

BITS Pilani

annual report

2012

Part B1: Pilani Campus

CONTENTS

	Page No.
B1.1 SENIOR OFFICERS OF THE INSTITUTE	B1-1
New Administrative appointments	B1-1
B1.2 ADMISSIONS	B1-4
B1.3 DUAL DEGREES AND TRANSFER	B1-4
B1.4 ACADEMIC CALENDAR	B1-4
B1.5 COURSES OFFERED	B1-5
B1.6 REGISTRATION OF STUDENTS	B1-5
B1.7 ACADEMIC AND PROFESSIONAL COUNSELLING	B1-5
B1.8 AWARD OF DEGREES AND MEDALS	B1-6
B1.9 CAMPUS INTERVIEWS AND PLACEMENT	B1-6
Employment of Graduates during the Year 2012	B1-6
B1.10 DEPARTMENT-WISE REPORT	B1-8
B1.10.1 Department: Biological Sciences	B1-8
B1.10.2 Department: Civil Engineering	B1-15
B1.10.3 Department: Chemical Engineering	B1-22
B1.10.4 Department: Chemistry	B1-31
B1.10.5 Department: Computer Science & Information Systems	B1-41
B1.10.6 Department: Economics and Finance	B1-46
B1.10.7 Department: Electrical, Electronics & Instrumentation	B1-48
B1.10.8 Department: Humanities and Languages	B1-55
B1.10.9 Department: Mathematics	B1-63
B1.10.10 Department: Mechanical Engineering	B1-71
B1.10.11 Department: Management	B1-76
B1.10.12 Department: Pharmacy	B1-77
B1.10.13 Department: Physics	B1-92
B1.11 DIVISION/UNIT/CENTER-WISE ACTIVITY HIGHLIGHTS	B1-97
Faculty Affairs Division	B1-97
Practice School Division	B1-97
University-Industry Linkages	B1-97
Practice School Programme	B1-97
PS-II Assignments: Institute's Contribution to Industrial Development	B1-98
PS-II Stations Added during the Year 2012	B1-99
PS Planning	B1-103
PS Instruction Monitoring	B1-103
Students' Involvement in PS Division-based Projects	B1-103
Research & Consultancy	B1-103
Ph.D. Programme	B1-103
Award of Ph.D. Degree	B1-103
Ph.D. Thesis Submitted and Under Process of Evaluation	B1-105
Ph.D. Aspirant's Scheme	B1-107
Sponsored Research Projects	B1-107
Entrepreneurship Development & IPR Unit	B1-116
Tech Bazaar 2012	B1-116
Software Development and Educational Technology Unit	B1-117
Center for Biotechnology	B1-118
Centre for Desert Development Technologies (CDDT)	B1-118

	Page No.
Centre for Educational Technology (CET)	B1-119
Center for Entrepreneurial Leadership	B1-119
Conquest 2012	B1-120
Epsilon 2012	B1.120
Technology Innovation Centre (TIC)	B1-121
Centre for Materials Science and Technology	B1-122
Centre for Robotics and Intelligent System	B1-122
Centre for Renewable Energy & Environment Development (CREED)	B1-123
Centre for Software Development (CSD)	B1-123
Centre for Women Studies	B1-124
Centres Established with Strong Industrial Support	B1-126
Embedded Controller Application Centre	B1-126
Technology Business Incubator (TBI)	B1-126
B1.12 CENTRAL FACILITIES REPORT	B1-127
Central Library	B1-127
Medical Centre	B1-128
BITS Coop	B1-129
Infant Care Centre	B1-129
Institute Festivals	B1-129
BITS House Allotment Committee (BITSHAC)	B1-129
BITS Staff Housing Group	B1-130
Recreation Activities Forum (RAF)	B1-130
Publications and Media Relations	B1-130
Central Workshop	B1-131
Instrumentation	B1-132
Information Processing Center	B1-132
Computer Assisted Housekeeping	B1-133
Central Analytical Laboratory Facility	B1-134
Central Animal Facility	B1-135
B1.13 MAJOR MAINTENANCE, RENOVATIONS OR NEW CONSTRUCTION REPORTS	B1-135
Maintenance, Renovation and Construction	B1-135
Works Completed	B1-135
Works in progress	B1-136
B1.14 MAJOR EQUIPMENTS ACQUIRED DURING THE YEAR	B1-136
B1.15 STUDENTS ACTIVITIES, ACHIEVEMENTS, SCHOLARSHIPS, CULTURAL AND ACADEMIC FESTIVALS	B1-136
Students Union	B1-136
Sports Club	B1-137
Sports Events organized during the 2011-12	B1-138
BITS Open Sports Meet	B1-138
Swimming Club	B1-139
Health Club	B1-140
Martial Arts	B1-140
Summer Swimming Camp	B1-140
Yoga Training Programme	B1-140
Pranayama and Meditation Camp	B1-140
Hockey Camp	B1-140
League Competition (Football)	B1-140

	Page No.
National Service Scheme	B1-140
OASIS 2012	B1-143
APOGEE 2012	B1-144
INTERFACE 2012	B1-144
Ragamalika	B1-144
SPIC MACAY	B1-145
MATRIX	B1-145
NIRMAAN	B1-146
Projects of Nirmaan	B1-147
Earn While You Learn	B1-148
Aditya Birla Group Scholarships	B1-148
GE Fund Scholarship Program – 2011-13	B1-148
Institute Fellowship	B1-148
CSIR/UGC/ICMR Fellowship	B1-148
Fellowships under Externally Funded Projects	B1-148
Alumni Scholarships	B1-149

LIST OF ANNEXURES

ANNEXURE		PAGE NO.
1.	DETAILS OF ADMISSIONS	B1: A-1
2.	DUAL DEGREE	B1: A-3
3.	NUMBER OF STUDENTS REGISTERED IN FIRST SEMESTER 2012-2013	B1: A-4
4.	DEGREES AWARDED	B1: A-7
5.	DEGREES TO BE APPROVED	B1: A-10
6.	CAMPUS INTERVIEW	B1: A-11
7.	LIST OF PROJECTS COMPLETED	B1: A-15
8.	NEW COURSES	B1: A-36
9.	SPECIAL LECTURES DELIVERED BY INVITED SCHOLARS	B1: A-52
10.	LIST OF FIRST DEGREE THESIS	B1: A-53
11.	LIST OF PROJECTS COMPLETED UNDER HIGHER DEGREE DISSERTATIONS DURING THE YEAR 2012	B1: A-66
12.	STATISTICS OF Ph.D. QUALIFYING EXAMINATION	B1: A-72
13.	LIST OF EQUIPMENTS PROCURED DURING THE YEAR 2012	B1: A-73
14.	CUMULATED LIST OF BOOKS PUBLISHED UNDER THE AUTHORSHIP OF BITS FACULTY	B1: A-79
15.	LECTURE NOTES PREPARED BY EDUCATIONAL DEVELOPMENT DIVISION	B1: A-92
16.	SENIOR OFFICERS OF THE INSTITUTE	B1: A-98

BITS PILANI – PILANI CAMPUS

B1.1 SENIOR OFFICERS OF THE INSTITUTE

DIRECTOR

Prof. G. Raghurama

DEPUTY DIRECTORS

1. Prof. Ranendra N. Saha
2. Prof. G. Sundar

REGISTRAR

Prof. M.M.S. Anand

New Administrative appointments

The following administrative appointments were made during the year:

- (A) The followings were appointed as Deans/Assistant Deans of the Divisions mentioned against their names.

Deans

<u>S.No.</u>	<u>Division</u>	<u>Name</u>	<u>Term Upto</u>
I. University Wide:			
(a) Pilani Campus			
1.	Academic Research (Ph.D. programme)	Prof. Sanjay Kumar Verma	15-6-2015
2.	Academic and Resource Planning	Prof. S. Balasubramaniam	15-6-2014
3.	Admissions	Prof. Sudeept Mohan	15-6-2014
4.	Educational Development	Prof. Ranendra N. Saha	15-6-2013
5.	Faculty Affairs	Prof. R. Mahesh	15-6-2014
6.	Practice School	Prof. Niranjan Swain	15-6-2014
7.	Sponsored Research and Consulting	Prof. Ranendra N. Saha	Till further orders
8.	Work Integrated Learning Programmes	Prof. S. Gurunaryanan	15-6-2014
(b) Hyderabad Campus			
9.	International Programmes and Collaboration	Prof. Suman Kapur	15-6-2015
II. Campus Wide:			
(a) Pilani Campus			
1.	Academic Registration & Counseling	Prof. Niti Nipun Sharma	15-6-2015
2.	Instruction	Prof. Ajit Pratap Singh	15-6-2015
3.	Student Welfare	Prof. Arya Kumar	15-6-2015
(b) Hyderabad Campus			
1.	Administration	Prof. M.B. Srinivas	15-6-2014

Assistant Deans

<u>S.No</u>	<u>Name</u>	<u>Campus/ Off-Campus Centre</u>	<u>Term upto</u>
(a) Practice School Division			
1.	Dr. P Srinivasan	Pilani Campus	15-06-2014
2.	Prof. Sutapa Roy Ramanan	K K Birla Goa Campus	15-06-2014
3.	Dr. K V G Chandrasekhar	Hyderabad Campus	15-06-2014
4.	Dr. (Ms.) S Sindhu	Bangalore Off-campus Centre	15-06-2014

(b) Work Integrated Learning Programmes Division

1.	Mr. K. Venkatasubramanian	Pilani Campus	15-06-2014
2.	Dr. G Venkiteswaran	Chennai Off-campus Centre	15-06-2014
3.	Dr. Raghunath Ratabole	K K Birla Goa Campus	15-06-2014

(B) The following were appointed as Unit Chiefs of the Units mentioned against their names

<u>S.No.</u>	<u>Unit</u>	<u>Name</u>	<u>Term upto</u>
1.	Centralised Purchases	Dr. Ravi Kant Mittal	31-8-2014
2.	Computer Assisted Housekeeping	Prof. S.C. Sivasubramanian	31-8-2014
3.	Entrepreneurship Development & Intellectual Property Rights	Prof. Arya Kumar	31-8-2014
4.	Estate Management	Dr. Anshuman	31-8-2014
5.	General Administration	Prof. M.M.S. Anand	31-8-2014
6.	Information Processing Centre	Prof. Janardan Prasad Misra	31-8-2014
7.	Instrumentation	Prof. Surekha Bhanot	31-8-2014
8.	Placement	Prof. Mani Sankar Dasgupta	Till further orders
9.	Publications and Media Relations	Prof. Ishwara Bhat M.	31-8-2014
10.	Software Development & Educational Technology	Prof. Rahul Banerjee	31-8-2014

(C) The following were appointed as Heads of Departments

<u>S.No.</u>	<u>Department</u>	<u>Name</u>	<u>Term upto</u>
1	Biological Sciences	Dr. Jitendra Panwar	31-8-2014
2	Chemical Engineering	Dr. Suresh Gupta	31-8-2014
3	Chemistry	Prof. Subit Kumar Saha	31-8-2014
4	Civil Engineering	Dr. Manoj Kumar	31-8-2014
5	Computer Science and Information Systems	Prof. Navneet Goyal	31-8-2013
6	Economics and Finance	Dr. Arvind Sudarsan	31-8-2014
7	Electrical & Electronics Engineering and Instrumentation	Prof. Anu Gupta	31-8-2014
8	Humanities and Languages	Dr. Geetha B	31-8-2014
9	Management	Prof. Anil Kumar Bhat	31-8-2014
10	Mathematics	Prof. Pradipkumar Haribhau Keskar	31-8-2014

<u>S.No.</u>	<u>Department</u>	<u>Name</u>	<u>Term upto</u>
11	Mechanical Engineering	Prof. Kuldip Singh Sangwan	31-8-2014
12	Pharmacy	Dr. Hemant Ramanlal Jadhav	31-8-2014
13	Physics	Prof. Debashish Bandyopadhyay	31-8-2014

(D) The following were appointed as Professor-in-Charge of the Divisions mentioned against their names.

<u>S No.</u>	<u>Name</u>	<u>Division</u>	<u>Term upto</u>
(a) Pilani Campus:			
1.	Dr. Hemant Ramanlal Jadhav	Academic Research	31-7-2013
2.	Prof. Navneet Goyal	Faculty Affairs	-
3.	Prof. Dalip Kumar	International Programmes and Collaborations	31-7-2013
4.	Dr. Champak Baran Das	Sponsored Research and Consulting	31-7-2013

(b) K K Birla Goa Campus:

1.	Dr. M. Srikanth	International Programmes and Collaborations	31-7-2013
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(c) Hyderabad Campus:

1.	Dr.(Ms.) Vidya Rajesh	Academic Research	31-7-2013
2.	Dr. Sourji Banerjee	International Programmes and Collaborations	31-7-2013
3.	Prof. (Ms.) P. Yogeeswari	Sponsored Research and Consulting	31-7-2013

(E) The following were appointed as Faculty-in-Charge/Official of the Centre/Section/Entity of the Institute.

<u>S. No.</u>	<u>Name</u>	<u>Name of Centre/Section/Entity</u>	<u>Term upto</u>
1.	Dr. Rajendra Prasad Pareek, Medical Supdt.	Medical Center	31-8-2014
2.	Shri Mohan Lal, Budget Officer	Accounts & Finance Section	-
3.	Dr. Abhijit K. Digalwar, Faculty-in-Charge	Transport Services Section	31-8-2014
4.	Prof. Kuldip Singh Sangwan, Faculty-in-Charge	Workshop	31-8-2014
5.	Dr. Ishwara Bhat M, Librarian	Library	-
6.	Dr. Virendra Singh Nirban, Faculty-in-Charge	Reprography Section	-
7.	Dr. G.S. Chauhan, Faculty-in-Charge	Publicity and Branding	-
8.	Dr. Yashvardhan Sharma, Faculty-in-Charge	Pay roll processing (CAHU)	31-8-2014
9.	Dr. (Ms.) Jyoti, Faculty-in-Charge	Center for Entrepreneurial Leadership (EDIPRU)	31-8-2014
10.	Mr. Vikas Singh, Faculty-in-Charge	Network Administration (IPCU)	31-8-2014
11.	Dr. Karunesh Kumar Gupta, Faculty-in-Charge	Projection Systems and Instrumentation Services (IU)	31-8-2014
12.	Dr. Hari Om Bansal, Faculty-in-Charge	Admission Tests and Services (ADMD)	31-8-2014

<u>S. No.</u>	<u>Name</u>	<u>Name of Centre/Section/Entity</u>	<u>Term upto</u>
13.	Mr. Virendra Singh Shekhawat, Faculty-in-Charge	Educational Technology Support (SDETU)	31-8-2014
14.	Dr. Poonam Goyal, Faculty-in-Charge	Infant Care Center	31-8-2014
15.	Prof. Sangeeta Sharma, Faculty-in- Charge	Societal Development	31-8-2014
16.	Dr. Leela Rani, Faculty-in-Charge	Institute Functions	31-8-2014

(F) Resident Wardens

<u>S. No.</u>	<u>Bhawan</u>	<u>Name</u>
1.	Budh	Dr. Kumar Neeraj Sachdev
2.	Bhagirath	Dr. Rajesh Prasad Mishra

The names and designations of senior officers of Pilani campus are given in 'Annexure B1-16'.

B1.2 ADMISSIONS

The number of students admitted in each of the semester is given below.

	Integrated First Degree Programmes	Higher Degree Programmes	Doctoral Programmes (PhD)	Total
Second Semester 2011-2012	–	–	68(30)	68(30)
First Semester 2012-2013	862(152)	244(57)	71(39)	1177(248)

The programme-wise details are given in 'Annexure B1-1'.

B1.3 DUAL DEGREES AND TRANSFERS

Dual Degree

During the Academic year 2012-2013, 218 students were permitted to work concurrently for two first degrees under Dual Degree scheme. See 'Annexure B1-2' for details.

B1.4 ACADEMIC CALENDAR

The Academic year of the Institute is divided into two semesters and a summer term.

	Starting Date	Ending date	Number of instruction days (excluding examination days)
Second Semester 2011-2012	07.01.2012	30.04.2012	91
First Semester 2012-2013	30.08.2012	30.11.2012	88
Summer Term 2011-2012	21.05.2012	13.07.2012	47
Practice School II 2011-12 (II Sem. 2011-12)	06.01.2012	20.06.2012	135
Practice School I 2012-13	21.05.2012	13.07.2012	47
Practice School II 2012-13 (First Sem. 2012-13)	04.07.2012	14.12.2012	132

B1.5 COURSES OFFERED

The number of courses, offered during the year 2011 is as follows:

	Number of Courses offered
Second Semester 2010-2011	343
First Semester 2011-2012	410
Summer Term 2010-2011	4

The list of new courses introduced during 2012 are given in 'Annexure B1-8'.

Project-oriented Courses

During this year a large number of students worked on time-bound projects of various types. The information about the projects done and the names of the students who worked on the projects and the names of instructors are given in *Annexure B1-7*.

B1. 6 REGISTRATION OF STUDENTS

The registration processes for both the semesters was completed on the first day of each semester.

	Number of students registered
Second Semester 2011-2012	4427
First Semester 2012-2013	4497
Summer Term 2011-2012	842

Details of Registration of students for the First Semester 2012-2013 are given in '*Annexure B1-3*'.

B1.7 ACADEMIC AND PROFESSIONAL COUNSELLING

During the year, the Academic Counselling Board, estimated the extent to which students under its purview fell short of the minimum academic performance, drew up a time-frame within which afflictions were to be removed, determined the package of courses for their registration in each semester and laid down the necessary stipulations for achieving intermediate targets. It further monitored their progress and applied necessary mid-course corrections, wherever required. The statistical summary of the number of On-campus students under its purview during the year is given below:

	II Semester 2011-2012	I Semester 2012-2013
1. Total number of students under the purview of ACB at the beginning of the semester	236	218
2. No. of students declared out of its purview at the end of the semester	68	89
3. No. of students who left the Institute during the semester	03	1
4. No. of new students who came under the purview of ACB at the end of the semester	53	71
5. Total No. of students under the purview of ACB during the next semester	218	199

B1.8 AWARD OF DEGREES AND MEDALS**(a) Award of Degrees**

During the year 152 degrees were awarded in the Board of Governors meeting held on 31.03.2012 (70th Award) and 1193 degrees were awarded on 19.07.2012 (71st Award), through a Circulatory Resolution. Statistical details of these degrees are given in 'Annexure B1-4'.

Since 71st award, more students have become eligible for the award of Degrees. These are 161 Degrees for 72nd Award, details of which are given in 'Annexure B1-5'.

(b) Award of Medals

For Academic Year 2011-2012

The list of students who were awarded various medals, for the students graduated at the end of First Semester, Second Semester and Summer Term of the academic year 2011-2012 in the following table:

SN.	ID.No.	Name	Sex	CGPA Obtained	Position Obtained	Type of Medal to be Awarded
Integrated First Degree Programmes (No. of students: 800)						
1.	2008A3PS072P	Chandrasekaran K	M	10.00	First	Gold
2.	2008A3PS528P	Mohit Khandelwal	M	9.95	Second	Silver
3.	2008A3PS074P	Lokesh	M	9.89	Third	Bronze

B1.9 CAMPUS INTERVIEWS AND PLACEMENT

Number of companies which conducted campus interviews	131
No of interviews	2428
No of offers made	847

The statistics (discipline-wise) and the list of organizations which conducted campus interviews during the year is given in 'Annexure B1-6'.

Employment of Graduates during the Year 2012

Programme	Number graduated	Employed/ Higher Studies	Unemployed as on October 2012	Those neither informed nor sought help in placement
On-Campus Programmes				
B.E.(Hons.)				
Chemical	53	45	4	4
Civil	58	44	9	5
Computer Science	93	89	3	1
EEE	98	87	9	2
Electronics & Instrumentation	59	51	7	1
Mechanical	86	70	6	10
Manufacturing	3	2	1	--
B.Pharm	41	29	8	4

Programme	Number graduated	Employed/ Higher Studies	Unemployed as on October 2012	Those neither informed nor sought help in placement
M.Sc.(Hons.)				
Bio. Sciences	43	30	8	5
Chemistry	38	23	7	8
Economics	47	32	8	7
Mathematics	50	45	2	3
Physics	47	37	6	4
M.Sc.(Tech.)				
Engineering Technology	4	3	1	--
General Studies	18	7	7	4
Information Systems	58	54	2	2
Finance	9	6	1	2
M.E.				
Biotechnology	12	9	1	2
Chemical	9	6	2	1
Chemical (Spl. in Petrochem)	9	3	5	1
Civil (Spl. in Structural Engg.)	16	11	2	3
Civil – Transportation Engg.	7	3	4	--
Communication Engg.	25	13	7	5
Computer Science	18	16	2	--
Design Engg.	10	8	--	2
Elect Power Electro. & Drives	7	4	2	1
Embedded System	16	13	2	1
Manufacturing Systems Engg.	10	9	1	--
Mechanical	21	7	3	11
Microelectronics	10	9	--	1
Software Systems	38	35	1	2
M.Pharm	21	6	5	10
M.Pharm. (Spl. in Pharmaceutics)	9	3	2	4
M.Pharm. (Spl. Pharmaceutical Chemistry)	8	3	3	2
MPH	11	1	7	3
MBA	50	44	3	3
Total	1112	857	141	114

B1.10 DEPARTMENT-WISE REPORT

In the following pages, a brief summary of the main activities and achievements of different departments of the campus are highlighted.

B1.10.1 Department: Biological Sciences

Number of faculty members (as on 31 December 2012)

Senior Professors, Professors	02
Associate Professors	00
Assistant Professors	16
Lecturers	02
Visiting Faculty (Adjunct Faculty)	01

Head of the Department: Dr. Jitendra Panwar

Contact details: jpanwar@pilani.bits-pilani.ac.in

Number of PhD Scholars: 26

Number of RA: 1 (DST Women Scientist)

Ph.D. Thesis Submitted during the year: 5

A. SPONSORED RESEARCH ACTIVITIES:**1. Ongoing projects:**

- (PI: Sanjeev Kumar) "Molecular characterization of *Anopheles stephensi* gut epithelial peroxidases and their role in modulating immunity against bacterial and fungal antigens" DST, 48 Lakhs, Duration: 2012-15.
- (PI: Jitendra Panwar) "Nano technology for enhanced utilization of native-phosphorous by plants and higher moisture retention in arid soils" Duration: 5 Years (July 2008-March 2013); Sanctioned Amount: 4.420011 Crores (34.9114 Lakhs for BITS Pilani Centre); Funding Agency: Indian Council of Agricultural Research (ICAR), Govt. of India, New Delhi.
- (PI: Lalita Gupta) "Characterization of immune signaling pathway in *Anopheles* mosquitoes for arresting plasmodium development, Duration: 2 years, sanctioned amount: 10 Lakhs, Funding agency: Aditya Birla Group.
- (PI: Lalita Gupta) "Characterization of Immune signaling pathway in *Anopheles* mosquitoes. DST Fast Tract, sanctioned amount 21.2 Lakhs, Duration: 2012-2015.
- (PI: Prabhat Nath Jha) Molecular characterization of ACC (1-aminocyclopropane-1-carboxylate) deaminase activity of associative bacteria isolated from plants of the desert of Rajasthan. Funded by DBT for three years. Sanctioned amount 41.35 Lakhs.
- (PI: Rajesh Mehrotra) Natural and engineered lipases for Biodiesel production. Funded by ABG for 2 years. Sanctioned amount 10 Lakhs.
- (PI: Santosh Kumar Padhi) "Enzymatic kinetic resolution of racemic amidoalkyl naphthols and their derivatives." Funded for two years (2012-2014) under Research Initiation Grant, BITS Pilani. (Sanctioned amount 2.00 Lakhs).
- (PI: Vishal Saxena) "Cloning & Characterization of major regions of plastid DNA of *Plasmodium vivax* from Indian isolates" (2010-2013) Funded by Department of Science & Technology, New Delhi. (Sanctioned amount Rs. 10.17 Lakhs).
- (PI: Prameela Jha) "Endophytic Bacteria mediated phytoremediation of organic pollutants" (2012-2015) Funded by Department of Science & Technology, New Delhi. (Sanctioned amount Rs. 25.10 Lakhs)

10. (PI: S.K. Verma) "Development of recombinant DNA based Biosensor device for detection of arsenic in water samples", Duration: 2 years. Sanctioned amount 38.6 Lakhs, Funding agency: DST, New Delhi.
11. (PI: Monalisa Mishra) "Characterisation of genes regulating the polarity of sensory organs of *Drosophila*." Funded for two years (2012-2014) under Research Initiation Grant, BITS Pilani. (Sanctioned amount 2.00 Lakhs).
12. (PI: Shilpi Garg) "Analysis of genetic diversity of malaria parasite using genetic and microsatellite markers from Bikaner, India" Funded for two years (2012-2014) under Research Initiation Grant, BITS Pilani. (Sanctioned amount 2.00 Lakhs).

2. Projects sanctioned during the year

1. (PI: Sanjeev Kumar) "Molecular characterization of *Anopheles stephensi* gut epithelial peroxidases and their role in modulating immunity against bacterial and fungal antigens", Duration: 3 years, Sanctioned amount 50 Lakhs. Funding Agency: DST.
2. (PI: Jitendra Panwar) "Mechanistic studies on extracellular biosynthesis of metal nanoparticles, DST Nano Mission Project", Duration: 3 years. Sanctioned amount Rs. 45.50 Lakhs. Funding Agency: Department of Science and Technology (DST) under Nano-Mission, Govt. of India, New Delhi.
3. (PI: Pankaj Kumar Sharma) "Phytochemical and Metabolic Characterization of *Prosopis cineraria* pods (sangri) as Potential Nutraceuticals", Duration: 3 years. Sanctioned amount Rs. 21.30 Lakhs. Funding Agency: DST/SERB.
4. (PI: Santosh Kumar Padhi) "Enzymatic kinetic resolution of racemic amidoalkyl naphthols and their derivatives". Research Initiation Grant, BITS Pilani (2012-14). Sanctioned amount 2 Lakhs.
5. (PI: Santosh Kumar Padhi) "Engineering *Baliospermum montanum* hydroxynitrile lyase for possible synthetic and industrial applications", Recommended for funding under Fast track proposals for young scientists. Funding Agency: Department of Science & Technology, New Delhi.
6. (PI: Rajdeep Chowdhury) "Role of Hippo Signaling Pathway Components in Autophagy Regulation in Hepatocellular Carcinoma". DST Fast track project for young scientists, Funding Agency: Department of Science & Technology, New Delhi.
7. (PI: Sandhya Mehrotra) "Analyzing structural and functional evolutionary links between RubisCO and carbon concentration mechanism proteins" DST fast track project for young scientists, Funding Agency: Department of Science & Technology, New Delhi. Sanctioned amount 22 Lakhs.

In addition to the above individual projects, the Department of Biological Sciences received support under DST-FIST Level-1 with a financial sanction of Rs. 50 Lakhs by Department of Science and Technology, New Delhi.

3. Projects completed this year

1. (PI: Prabhat Nath Jha) "Molecular characterization of diazotrophic plant growth-promoting endophytic bacteria isolated from the arid desert of Rajasthan". Funded by: Department of Science & Technology, New Delhi.
2. (PI: Rajesh Mehrotra) "Cloning and characterization of protein phosphatase 2C like promoter from *Arabidopsis thaliana*". Funded by: Department of Science & Technology, New Delhi.
3. (Co-PI. Uma S. Dubey) "Functional Mutations in the Opioid Receptors and their impact on immune cell function". Funded by ICMR, Govt. of India. (PI. Prof Suman Kapur, BITS Pilani, Hyderabad Campus).
4. (PI: S.K. Verma) "Characterization and Pharmacological Evaluation of Bioactive Compound (Cyanotoxins) from the Cyanobacterial Isolates from Shekhawati Region of Rajasthan". Funding agency UGC, New Delhi.
5. (PI: S.K. Verma) "Bio-diesel production from microalgae". Funding agency CSIR, New Delhi

B. PUBLICATIONS:

The faculty members of the Department published a total of 22 papers in various International/ National refereed journals during the year. The list is as follows:

1. Akhtar, M.S., Babel, S., Yadav, B.K., Yadav, R.S. and Panwar, J. 2012. "Potentiality of *Thiobacillus* in agricultural system". *Advanced Science, Engineering and Medicine*, 4: 77-80.
2. Panwar, J., Jain, N. Bhargava, A., Akhtar, M.S. and Yun, Y.S. 2012. "Positive effect of ZnO nanoparticles on tomato plants: A step towards developing 'nanofertilizers'". *Proceedings of 3rd International Conference on Environmental Research and Technology*, 348-352.
3. Khungar, B., Rao, M.S., Pericherla, K., Nehra, P., Jain, N., Panwar, J. and Kumar, A. 2012. "Synthesis, characterization and microbiocidal studies of novel ionic liquid tagged Schiff bases". *Comptes Rendus Chimie*, 15: 669-674.
4. Akhtar, M.S., Panwar, J. 2012. "Efficacy of root-associated fungi and PGPR on the growth of *Pisum sativum* (cv. Arkil) and reproduction of the root-knot nematode *Meloidogyne incognita*". *Journal of Basic Microbiology*, 52: 1-9.
5. Ashish Runthala, "Protein Structure Prediction: Challenging Targets for CASP10", *Journal of Biomolecular Structure and Dynamics*, 2012, 30(5), 607-615.
6. Ashish Runthala, "Evolution: Boosters, Drivers and Plausible Models", *Research and Reviews: A Journal of Life Sciences*, 2012, 2(2): 1-6.
7. Mishra M, Rentsch M, Knust E. "Crumbs regulates polarity and prevents light-induced degeneration of the simple eyes of *Drosophila*, the ocelli". *European Journal of Cell Biology*, 2012, 91(9):706-16.
8. Sharma P.K., Sangwan N.S., Bose S.K. and Sangwan R.S., "Biochemical characteristics of a novel vegetative tissue geraniol acetyltransferase from a monoterpene oil grass (*Palmarosa, Cymbopogon martinii* var. *Motia*) leaf", *Plant Science* (2013), Article in press, <http://dx.doi.org/10.1016/j.plantsci.2012.12.013>.
9. Misra N., Gupta G., Jha P.N. (2012). "Assessment of mineral phosphate solubilizing properties and molecular characterization of zinc tolerant bacteria". *J. Basic Microbiol.* 52: 549-558.
10. Rajesh Mehrotra, Amit Yadav, Purva Bhalotia, Ratna Karan, Sandhya Mehrotra (2012) "Evidence for directed evolution of larger size motif in *Arabidopsis thaliana* genome". *The Scientific World Journal*. 2012.
11. Bhavya Ravi, Madhulika Rai, Sandhya Mehrotra and Rajesh Mehrotra. "An efficient protocol for the isolation of fungal DNA for strains obtained from oil contaminated fields" (2012) *SAJEB Vol 9 (2) 4* pg 162-165.
12. Aditi Gangawar, Sandhya Mehrotra ,VB Sharan, Ratna Karan and Rajesh Mehrotra."10⁻⁴³ sec after the big bang and million years henceforth". *Research and Reviews: A journal of Biotechnology*.Vol 2 (1) April 2012.
13. Saxena V., Garg S., Tripathi J., Sharma S., Pakalapati D., Subudhi A.K., Boopathi P. A., Saggi G.S., Kochar S.K. , Kochar D.K., Das A. (2012). "*Plasmodium vivax* Apicoplast genome: A Comparative analysis of major genes from Indian field isolates." *Acta Trop.* 122 (1), 138-149.
14. Garg S., Saxena V., Lumb V., Pakalapati D., Boopathi P.A., Subudhi A. K., Chowdhury S., Kochar S.K., Kochar D.K., Sharma Y.D., Das A. (2012) "Novel mutations in the antifolate drug" resistance marker genes among *Plasmodium vivax* isolates exhibiting severe manifestations, *Experimental Parasitology* 132 (4), 410-416.
15. Tanwar G.S., Khatri P.C., Chahar C.K., Sengar G.S., Kochar A., Tanwar G., Chahar S., Khatri N., Middha S., Acharya J., Kochar S.K.,Pakalapati D., Garg S., Das A., Kochar D.K. (2012). "Thrombocytopenia in childhood malaria with special reference to *P. vivax* mono-infection: A study from Bikaner (Northwestern India)". *Platelets* 23 (3), pp. 211-216.
16. Padhi, S. K., Haas, M., Bornscheuer, U. T., (2012) "Lipase catalyzed transesterification to remove saturated monoglycerides from biodiesel". *Eur. J. Lipid Sci. Tech.*, 114, 875-879.
17. Brundiek, H., Padhi, S. K., Kourist, R., Evitt, A., Bornscheuer, U. T., (2012) "Altering the scissile fatty acid binding site of *Candida antarctica* lipase A by protein engineering for the selective hydrolysis of medium chain fatty acids". *Eur. J. Lipid Sci. Tech.*, 114, 1148-1153.

18. Dubey B and Dubey US., (2011). "Modeling effects of toxicant on uninfected cells, infected cells and immune response of the body in the presence of virus". *Journal of Biological Systems*, 19 (3): 479-503.
19. Singh S and Verma S K (2012) Application of direct analysis in real time mass spectrometry (DART_MS) for identification of an epiphytic cyanobacterium *Nostoc sp*". *Analy. Lett.*45:2562-2568.
20. Ashwin KR, Sushil Y and Verma SK (2012) "Antidepressive-like effect of microcystin-FR in swiss albino mice tested by a battery of behavioural depression models". *International journal of pharmacy and pharmaceutical sciences*; 4(1) 293-300.
21. Singh S and Verma S K (2012) Study of the distribution profile of piperidine alkaloids in various parts of *Prosopis juliflora* by the application of Direct Analysis in Real Time Mass Spectrometry (DART-MS) *Nat. Prod. Bioprospect.* 2, 206–209.
22. Rajesh Mehrotra, Shobha Mehra, Sandhya Mehrotra and Bhavya Ravi. Diversity of lipase producing microbial strains obtained from oil contaminated soils and their hydrolytic activity. *Proceedings of 3rd International Conference on Environmental Research and Technology*, Penang, Malaysia.

Patent

Ashis D. and Deepak P. "Oligonucleotides for the detection of Plasmodial sp. and an assay thereof". Provisional Patent App No.: 3944/DEL/2012

C. CONFERENCES ATTENDED/ PAPERS PRESENTED:

1. Panwar, J. 2012. Nanotechnology for enhanced P mobilization in arid soils. In: *National Conference on Emerging Trends in Biotechnology and Pharmaceutical Research*, February 18-19, 2012, Mangalayatan University, Aligarh, India, p. 43.
2. Dey, D. Bhargava, A., Jain, N. and Panwar, J. 2012. Phytosynthesis of silver nanoparticles from *Prosopis cineraria* leaf extract and evaluation of their antimicrobial activity. In: *International Conference on Industrial Biotechnology*, November 21-23, 2012, Punjabi University, Patiala, India, p. 244.
3. Gupta L, Noh JY, Jo YH, Oh SH, Kumar S, Noh MY, Lee YS, Cha S-J, Seo SJ, Kim I, Han YS, Barillas- Mury C. 2012. Functional characterization of intracellular apoLpo-III in response to *Plasmodium* invasion in mosquito. In symposium on Molecular basis of vector-pathogen interactions (S 1301), XXIV International Congress of Entomology, Daegu, South Korea (Abstract title code: S1301M01).
4. Gupta L, Gupta K, Kajla M, Dhawan R, Kumar S. 2012. The mosquito STAT pathway and its role in *Plasmodium* development. In symposium on Molecular basis of vector-pathogen interactions (S 1301), XXIV International Congress of Entomology, Daegu, South Korea (Abstract title code: S1301M02).
5. Kumar S, Gupta L, Kajla M, Gupta K, Singh NK. 2012. Modulation of mosquito immunity during *Plasmodium* development. In Symposium on Molecular basis of vector-pathogen interactions (S 1301), XXIV International Congress of Entomology, Daegu, South Korea (Abstract title code: S1301M03).
6. Ismail S. and Sharma P.K., Novel plant glycoside hydrolases with potential industrial applications, Oral presentation in the AICTE-sponsored International Conference on Bioscience & Bioengineering: A collaborative approach, organized by IMS College, Ghaziabad, 6-7 July, 2012.
7. Dasgupta A., Gupta G., Jha, P. N. Characterization of endophytic biocontrol bacteria *Pseudomonas aeruginosa* PM389. In: International conference on industrial biotechnology, 9th annual convention of the Biotech Research Society held at Patiala, India (November 21-23, 2012). Abstract book, p100.
8. Gupta, G., Das, A., Jha, P. N. Attenuated immune response to endophytic bacteria favours successful interaction with the host plant. In: The power of small, 14th international symposium on microbial ecology (ISME), held at Copenhagen, Denmark (August 19-24, 2012).
9. Purva, Anshu Alok, Sidharth Tiwari and Rajesh Mehrotra. AACA element negatively regulates expression of protein phosphatase 2C (*PP2C*) like promoter in *Arabidopsis thaliana*.

- International conference on industrial biotechnology (IXth convention of the biotechnology research society, India) held at Patiala, Punjab (21st-23rd November'12).
10. Shobha Mehra, Ujjwal Kumar Banerjee and Rajesh Mehrotra. "Microbial lipases: A step towards green chemistry". International conference on industrial biotechnology (IXth convention of the biotechnology research society, India) held at Patiala, Punjab (21st-23rd November'12).
 11. Ujjwal Kumar Banerjee, Shobha Mehra and Rajesh Mehrotra. "Hydrolytic and synthetic activity of lipase producing fungal strains isolated from oil contaminated sites in Mehsana". International conference on industrial biotechnology (IXth convention of the biotechnology research society, India) held at Patiala, Punjab (21st-23rd November 2012).
 12. Michael J Haas, Vijay Singh, Santosh Kumar Padhi and Uwe T Bornscheuer, "Advances in biodiesel production and quality improvement: the in situ transesterification of corn germ, and the removal of saturated monoglycerides via enzyme-catalyzed transesterification." - Presented in '103rd AOCS Annual meeting & Expo' Long beach, CA, USA, from 29th April - 02nd May 2012 (Oral).
 13. Ritika Lakhotia, Shilpi Garg, Zarna Pala, Gagandeep S.Saggu, Akanksha Gupta, Vishal Saxena. "Characterization of the RimM protein encoding gene in *P. vivax*" presented at International Conference on Microbial, Plant & Animal Research (ICMPAR 2012), Mody Institute of Technology & Science, Sikar, from March 29-31, 2012.
 14. Uma S. Dubey. "Modelling the effect of toxicant on immune response in the presence of virus". Contemporary Trends in Biological and Pharmaceutical Research. March 12-13, 2011, Birla Institute of technology and Science. Pilani.
 15. Verma, S.K., Nagappan, S., Upadhyay R. "Nutritional control of phototrophic and heterotrophic growth of microalgae *Scenedesmus* sp for biodiesel production". 2nd International Conference on Algal Biomass, Biofuels and Bioproducts, San Diego, USA June 10-13, 2012.
 16. Somnath Maji, Panchsheela Nogia and Sandhya Mehrotra. "Extraction of high quality cellulose from the stem of *Calotropis procera*". International conference on industrial biotechnology (IXth convention of the biotechnology research society, India) held at Patiala, Punjab (November 21-23, 2012).
 17. Gurpreet Kaur sidhu and Sandhya Mehrotra. "Analyzing structural and functional Evolutionary links between Rubisco and carbon concentration Mechanism Proteins". International conference on industrial biotechnology (IXth convention of the biotechnology research society, India) held at Patiala, Punjab (November 21-23, 2012).

D. BOOKS PUBLISHED/EDITED /BOOK CHAPTERS DURING THE YEAR:

1. Ashish Runthala. Protein Modeling & CASP: Progress and Future Prospects? "NOVA PUBLISHERS: Advances in Medicine and Biology. 2012. Volume 46, 259-270.
2. Dhingra H. K., Jha P.N., Bajpai P. Advances in Biotechnology: A Practical Approach, Nova Publishers, New York, USA (In Press).
3. Gupta G., Panwar J., Akhtar M.S., Jha P.N. (2012). Endophytic Nitrogen Fixing Bacteria as biofertilizer. *In: Sustainable Agriculture Reviews*, Vol. 11, Ed. Lichtfourse E. Springer (Accepted).
4. Uma S. Dubey and Anyaa Mittal. Counteracting microbes. Advances in Biotechnology: A practical approach. Nova Publishers, New York. (In Press).
5. Bhavya Ravi, Madhulika Rai, Sandhya Mehrotra and Rajesh Mehrotra : Lipase catalysing transesterification reaction for Biodiesel Production: .Current status and Future prospects. Edited by Dhingra, P.N. Jha and P. Bajpai. (In Press)

E. CONFERENCES, SEMINARS & WORKSHOPS CONDUCTED

Nil

F. INVITED TALKS GIVEN BY BITS FACULTY

1. Kumar S. "Modulation of mosquito immunity during *Plasmodium* development" in Symposium on Molecular basis of vector-pathogen interactions (S 1301) in XXIV International Congress of Entomology, Daegu, South Korea. Aug 19-25, 2012.

2. Shibasish Chowdhury, Implication of non-native Structures in Protein folding Mechanism National Conference on Condensed Matter Physics 2012, at Department of Physics, BITS-Pilani, Pilani, 24-25 February, 2012.
3. Panwar J., Nanotechnology for enhanced P mobilization in arid soils. In: *National Conference on Emerging Trends in Biotechnology and Pharmaceutical Research*, Mangalayatan University, Aligarh, India. February 18-19, 2012. (*Key-Note Lecture*)
4. Panwar J., Mycosynthesis of nanoparticles and their characterization. In: *Training on Nanoparticle Production, Characterization and Utilization in Agriculture*, Central Arid Zone Research Institute, Jodhpur, India. February 23 - March 03, 2012. (*Expert Lecture*)
5. Panwar J., Nanoparticles: Controllable Synthesis and Characterization. In: *Short Course on Application of nanotechnology in soil science and plant nutrition research*, Indian Institute of Soil Science, Bhopal, India. September 18-27, 2012. (*Expert Lecture*)
6. Lalita Gupta, The mosquito STAT pathway and its role in Plasmodium development. 24th International Congress of Entomology, August 2012. South Korea.
7. Prabhat Nath Jha: 'Bright side of Microorganisms'. Motivational talk to higher secondary school children organized by Regional Science congress, Jawahar Navodaya Vidyalaya, Kajra, Jhunjhunun, Rajasthan. November 30, 2012
8. Rajesh Mehrotra delivered a talk in OIST, Japan on Characterization of protein phosphatase 2C like promoter on July 4, 2012.
9. Rajesh Mehrotra delivered an invited talk on Pedagogy, in Shivalik College of Engineering on 21st December 2012.
10. Santosh Kumar Padhi, "Biology for today and tomorrow". Motivational talk to higher secondary school children organized by Region level science congress, Jawahar Navodaya Vidyalaya, Kajra, Jhunjhunu, Rajasthan, India, November 28, 2012.
11. Vishal Saxena, "Plastid in malaria parasites as putative drug target". International Conference on Microbial, Plant and Animal Research (ICMPAR 2012), at Mody Institute of Technology and Science, Sikar, from March 29-31, 2012.
12. S. K. Verma, Biological activity of microcystin present in *Anabaena doliolum* and *Nostoc spongiaeforme* at Biotech12, Bangkok, March 12-13, 2012 (*Key-Note Lecture*)

G. INVITED TALKS ARRANGED IN THE DEPARTMENT

Nil

H. AWARDS AND RECOGNITIONS WON BY FACULTY AND STUDENTS

1. Sanjeev Kumar: Received travel awards (650,000 Korean Won) from XXIV International Congress of Entomology (ICE 2012), South Korea.
2. Jitendra Panwar: Bio-graphy of Dr. Jitendra Panwar was published in the renowned books published by Marquis Who's Who LLC, USA; International Biographical Center (IBC), Cambridge, England; and American Biographical Institute (ABI), North California, USA.
3. Jitendra Panwar: Chaired a technical session in 3rd International Conference on Environmental Research and Technology (ICERT 2012), Penang (Malaysia) organized by Institute of Industrial Technology at University Sains, Malaysia.
4. Lalita Gupta: Travel Award for attending XXIV International Congress of Entomology (ICE 2012), South Korea by the organizing committee, DST and CSIR, New Delhi.
5. Santosh Kumar Padhi: Viva examiner for a Ph. D. candidate of Banaras Hindu University, July 2012.
6. Zarna Pala Rajesh Kumar, Ph.D. student selected for 'Novartis Biotechnology Leader Camp 2012' held at Hyderabad, India during August, 2012. She won the first prize in Team event.
7. Navin Jain, Ph.D. student selected for 'Novartis Biotechnology Leader Camp 2012' held at Hyderabad, India during August, 2012.
8. Garima Gupta, Ph.D. student received travel award from DST, New Delhi for attending 14th

International Symposium on Microbial Ecology (ISME), held at Copenhagen, Denmark (August 19-24, 2012).

9. Amit Kumar Subudhi, Ph.D. student selected for advance course on Functional genomics and systems biology organized by Wellcome Trust Sanger Institute held at Wellcome Trust Genome Campus, Hinxton, Cambridge, UK during June 13-22, 2012.
10. Rajesh Mehrotra: Visiting Scientist in Okinawa Institute of Science and Technology (OIST), Japan during June-July 2012.
11. Rajesh Mehrotra: Chaired a technical session in 3rd International Conference on Environmental Research and Technology (ICERT 2012), Penang (Malaysia) organized by Institute of Industrial Technology at University Sains, Malaysia.
12. Sandhya Mehrotra: Received Indo-Australia Early Career S&T Visiting Fellowship for the year 2012-2013 for conducting advanced research on the project entitled "Exploring the prospects of introducing bicarbonate transporters into C3 crop plants to improve photosynthesis and water use efficiency".

I. FACULTY DEVELOPMENT, INTERNATIONAL COLLABORATION & INDUSTRY IMMERSION

1. Sanjeev Kumar: Industrial project of Aditya Birla Group of Companies and scientific collaboration with Prof. S. K. Gakhar, MDU, Rohtak and Dr. Rajnikant Dixit, NIMR, New Delhi.
2. Lalita Gupta: Initiated collaboration with Prof. S. K. Gakhar, MDU, Rohtak India.
3. Rajesh Mehrotra: Received travel award from Japanese Science and Technology Ministry to Visit Okinawa. He initiated collaboration with Prof. Mitsuhiro Yanagida, OIST, Japan.
4. Rajesh Mehrotra, Jitendra Panwar, Sandhya Mehrotra and Prabhat Nath Jha: Industrial project of Aditya Birla Group of Companies.
5. Sandhya Mehrotra, Initiated collaboration with Prof Dean Price of Australian National University.

J. SIGNIFICANT NEW EQUIPMENTS/EXPERIMENTAL FACILITY ADDED DURING THE YEAR

Dissecting Microscope (Carl Zeiss)
 Hybridization Oven (Genei)
 Plant Growth Chamber (Daihan, LabTech)
 Two-Stack Incubator shaker (Daihan, LabTech)
 Electroporator (Bio-Rad)
 Gradient PCR (Bio-Rad)
 Circulating Water bath (Daihan, LabTech)
 Hand-held homogenizer
 Incubator Shaker (Remi)
 Automatic Autoclave (Daihan, LabTech)
 Real-Time PCR
 Horizontal Electrophoresis system (Bio-Rad) - Two
 Vertical Electrophoresis system (Bio-Rad)
 PCR
 Homogenizer
 Water bath (Temp. 20-100)

K. DEPARTMENTAL ASSOCIATION/ CLUB ACTIVITIES

Biological Society

The Biological Society in its traditional way executed APOGEE-2012, showing the recent development in modern biology through excellent working and non-working models. Senior members of the Biological Society have also been involved in orientation for freshly joined students and discussions regarding the future scope of Biology and Biotechnology. Other traditional activities such as welcome for new members and farewell for graduating students were also organized.

B1.10.2 Department: Civil EngineeringNumber of faculty members (as on 31st December 2012)

Professors	02
Associate Professors	02
Assistant Professors	09
Lecturers	02
Visiting Faculty	-

Head of the Department: Dr. Manoj Kumar**Contact details:** manojkr@pilani.bits-pilani.ac.in**Number of PhD Scholars:** 02**Ph.D. Thesis Submitted during the year:** 01**A. Financial Assistance from Government of India****Financial Assistance Under FIST Programme of DST (Government of India)**

The Department of Science and Technology (DST) has sanctioned a grant of Rs. 40 lacs under the FIST program for five years duration to the civil engineering department to strengthen the research facility in structural engineering. This amount was sanctioned in the 50:50 mode where 50% contribution is from DST and another 50% contribution is from the institute. Thus the department has been sanctioned a total amount of 80 lacs. This year DST released Rs 32 lacs and 32 lacs was contributed by the Institute. The total amount of Rs 64 lacs is being used to upgrade the load frame with servo hydraulic facility in the structural engineering lab and to purchase a 100 kN capacity Dynamic Universal Testing Machine.

Department Research Support from UGC under Special Assistance Programme (SAP)

The Civil Engineering Department of the institute has been selected for the UGC assistance at the level of DRS under the Special Assistance Programme (SAP) for the period of three years for purchasing the equipments to strengthen the teaching and research facility. Moreover, a recurring grant of Rs 17.30 lacs was sanctioned for the period of five years to the civil engineering department.

UGC Infrastructure Development Grant

The Civil Engineering Department of the institute has been selected for support under the Special Assistance Programme (SAP) of UGC at the DRS Phase-I to strengthen the infrastructure required for including the component of research at PG level. This year, an amount of Rs 20 lacs was released for year 2012-13. This amount is being used for the strengthening of the laboratory infrastructure.

B. SPONSORED RESEARCH ACTIVITIES**(i) Ongoing projects:**

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. in Lacs)
1.	Aakash Ganga – A Social Enterprise Model for RWH and Agriculture of low water demanding economically important plant	Rajiv Gupta	Department of Science and Technology, New Delhi	61.96
2.	Design and development of Static Sunshade for thermal comfort inside the building	Rajiv Gupta	University Grants Commission, New Delhi	9.86
3.	GIS based Characterization of Ground water in Shekhawati Region of Rajasthan	Anupam Singhal	Aditya Birla Group (ABG)	10.00

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. in Lacs)
4.	Development and Usage of Innovative Ductile Composite Materials for Repair and Retrofitting of Masonry Structures	S. B. Singh	Aditya Birla Group (ABG)	10.00
5.	Sustainable High Performance Concrete Infrastructures	S. B. Singh and Ravindra Dhir	UKIERI Collaborative Research Award	281.6
6.	Strengthening of Local Soil Using Fly Ash	Kamlesh Kumar	UGC	2.00
7.	A Study on Sludge Minimization during The Treatment of Pickling Effluent and Utilization of Sludge	Anupam Singhal	ABG	10.00
8.	GIS based Characterization of Ground water in Shekhawati Region of Rajasthan	Anupam Singhal	DST	18.00
9.	Investigation into the Behavior of Coupling	Dipendu Bhunia	Research Initiation Beam Grant Scheme BITS Pilani	2.00
10.	Dynamic Buckling Responses of Composite Structures	S. N. Patel	BITS Faculty Research Initiation Grant	2.00
11.	Modeling Modal Shift to Bus Rapid Transit System (BRTS) from other modes of travel in Jaipur	Shriniwas S Arkatkar	BITS Faculty Research Initiation Grant	2.00

(ii) **Projects Sanctioned during the year**

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. In Lakhs)
1.	Development and Usage of Innovative Ductile Composite Materials for Repair and Retrofitting of Masonry Structures	S. B. Singh	Aditya Birla Group (ABG)	10.00
2.	A Study on Sludge Minimization during The Treatment of Pickling Effluent and Utilization of Sludge	Anupam Singhal	ABG	10.00
3.	GIS based Characterization of Ground water in Shekhawati Region of Rajasthan	Anupam Singhal	DST	18.00
4.	Impact of PMGSY roads on accessibility in rural areas	A.K. Sarkar A.P. Singh and Shriniwas S Arkatkar	National Rural Roads Development Agency	22.63
5.	Investigation of the Effect of Carbonation on the Properties of Concrete	Dipendu Bhunia	DST	34.00
6.	Mobilization of Metals from Copper Mine Tailings of Khetri Copper Mine, Rajasthan and their Attenuation by Soil: Groundwater Pollution Implications	Sanghamitra Kundu	DST	11.27

(iii) Projects completed this year

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. in Lakhs)
1.	Flexural Strengthening of Concrete Structures using Near Surface Mounted (NSM) Fiber Reinforcements	S. B. Singh	UGC, New Delhi, under Category of Major Research Project	9.30

C. PUBLICATIONS**Papers published by Faculty In Journals**

S.No.	Author(s)	Title of the Publication	Journal	Vol, year	Page Nos.
1.	Shriniwas S. Arkatkar and V. Thamizh Arasan	Micro-simulation Study of Vehicular Interactions on Upgrades of Intercity Roads in Heterogeneous Traffic	European Transport	52, 2012	1-33
2.	Manraj Singh Bains, Balaji P., Shriniwas S Arkatkar	Modeling of Traffic Flow on Indian Expressways using Simulation Technique	Procedia Social and Behavioral Sciences, Elsevier,	43,2012	563-573
3	Subodh Kant Dubey, Balaji P. and Shriniwas S. Arkatkar	Time Gap Modeling under Mixed Traffic Conditions: A statistical Analysis	Journal of Transportation System Engineering and Information Technology, Elsevier,	12(6), 2012	25-34
4	V. Thamizh Arasan and Shriniwas S. Arkatkar	Effect of Upgrade and its length on PCU of Vehicles in Heterogeneous Traffic	Highway Research Journal, Indian Roads Congress	4(1), 2012	51-68
5	Anupam Singhal, Satya Prakash and V.K. Tiwari	A study on sludge utilization of treated spent liquor sludge with fly ash by making cement concrete hollow cavity bricks	International Journal of Environmental Protection	2, 2012	17-21
7	D. Kumar and S. B. Singh	Effects of Flexural Boundary Conditions on Failure and Stability of Composite Laminate with Cutouts	Journal of combined inplane loads composite part B	45, 2012	657-665.
9	S. B. Singh and Himanshu Chawla	Dynamic Characteristics of GFRP Laminates with Cutouts	International Journal of Applied Engineering Research	07, 2012	1319-1323
10	S. B. Singh, Sivasubramanian, M.V.R., Likhith Reddy, A., Chandra Prakash, K., Nagarjuna, K. and Hima Kiran	Performance of NSM-FRP RC beams in flexure and shear using locally developed CFRP rebars	Int. Journal Sustainable Materials and Structural Systems,	01, 2012	42-67
11	Ajit Pratap Singh	Optimal selection of a	Springer Journal of	4(3), 2012	313-338

S.No.	Author(s)	Title of the Publication	Journal	Vol, year	Page Nos.
	and S. K. Dubey	landfill disposal site using a modified fuzzy utility approach	Fuzzy Information and Engineering		
12	J. S. Challa, A. Paul, Y. Dada, V. Nerella, P. R. Srivastava and Ajit Pratap Singh	Integrated Software Quality Evaluation: A Fuzzy Multi-Criteria Approach	Journal of Information Processing Systems,	7(3), 2012	473-518
14	A.K. Sarkar	Role of Social Sciences in Engineering Education	Pertanika Journal of Social Sciences and Humanities	20 (4), 2012	1275-1286
15	D. Bhunia, V. Prakash and A.D. Pandey	A study on the behavior of Coupled Shear Walls	Structural Engineering and Mechanics	42(4), 2012	645-675

Papers published by Faculty In Conferences

S. No.	Author(s)	Title of the Publication	Proceedings of Conference	Pages/ Page ID	Place
1.	Ajit Pratap Singh, S. Chakrabarti, and S. K. Dubey	Managing Water Quality of a River Basin Using Fuzzy Water Quality Index	Proceedings National Seminar on Recent Trends in Geo-Environmental Engineering (RTGEE-2012)	83-88	M.B.M Engineering College Jodhpur
2.	Ajit Pratap Singh, S. Chakrabarti, A. K. Sarkar and S. K. Dubey	Fuzzy water quality index and sensitivity analysis: a comprehensive technique for water quality management of a river basin	5th International Perspective on Water Resources & the Environment Conference, 2012 (ASCE conference)	385-397	Marrakech, Morocco
3.	Singh Praveen, Gowda K.S., Arkatkar S.S. and Sarkar A.K.	Pedestrian gap acceptance behaviour analysis at midblock sections	National Conference and workshop on "Recent Advances in Traffic Engineering"	1-14	Surat
4.	P.Saha, A. K. Sarkar, M. Pal	Study on percent time-spent-following: a performance measure for two-lane highways	2 nd International Conference on Civil Engineering and Building Materials, 2012	899-902	Hong Kong
5.	Umashankar S, Shalini Kanuganti, Ashoke Kumar Sarkar and Shrinivas Arkatkar	Level of service analysis of city buses on different routes in Jaipur using fuzzy set theory	Proceedings of the TSE Silver Jubilee International Conference -10 th TPMDC	1-19	IIT Bombay
6.	Behara, Krishna Nikhil Sumanth, Shrinivas Arkatkar and Ashoke Kumar Sarkar	Estimation of Extra Burden Perceived by Public Transport Users while Walking to and from Bus Stops in Jaipur	Proceedings of the TSE Silver Jubilee International Conference -10 th TPMDC	1-21	IIT Bombay
7.	Kartikeya Jha, Balaji Ponnun, Shrinivas S. Arkatkar,	Time Series Analysis: A Contemporary Approach to Traffic Volume Forecasting	Proceedings of the TSE Silver Jubilee International Conference -10 th TPMDC	1-18	IIT Bombay
8.	Manraj Singh Bains, Balaji P.,	Modeling of Traffic Flow on Indian	8 th ICTTS- Procedia Social and Behavioral Sciences,	563-573	Changsha, China

S. No.	Author(s)	Title of the Publication	Proceedings of Conference	Pages/ Page ID	Place
	Shriniwas S Arkatkar	Expressways using Simulation Technique	Elsevier		
9.	Behara, Krishna Nikhil Sumanth, Arkatkar, Shriniwas S., and Sarkar, Ashoke Kumar	A Composite Index to Measure the Perceived Inadequacy of Public Transportation	5 th Research Symposium on Urban Mobility India, Institute of Urban Transport, 2012	1-6	New Delhi
10.	Jha Kartikeya and Shriniwas Arkatkar	Univariate Time Series Modeling for Traffic Volume Estimation	Proceedings of the National Conference on "National Conference on Urban Mobility-Challenges, Solutions and Prospects, 2012	1-5.	IIT Madras
11.	Balaji Ponnu, Ravikiran Puvvala and Shriniwas Arkatkar	Traffic Flow Modeling of the Delhi Gurgaon Expressway-An Empirical and a Simulation Approach	Proceedings of the National Conference on "National Conference on Urban Mobility-Challenges, Solutions and Prospects	1-7	IIT Madras
12.	Jha Kartikeya and Shriniwas Arkatkar	Traffic Forecasting Techniques for Projecting Vehicular Population in India	National Conference and workshop on "Recent Advances in Traffic Engineering, 2012	1-5.	SVNIT Surat
13.	Singh Praveen, Gowda K.S., Arkatkar S.S. and Sarkar A.K.	Pedestrian gap acceptance behaviour analysis At midblock sections	Proceedings of the National Conference and workshop on 'Recent Advances in Traffic Engineering', 2012	1-14	SVNIT Surat
14.	Shriniwas S. Arkatkar	Analysis of Heterogeneous Traffic Flow Using Microscopic Simulation Technique	National Symposium on Innovations and Advances in civil Engineering,2012	1-12	GGCT, Jabalpur
15.	Muthukumar, G and Kumar Manoj	Finite Element Dynamic Analysis of Shear W	Int. Conf. on Advances in Mechanical, Manufacturing and Building Science	1044- 1050	VIT University, Vellore
16.	Arun Kumar G N, G. Sujitha Kumari and D. Bhunia	A Study on Sustainable Straw Bale House Construction during Earthquakes in India	Proceedings of Structural Engineering Convention,2012	293- 297	NIT Surat, December 2012.
17.	G. Sujitha Kumari, D. Bhunia and G N Arun Kumar	Investigation into the Behavior of Coupling Beams	Proceedings of Structural Engineering Convention- 2012	298- 302	NIT Surat, December
18.	D. Bhunia, K. Sujitha and G.N. Arun	A Study on the Behavior of Coupling Beams	International Conference on Earthquake Resistant Construction Practice, 27th-28 th July 2012	300- 310	Dr. M.G.R. University, Chennai,

D. CONFERENCES ATTENDED BY FACULTY MEMBERS

1. Kamlesh Kumar presented a paper on “ Estimation of Tri-axial Behavior of Pilani Soil using the results of Direct Shear Test as a function of pore water content” at the second International symposium on constitutive modeling of Geometrical: Advances and New Applications (IS-Model, 2012), jointly organized by Tsinghai university and IACMAG at Beijing, China (15-16 October, 2012) (symposium proceedings, pages 417-421)
2. Shrinivas Arkatkar Key Note Address :“Modelling of Heterogeneous Traffic Flow on Upgrades of Intercity Roads” to the scientists from Central Road Research Institute (CSIR-CRRI) laboratory, New Delhi, India, on 16.01.2012.
3. Shrinivas Arkatkar Key Note Address : “Modelling of Traffic Flow on Indian Expressways using Simulation Technique” in the PTV Germany (Sunovatech) User Group Meeting in New Delhi, India on 9-02-2012.
4. Shrinivas Arkatkar Key Note Address: “Impact Assessment of Bus Rapid Transit under Heterogeneous Traffic Conditions.” to the students and faculties of Department of Architecture and Planning, Visvesvaraya National Institute of Technology Nagpur, India, on 13.2.2012.
5. Shrinivas Arkatkar Key Note Address: "Analysis of Heterogeneous Traffic Flow Using Microscopic Simulation Technique" to the students and faculties of Department of Civil Engineering, in National Symposium at Gyan Ganga Institute of Technology, (GGCT) Jabalpur, India, on 17.3.2012.
6. Shrinivas Arkatkar Key Note Address: Time Gap Modelling under Mixed Traffic Conditions: A Statistical Analysis” to the participants in the National Conference and Workshop on „Recent Advances in traffic Engineering” at SVNIT Surat, India, on 7.06.2012.
7. D. Bhunia, K. Sujitha and G.N. Arun, “A Study on the Behavior of Coupling Beams”, International Conference on Earthquake Resistant Construction Practice (ICEQRCP-2012), Dr. M.G.R. University, Chennai, 27th-28th July 2012.

E. CONFERENCES, SEMINARS & WORKSHOPS CONDUCTED

The civil engineering department organized a National Workshop on ‘Structural Health Monitoring and Rehabilitation’ during September 19th-20th, 2012 with the intention of shouring the developments in the health monitoring of the structures and rehabilitation of distressed structures. The workshop was attended by academicians, engineers, researchers and scientists at BITS Pilani. The workshop was coordinated by Dr. S. B. Singh and Dr. Dipendu Bhunia.

F. INVITED TALKS GIVEN BY BITS FACULTY

1. Dr. S. B. Singh Delivered invited lecture on “Innovative Ductile Fiber Reinforced Cementitious Composites for Structural Applications,” at National Conference on Recent Advances in Composites (NCRAC 2012), June 15-16, Hyderabad.
2. S. B. Singh (2012), “Retrofitting of RC Structures Using ECC and FRP,” Presented at Workshop on Structural Health Monitoring and Rehabilitation, September 19-20, 2012, Pilani, Rajasthan.
3. S. B. Singh and Himanshu Chawla (2012), “Assessment of Dynamic Parameter of GFRP Laminates with Imperfections (Paper#154),” ICCMS 2012, Hyderabad, India, December 9-12, (Accepted for publication in Conference Proceedings).
4. S. B. Singh and Himanshu Chawla (2012), “Dynamic Characteristics of GFRP Laminates with Cutouts (ID No-IETET2012-112),” 3rd International Conference on Emerging Trends in Engineering and Technology (IETET 2012) held at Geeta Institute of Management and Technology, Kurukshetra, India, November 9 -11, 2012, (Accepted for publication).
5. S. B. Singh (2012), “Innovative Ductile Fiber Reinforced Cementitious Composites for Structural Applications,” Presented as Invited Speaker at National Conference on Recent Advances in Composites (NCRAC 2012), June 15-16, Hyderabad.
6. Shrinivas Arkatkar Key Note Address :“Modelling of Heterogeneous Traffic Flow on Upgrades of Intercity Roads” to the scientists from Central Road Research Institute (CSIR-CRRI) laboratory, New Delhi, India, on 16th January 2012.

7. Shrinivas Arkatkar Key Note Address : "Modelling of Traffic Flow on Indian Expressways using Simulation Technique" in the PTV Germany (Sunovatech) User Group Meeting in New Delhi, India on 9th February 2012.
8. Shrinivas Arkatkar Key Note Address : "Impact Assessment of Bus Rapid Transit under Heterogeneous Traffic Conditions." to the students and faculties of Department of Architecture and Planning, Visvesvaraya National Institute of Technology Nagpur, India, on 13th February 2012.
9. Shrinivas Arkatkar Key Note Address: "Analysis of Heterogeneous Traffic Flow Using Microscopic Simulation Technique" to the students and faculties of Department of Civil Engineering, in National Symposium at Gyan Ganga Institute of Technology,(GGCT) Jabalpur, India, on 17th March 2012.
10. Shrinivas Arkatkar Key Note Address: Time Gap Modelling under Mixed Traffic Conditions: A Statistical Analysis" to the participants in the National Conference and Workshop on „Recent Advances in traffic Engineering” at SVNIT Surat, India, on 7th June 2012.
11. Dipendu Bhunia delivered an Invited Lecture on "A Systematic Design Approach of Coupled Shear Walls" in the Workshop Organized by Civil Engineering Department, IT BHU, 3-4th March 2012.

G. AWARDS AND RECOGNITIONS WON BY FACULTY AND STUDENTS

By Faculty:

Shrinivas Arkatkar appointed as Editorial Board member for three Journals (i) Transportation Research Group of India Magazine, (ii) Modern Traffic and Transportation Engineering Research and, (iii) International Journal for Traffic and Transport Engineering

Commendation Certificate Award for the paper: V. Thamizh Arasan and Shrinivas S. Arkatkar "Effect of Upgrade and its length on PCU of Vehicles in Heterogeneous Traffic" Highway Research Journal, Indian Roads Congress, New Delhi, 4(1),51-68.

By Student:

List of the Civil Engineering students which have published papers in 2012- 2013.

Name of the student	Name of Journal
Sujitha Kumari	SEC-2012 at NIT Surat
Arun G.N.and Omkar	SEC-2012 at NIT Surat
J. Rajendra Prasad	IUP Journal 2012
Himanshu Chawla	IJAER Journal 2012

H. FACULTY DEVELOPMENT, INTERNATIONAL COLLABORATION & INDUSTRY IMMERSION

Collaborating with Trinity college of Dublin, Ireland for possible Research Collaboration. Prof. S. B. Singh and Dr. Dipendu Bhunia are the members of committee on Ireland - India, Concrete Research Initiative (IICRE) Project.

I. SIGNIFICANT NEW EQUIPMENTS/EXPERIMENTAL FACILITY ADDED DURING THE YEAR

S. No.	Description of Goods
1.	<ul style="list-style-type: none"> • Sine Sweep Software Package
2.	<ul style="list-style-type: none"> • Midas GENE & Midas D Shop
3.	<ul style="list-style-type: none"> • COD Apparatus • Spectrophotometer • Dissolved Oxygen (DO) Meter • Field Kit
4.	<ul style="list-style-type: none"> • Sokkia DT 940 Electronic • LAN –GL Telescopic Tripod

S. No.	Description of Goods
	<ul style="list-style-type: none"> • Sokkia B40 AL • SAT-YL Telescopic Tripod • SUM43 Aluminium Staff • KP-90N Digital Planimeter
5.	<ul style="list-style-type: none"> • 208210WT, Oxitop Is6 • Digital BOD Analyzer
6..	<ul style="list-style-type: none"> • Flexure Testing machine • Triaxial testing apparatus • Direct Shear test apparatus
7.	<ul style="list-style-type: none"> • Digital Marshall apparatus
8.	<ul style="list-style-type: none"> • Osborne Reynolds Demonstration • Orifice and Free Jet Flow • Basic Hydraulics Bench
9.	<ul style="list-style-type: none"> • Hydraulic Jump apparatus • Heleshaw apparatus • Impact of Jet apparatus

J. DEPARTMENTAL ASSOCIATION/CLUB ACTIVITIES

Civil Engineering Association

1. APOGEE 2012 (events: Shrishti, GridLock Istruct E, Krazy Bridge)
2. APOGEE 2012 (Projects: out of 25, 3 projects won prize)
3. Farewell for the final year students (BE and ME)
4. ARCHETYPE fest (Events: Bridge The Gap, Cardstruction, Urbanistica, Lego Legends)

B1.10.3 Department: Chemical Engineering

Number* of faculty members (as on 31 December 2012)

Professor	01
Associate Professor	01**
Assistant Professors	09
Lecturers	10
Visiting Faculty	00

* On & Off Campus. ** On deputation to Dubai Campus

Head of the Department: Dr. Suresh Gupta

Contact details: sureshg@pilani.bits-pilani.ac.in

Number of PhD Scholars: 04

Ph.D. Thesis Submitted during the year: 01

A. SPONSORED RESEARCH ACTIVITIES

Total number of Sponsored Projects in the department: 10 [3 (Department Grant) + 4 (Research Grant) + 3 (Research Initiation Grant)]. Details are given below.

(i) Ongoing projects

Project Title	Principal Investigator	Co-Investigator	Agency	Sanction (Rs. in Lakh)
UGC – DRS – SAP	Head of Department	-	UGC	48.0
Research Initiation Grant	Dr Pradipta Chattopadhyay	-	BITS, Pilani	2.00
Research Initiation Grant	Dr Pratik N Sheth	-	BITS, Pilani	2.00
Research Initiation Grant	Dr Smita Raghuvanshi	-	BITS, Pilani	1.20

(ii) Projects sanctioned during the year

Project Title	Principal Investigator	Co-Investigator	Agency	Sanction (Rs. in Lakh)
DST-FIST	Head of Department	-	DST	80.50
Removal of Volatile Organic Compounds (Chlorinated VOCs, non-Methane Hydrocarbons, Ethylene Glycol) from Waste Streams using Biofiltration	Dr Smita Raghuvanshi	-	DST	14.18
Reactive Extraction of Nicotinic and Isonicotinic Acids from Aqueous Solution	Dr Sushil Kumar	-	DST	11.11
Removal of Heavy Metals from Industrial Wastewater using Biofiltration	Dr Smita Raghuvanshi	Dr Suresh Gupta	UGC	5.50

(iii) Projects completed this year

Project Title	Principal Investigator	Co-Investigator	Agency	Sanction (Rs. in Lakh)
Modeling and Simulation of Viscose Flow through JetPack Assembly	Dr Pratik N. Sheth	Dr Suresh Gupta	Aditya Birla Group: Birla Cellulosic, Kharach	5.52
Infrastructure Development	Head of Department		UGC	20.0
Research Initiation Grant	Dr. Sushil Kumar		BITS, Pilani	2.00

B. PUBLICATIONS

- (i) The faculty of the department published 10 papers in international/national refereed journals during the year.
1. Datta D. and Kumar S., Modeling and Optimization of Recovery Process of Glycolic Acid using Reactive Extraction. International Journal of Chemical Engineering and Applications, 3 (2012), 141-146.
 2. Datta D., Kumar S., Wasewar K. L. and Babu B. V., Comparative Study on Reactive Extraction of Picolinic Acid with Six Different Extractants (Phosphoric and Aminic) in Two Different Diluents (Benzene and Decane-1-ol). Separation Science and Technology, 47 (2012), 997 – 1005.
 3. Gangadhar, G., Maheshwari, U., Gupta, S., Application of Nanomaterials for the Removal of Pollutants from Effluent Streams. Nanoscience and Nanotechnology-Asia, 2 (2012), 140-150.
 4. Ghosh, S., Das, G., Das, P.K., Inception and Termination of Core Annular Pattern for Oil-Water Downflow. AIChE Journal, 58 (2012), 2020-2029.
 5. Ghosh, S., Patil, P.K., Das, A.K., Mishra, S.C., Das, P.K., 3-D lattice Boltzmann Model for Asymmetric Taylor Bubble and Taylor Drop in an Inclined Channel, Engineering Applications of Computational Fluid Mechanics, 6 (2012), 383-394.

6. Ghosh, S., Vaidya, A., Das, A.K., Mishra, S.C., Das, P.K., Numerical Study of Dynamics of Bubbles using Lattice Boltzmann Method, *Industrial Engineering and Chemistry Research*, 51 (2012), 6364-6376.
 7. Jain, A. and Babu, B. V., Analysis of Process Interactions in Dynamic Systems Using Frequency Dependent RGA. *Advanced Materials Research*, 403-408 (2012), 895-899.
 8. Raghuvanshi, S., Gupta, S., Babu, B. V., Growth Kinetics of Acclimated Mixed Culture for Degradation of Iso-Propyl Alcohol (IPA), *Journal of Biotechnology and Biomaterials*, Accepted, (In Press).
 9. Roy, B. K., Artyushkova, Pham, H. N., Li, L., Datye, A.K., and Leclerc, C. A., Effect of Preparation Method on the Performance of the Ni/Al₂O₃ Catalysts for Aqueous-Phase Reforming of Ethanol: Part II-Characterization. *International Journal Hydrogen Energy*, 37 (2012), 18815-18826.
 10. Roy, B., Martinez, U., Loganathan, K., Datye, A.K., and Leclerc, C. A., Effect of Preparation Methods on the Performance of Ni/Al₂O₃ Catalysts for Aqueous-Phase Reforming of Ethanol: Part I-Catalytic Activity. *International Journal Hydrogen Energy*, 37 (2012), 8143 - 8153.
- (ii) The faculty of the department published 47 papers in international/national conferences during the year.
1. Bhargav, U., Nitin, J., Prakash, N., Advances in Conducting Polymers, Proceedings of the 8th Annual Session of Students Chemical Engineering Congress (SCHEMCON 2012), September 21-22, 2012, Pilani India.
 2. Chattopadhyay, P., Anand, N. A. P., Impact of Surfactants on Aqueous Foam Generation, Proceedings of 8th Annual Session of SCHEMCON 2012, Department of Chemical Engineering, Birla Institute of Technology and Science, Pilani, India, 21-22nd September, 2012.
 3. Chattopadhyay, P., Current relevance of Foams and Foam Characterization, Proceedings of 65 th Annual Session of IICHE (CHEMCON 2012), NIT Jalandhar, India, 27-30th December, 2012.
 4. Chattopadhyay, P., Gupta, U., Experimental Studies for Measurement of Performance of Ethanol based Aqueous Foam, Proceedings of National Conference on Recent Advances In Chemical and Environmental Engineering (RACEE 2012), NIT Rourkela, India, Jan 20-21, 2012.
 5. Chattopadhyay, P., Kumar, S. A., Kumar, Y. R., Foam and Foam Property Evaluation using aqueous Ethanol, Proceedings of 8th Annual Session of SCHEMCON 2012, Department of Chemical Engineering, Birla Institute of Technology and Science, Pilani, India, 21-22nd September, 2012.
 6. Chattopadhyay, P., Modeling of Naphtha and Kerosene Product Yields with Reaction Temperature for Hydrocracking Process, Proceedings of National Conference on Energy and Environmental Issues related to Chemical Industries (EEChemI-2012), Agra, India, Feb 18-19, 2012.
 7. Chattopadhyay, P., "Modeling Studies with Foaminess of Ethanol Based Aqueous Foam", Proceedings of 4th National Symposium for Material Research scholars (MR-12), IIT Bombay, Mumbai, India, May 3-5, 2012.
 8. Chattopadhyay, P., Rastogi, P., "Foam Development and Factors Impacting Foam Stability", Proceedings of Conference on Technological Advancements in Chemical and Environmental Engineering (TACEE-2012), Department of Chemical Engineering, Birla Institute of Technology and Science, Pilani, India, March 23-24, 2012.
 9. Chaudhuary C., Jain A., "Application of Forward Osmosis Membrane Process in Desalination". Proceedings of Conference on Technological Advancements in Chemical and Environmental Engineering (TACEE-2012), Pilani, India, 2012.
 10. Chowrasia, N., Sheth, P.N., "Simulation of a Coal Gasifier to Optimize the Hydrogen Production using Aspen Plus Software", Proceedings of Technological Advancements in Chemical and Environmental Engineering (TACEE-2012), Department of Chemical Engineering, BITS-Pilani, Pilani Campus, India, March 24-25, 2012.

11. Datta, D., Kumar, S., "Reactive Extraction of Picolinic Acid using Tri-n-Octylamine (TOA) Dissolved in Toluene and DCM", International Symposium and 65th Annual Session of IChE (CHEMCON-2012), National Institute of Technology, Jalandhar, Punjab, December 27-30, 2012.
12. Datta, D., Chellappan, S., Kumar, S., "Experimental Design and Modeling of Itaconic Acid Reactive Extraction using Response Surface Method", Proceedings of Conference on Technological Advancements in Chemical and Environmental Engineering (TACEE-2012), Department of Chemical Engineering, Birla Institute of Technology and Science, Pilani, Rajasthan, March 23-24, 2012.
13. Datta, D., Kumar, S., Chellappan S., Ghosh, A., "Effect of Modifier on Reactive Extraction of Glycolic and Glyoxylic Acids", Proceedings of Conference on Technological Advancements in Chemical and Environmental Engineering (TACEE-2012), Department of Chemical Engineering, Birla Institute of Technology and Science, Pilani, Rajasthan, March 23-24, 2012.
14. Datta, D., Kumar, S., "Extraction and Back-Extraction Studies of Picolinic Acid Using Tri-n-Octylamine Dissolved in 1-Decanol", Proceedings of AIChE Annual Meeting 2012, Pittsburgh Convention Center, Pittsburgh (PA), USA, October 28-November 2, 2012.
15. Dave, I., Sharma, A. K., "Industrial and Agricultural Wastes as Potential Adsorbents for Wastewater Treatment : A Review", Proceedings of 8th Annual Session of Students' Chemical Engineering Congress (SCHEMCON - 2012), Sept. 21-22, 2012, Pilani, India
16. Ghosh, A., Maheshwari, U., "Surfactant Flooding: A Tertiary Method for Oil Recovery from the Reservoir", Proceedings of 8th Annual Session of Students' Chemical Engineering Congress (SCHEMCON 2012), Department of Chemical Engineering, BITS, Pilani, September 21-22, 2012, pp. 203.
17. Goel, P., Amin, K., Maheshwari, U., "Water Coning: A Major Reason for the Decline in Overl Recovery of Oil from the Reservoir", Proceedings of 8th Annual Session of Students' Chemical Engineering Congress (SCHEMCON 2012), Department of Chemical Engineering, BITS, Pilani, September 21-22, 2012, pp.200.
18. Goel, P., Maheshwari, U., "Gas Lift - An Artificial Lift Technology", Proceedings of International Symposium and 65th Annual Session of IChE in association with International Partners (CHEMCON-2012), Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, India, December 27-30, 2012.
19. Gupta, A., Maheshwari, U., "Dynamics and Control of MTBE Catalytic Distillation Column using ASPEN Plus", Proceedings of Technological Advancements in Chemical and Environmental Engineering (TACEE), Department of Chemical Engineering, BITS-Pilani, Pilani, India, March 23-24, 2012.
20. Hareeshbabu, P., Shankar, C. V., Gupta, S., Jain A., "Desalination: A Strategic Review of Methods, Cost and Techniques in 21st Century". Proceedings of Conference on Technological Advancements in Chemical and Environmental Engineering (TACEE-2012), Pilani, India, 2012.
21. Ingle, S. A., Prakash, N., Sharma, A. K., "Effects of Operating Conditions on Ethylene-Norbornene Co-polymerization Catalyzed by Cyclopentadienyl-Phenoxytitanium Catalysts: An Artificial Neural Network Approach, Proceedings of National Conference (TACEE – 2012) on Technological Advancements in Chemical and Environmental Engineering, March 23-24, 2012, Pilani, India.
22. Jain, A., Babu, B.V., "RGA Analysis of Dynamic Process Models Under Uncertainty", Proceedings of 2nd International Conference on Soft Computing for Problem Solving (SocProS-2012), Jaipur, India, December 28-30, 2012.
23. Jain P. Haridas, Babu B.V., "A Comparative Study on Input-Output Pairing Analysis of Multivariable Systems", Proceedings of Conference on Technological Advancements in Chemical and Environmental Engineering (TACEE-2012), Pilani, India, March 23-24, 2012.
24. Kharwade H.S., Anand A.P., Raghuvanshi S., "Physico-Chemical Analysis and Environmental Impact Assessment of Textile Industry Effluent", Proceedings of National Conference (TACEE – 2012) on Technological Advancements in Chemical and Environmental Engineering, March 23-24, 2012, Pilani, India.
25. Kumar P., Mohanta H.K., Ahmed B., "Simulation Studies on Dimerization of Isobutene",

- Proceedings of the 8th Annual Session of Students Chemical Engineering Congress (SCHEMCON 2012), p. 156, September 21-22, 2012. BITS, Pilani-Pilani Campus.
26. Kumar S.A., Maheshwari U., "Role of Polymer Flooding in Enhanced Oil Recovery: A Review", Proceedings of 8th Annual Session of Students' Chemical Engineering Congress (SCHEMCON 2012), Department of Chemical Engineering, BITS, Pilani, September 21-22, 2012, pp.201.
 27. Kumar S.A., Maheshwari U., "Separation of Produced Emulsions from Surfactant Enhanced Oil Recovery Processes", Proceedings of 8th Annual Session of Students' Chemical Engineering Congress (SCHEMCON 2012), Department of Chemical Engineering, BITS, Pilani, September 21-22, 2012, pp.202.
 28. Kumar S., Datta D., Babu B.V., "Reactive Extraction of Nicotinic Acid Using Tri-n-Octylphosphine Oxide (TOPO) Dissolved in a Binary Diluent Mixture", Proceedings of AIChE Annual Meeting 2012, Pittsburgh Convention Center, Pittsburgh (PA), USA, October 28-November 2, 2012.
 29. Maheshwari, U., Kumar, Y.T.R., "Enhanced Oil Recovery through Alkaline Flooding, a Tertiary Recovery Technique", Proceedings of International Symposium and 65th Annual Session of IChE in association with International Partners (CHEMCON-2012), Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, India, December 27-30, 2012.
 30. Maheshwari,U., Gupta, S., "Equilibrium Studies for the Removal of Copper (II) using Activated Neem Bark as a Low Cost Adsorbent", Proceedings of International Symposium and 65th Annual Session of IChE in association with International Partners (CHEMCON-2012), Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, India, December 27-30, 2012.
 31. Maheshwari,U., Ingle S. A., Sadaphal, A. G., "Modeling of CO₂ Flooding, An Enhanced Oil Recovery Technique", Proceedings of International Symposium and 65th Annual Session of IChE in association with International Partners (CHEMCON-2012), Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, India, December 27-30, 2012.
 32. Maheshwari, U., Ingle, S. A., Ghosh, Patil, A., M. S., "Optimization of Vinyl Chloride Monomer (VCM) Production using ASPEN PLUS, Proceedings of International Symposium and 65th Annual Session of IChE in association with International Partners (CHEMCON-2012), Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, India, December 27-30, 2012.
 33. Majumder, S., Raghuvanshi, S., Gupta, S., "Bioremediation of Cr(VI) by Acclimated Mixed Culture: Kinetic Study", Proceedings of 3rd World Congress on Biotechnology, OMICS Group, HICC, Hyderabad, India, September 13-15, 2012.
 34. Mishra, S., Raghuvanshi, S., Gupta, S., "Batch Studies on Biomitigation of Carbon dioxide (CO₂) using Mixed Culture", Proceedings of International Symposium and 65th Annual Session of IChE in association with International Partners (CHEMCON-2012), Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, India, December 27-30, 2012.
 35. Mishra, S., Raghuvanshi, S., Mishra, S., "Feasibility of Mixed Culture to Mitigate CO₂", "Proceedings of National Conference (TACEE – 2012) on Technological Advancements in Chemical and Environmental Engineering, March 23-24, 2012, Pilani, India.
 36. Muppalla U., Jain A., "Energy from Municipal Solid Waste: A State-of-art Review". Proceedings of Conference on Technological Advancements in Chemical and Environmental Engineering (TACEE-2012), Pilani, India, 2012.
 37. Nagpurkar, I., Mishra, S., Raghuvanshi, S., Gupta, S., "Mitigation of CO₂ Using Microalgae Chlorella Minutissima", Proceedings of International Symposium and 65th Annual Session of IChE in association with International Partners (CHEMCON-2012), Department of Chemical Engineering, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, India, December 27-30, 2012.
 38. Narayanan, P., Prakash, N., Sharma, A. K., "Reaction Mechanisms and Kinetics of Olefin Polymerization Catalyzed by Metallocenes: A Review", Proceedings of National Conference (TACEE – 2012) on Technological Advancements in Chemical and

Environmental Engineering, March 23-24, 2012, Pilani, India.

39. Nipane, A., Sheth, P.N., "A Review: Pyrolysis of Biomass in a Fluidized Bed Reactor", Proceedings of Technological Advancements in Chemical and Environmental Engineering (TACEE-2012), Department of Chemical Engineering, BITS-Pilani, Pilani Campus, India, March 24-25, 2012.
40. Pani, A. K., Amin, K. G., Mohanta, H. K., "Data Driven Soft Sensor of a Cement Mill using Generalized Regression Neural Network". International Conference on Data Science and Engineering (IEEE-ICDSE), 98-102, 18-20 July 2012,
41. Prakash, N., Kumar S., Sharma, A. K., "Modeling and Simulation of Metallocene Catalyzed α -Olefin Polymerization: A Logarithmic Differential Evolution Approach", Proceedings of International Symposium and 65th Annual Session of IChE in association with International Partners (CHEMCON-2012), December 27-30, 2012 Jalandhar, India.
42. Prakash, N., Kumar, S., Sharma, A. K., "Effect of Reaction Parameters on Propylene Polymerization with the Me₂Si(2-Me-Ind)₂ZrCl₂ Catalyst: An Artificial Neural Network Approach", Proceedings of National Conference (TACEE – 2012) on Technological Advancements in Chemical and Environmental Engineering, March 23-24, 2012, Pilani, India.
43. Prakash, N., Kumar, S., Sharma, A.K., "Modeling and Kinetic Parameter Estimation of Ethylene Polymerization with Silica Supported Dimethylsilylene bis(η^5 -inden-1-ylidene)zirconium dichloride Catalyst using Differential Evolution Approach", Proceedings of Annual meeting of AIChE-2012, Oct 28 - Nov 2, 2012, Pittsburgh, PA, USA.
44. Prashanth, G., Goel, P., Sharma, R., Sheth, P.N., "Characterization of Bio-oil generated from Pyrolysis of Biomass: A Review, Proceedings of Technological Advancements in Chemical and Environmental Engineering (TACEE-2012)", Department of Chemical Engineering, BITS-Pilani, Pilani Campus, India, March 24-25, 2012.
45. Reddy, H.Y., Mohanta, H.K., "Use of Principal Component Analysis for Process Monitoring and Control" Proceedings of the 8th Annual Session of Students Chemical Engineering Congress (SCHEMCON 2012), p. 163, September 21-22, 2012, BITS, Pilani-Pilani Campus.
46. Sadaphal, A. G., Maheshwari, U., "A Review on the Multiphase Behavior of Oil-Brine-Surfactant Systems in Relation to Changes in Pressure, Temperature and Oil Composition", Proceedings of 8th Annual Session of Students' Chemical Engineering Congress (SCHEMCON 2012), Department of Chemical Engineering, BITS, Pilani, September 21-22, 2012, pp.200.
47. Sharma, R., Chowrasia, N., Sheth, P.N., "Kinetic Modeling and Simulation of Pyrolysis of Jatropha cake waste, Proceedings of Technological Advancements in Chemical and Environmental Engineering (TACEE-2012)", Department of Chemical Engineering, BITS-Pilani, Pilani Campus, India, March 24-25, 2012.
48. Singh, S., Mohanta, H.K., "Control of A Fluidized Bed Catalytic Cracking Unit Using ANN Controller", Proceedings of the 8th Annual Session of Students Chemical Engineering Congress (SCHEMCON 2012), p.160, September 21-22, 2012, BITS, Pilani-Pilani Campus.
49. Upadhyaya, A., Raghuvanshi, S., "Novel Techniques to Prevent Air Pollution from Petroleum Refineries", Proceedings of National Conference (TACEE – 2012) on Technological Advancements in Chemical and Environmental Engineering, March 23-24, 2012, Pilani, India.
50. Vaishnav, B., Raghuvanshi, S., "Application of Environmental Impact Assessment Method for Integrated Solid Waste Management Activities", Proceedings of National Conference (TACEE – 2012) on Technological Advancements in Chemical and Environmental Engineering, March 23-24, 2012, Pilani, India.
51. Yadav, A., Prakash, N., Sharma, A. K., "Kinetic Modeling of Propene Polymerization with Silica Supported Zirconocene Catalyst and Estimation of Kinetic Parameters using Differential Evolution Algorithm", Proceedings of APA International Congress (HEALTH CARE INDIA 2012) on Advances in Human Healthcare Systems, February 20-23, 2012 New Delhi, India.

C. CONFERENCES ATTENDED/PAPERS PRESENTED

1. Mr. Subhajit Majumder, Dr. Suresh Gupta and Dr. Smita Raghuvanshi attended 3rd World Congress on Biotechnology, OMICS Group, HICC, Hyderabad, India, September 13-15, 2012.
2. Amit Jain attended 2nd International Conference on Soft Computing for Problem Solving (SocProS-2012), Jaipur, India, December 28-30, 2012.
3. Mr. Dipaloy Datta and Mr. Nikhil Prakash attended Cleaner Energy, Stronger Economy, Better Living, 2012 AIChE Annual Meeting, David L. Lawrence Convention Center, Pittsburgh, PA, USA, October 28 - November 2, 2012.
4. Chattopadhyay, P., National Conference on Recent Advances in Chemical and Environmental Engineering (RACEE 2012), NIT Rourkela, India, Jan 20-21, 2012.
5. Pani, A. K., IEEE International Conference on Data Science and Engineering held at Cochin University of Science and Technology, 18-20 July 2012.
6. Prakash, N., 8th Annual Session of Students Chemical Engineering Congress (SCHEMCON 2012), September 21-22, 2012, Pilani India.
7. Prakash, N., National Conference on Technological Advancements in Chemical and Environmental Engineering (TACEE – 2012), March 23-24, 2012, Pilani, India.

D. BOOKS PUBLISHED/EDITED DURING THE YEAR

1. Raghuvanshi, S., Majumder, S., Gupta, S., Biofiltration: Essentials, Research and Applications in Bioremediation and Sustainability: Research and Applications, Edited by Romeela Mohee and Ackmez Mudhoo, Scrivener Publishing LLC., USA, March 2012.
2. Jain, A., Kumar, S., Proceedings of conference on Technological Advancements in Chemical and Environmental Engineering (TACEE-2012), B.I.T.S., Pilani, 2012.
3. Mohana, H. K., Gupta S., Sheth P. N., (editors), "Proceedings of the 8th Annual Session of Students' Chemical Engineering Congress (SCHEMCON 2012) on the theme 'Energy Efficient Technologies for Green Environment' held in BITS Pilani during September 21-22, 2012.

E. CONFERENCES, SEMINARS & WORKSHOPS CONDUCTED

The Department of Chemical Engineering, BITS Pilani, Pilani Campus has organized following two national level conferences.

1. The Department of Chemical Engineering organized the "Conference on Technological Advancements in Chemical and Environmental Engineering (TACEE-2012)" during March 23-24, 2012, with an objective to provide a forum for the scientists, scholars, engineers and students from the Universities and Industries across India to exchange ideas and present recent technological developments in chemical and environment engineering. Honorable chief guest Dr Chandra Shekhar, Director, CEERI, Pilani, inaugurated the conference. Eminent professors Prof V G Gaikar, ICT, Mumbai and Prof B V Babu, JKLU, Jaipur were also present during the inaugural function and delivered invaluable keynote addresses to the participants and to the research community at large. The conference encompassed topics of great relevance videlicet Green and Sustainable Technology, Energy Engineering, Biochemical Engineering, Transport Phenomena, Catalysis and Reaction Engineering, Modeling simulation Optimization and Control, New materials and Polymers, Environmental Processes, Separation Processes, Water: Resources, Quality and Treatment and Nanotechnology. Paper presentations and poster sessions of cutting-edge research in afore mentioned areas, supported by keynote addresses and plenary presentations were major part of the conference, which had accepted submissions, with 150 full paper presentations and 60 poster displays, distributed over 14 sessions.
2. Department of Chemical engineering, BITS-Pilani, Pilani Campus and the Students' chapter of Indian Institute of Chemical Engineers (IChE), Pilani Regional Center jointly organized the 8th Annual Session of Students' Chemical Engineering Congress "SCHEMCON 2012" with the theme "*Energy Efficient Technologies for Green Environment*" during 21-22 September 2012. Honorable chief guest Mr. P. Vijayaraghavan, President of IChE and ex-President of Reliance Industries Ltd., Vadodara Manufacturing Division inaugurated the congress. During the ceremony, there were esteemed guests present from the various fields of Chemical engineering society such as Dr. Ashim Kumar De, Honorary Secretary of IChE, Prof. V K Rattan and Mr. C.P. Ramulu, Vice Presidents of IChE and other IChE council members. The total participants registered for SCHEMCON 2012 was 397 of which there were 89 female and 308 male

candidates. There were 122 IChE student members and 16 IChE council members present during SCHEMCON-2012. The total number of papers presented was 141. There were participation from 56 colleges across India. There were total 6 technical sessions with 10 themes and one technical quiz. Nine key note speakers delivered their talk on the various aspects of the theme of the Congress.

F. INVITED TALKS GIVEN BY BITS FACULTY: N.A

G. INVITED TALKS ARRANGED IN THE DEPARTMENT

Dr. Samir Hemant Mushrif, Assistant Professor, School of Chemical and Biomedical Engineering (SCBE), Nanyang Technological University (NTU) has delivered a seminar focusing on his research areas and of various faculty members of SCBE, NTU such as Catalysis and Chemical System Engineering, Nanotechnology and Printed Devices, Tissue Engineering and Regenerative Medicine, Synthetic Biology and Biosensors and Devices, etc.

H. AWARDS AND RECOGNITIONS WON BY FACULTY AND STUDENTS

1. Department of Chemical Engineering became the Pilani Regional Centre of Indian Institute of Chemical Engineers (IChE), Pilani.
2. Dr Smita Raghuvanshi has been awarded Young Scientist, Fast Track Proposal and UGC major project.
3. Dr Arvind K Sharma, Dr Suresh Gupta, Dr Pratik N Sheth, Dr Sushil Kumar, Mr Nikhil Prakash, have been the external examiner for BTech (Chemical Engg.) students at Banasthali University.
4. Mr Dipaloy Datta and Mr Nikhil Prakash have been awarded international travel grant by Department of Science and Technology (DST), New Delhi, under young scientist scheme to attend 2012 AIChE Annual Meeting at Pittsburgh, USA, from October 28 to November 2, 2012.
5. Dr. Arvind K Sharma has been the Chairperson of 8th Annual Session of Students' Chemical Engineering Congress (SCHEMCON - 2012), September 21-22, 2012, Pilani, India and National Conference on Technological Advancements in Chemical and Environmental Engineering (TACEE – 2012), March 23-24, 2012, Pilani, India.
6. Faculty members have been involved in reviewing various national and international journals such as AIChE Journal, Industrial Engineering and Chemistry Research, American Journal of Polymer Science, International Journal of Materials Engineering, Nanoscience and Nanotechnology, International Journal of Chemical Reactor Engineering, Desalination and Water Treatment, Journal of Hazardous Materials, Process Biochemistry, Journal of Advanced Research, Pakistan Journal of Scientific and Industrial Research, Adsorption Science and Technology, Chemical Engineering Communications, Journal of Membrane Science and Technology and Journal of Food Processing and Technology.
7. Dr. Suresh Gupta has been the International Conference Committee member for the International Congress on Chemical, Biological and Environmental Sciences, held from January 08 to January 10 in Taipei, Taiwan in 2013.
8. Faculty members are also the members of following organizations:
 - American Institute of Chemical Engineers (AIChE)
 - Indian Institute of Chemical Engineers (IChE)
 - International Association of Engineers (IAENG)

I. FACULTY DEVELOPMENT, INTERNATIONAL COLLABORATION AND INDUSTRY IMMERSION

Dr Pratik N Sheth and Dr Suresh Gupta visited Aditya Birla Science and Technology Company Limited, Mumbai during 25th June to 28th June, 2012 and Kotputli Cement Plant, Aditya Birla Group on 26th July 2012 to initiate collaborative research work.

J. SIGNIFICANT NEW EQUIPMENTS/EXPERIMENTAL FACILITY ADDED DURING THE YEAR

1. Petroleum Engineering Laboratory has been developed. The 10 pieces of equipment purchased for this laboratory are Aniline Point, Cloud and Pour Point, Conrad son Carbon Residue, Copper Corrosion test, Distillation, Flash and Fire point, Flash and Fire point, Reid

- Vapour pressure, Say bolt Viscometer, Softening point, Mini Boiler, Multi-point Magnetic Stirrer.
- Two laboratories (Environmental Engineering and Analytical Laboratories) have been renovated by the Infrastructure support provided by UGC. Two (Analytical and CAD) laboratories have been made air conditioned.
 - COSMOtherm software was purchased to strengthen the facility of CAD lab. This software provides the thermodynamic properties of pure compounds and arbitrary mixtures.

K. DEPARTMENTAL ASSOCIATION/CLUB ACTIVITIES

Chemical Engineering Association

During the year 2012, Chemical Engineering Association organized various activities which provided students opportunities to showcase their innovative thinking and academic competence. The technical fest of BITS, "APOGEE 2012" saw a record participation from Chemical Engineering students. The festival proved to be a nurturing ground for the budding engineers of the association, who put their heads together and came up with brilliant shows of conceptual and application oriented projects. The association prepared 27 projects for APOGEE 2012. Many of the projects floated new ideas that left the observers mesmerized. Two projects out of these bagged Gold and two won Silver in their respective categories. The association also organized two competitions during APOGEE 2012, the first one being "ChemPro". In this event students got to showcase their talent, interdisciplinary knowledge and their innovation skills. ChemPro searched for process designing skills and their implementation within the students. It consisted of two rounds. In the final round students had to design a system for desalination of sea water. The entries were judged on their cost effectiveness and innovation involved. The second event was "Resource Optimization" for which the problem statement was acquired from the chemical industry and it served as a platform to connect industry to students.

In April 2012, the executive committee for the academic year 2012-13 was nominated and was officially announced in the farewell dinner organized for the class of 2012. The Lakshmi Memorial Award was given to Mr. Neeraj Agarwal for his best overall performance. The Tres Bien Award was given to Mr Sundeep Pothula. Mr Prateek, Mr Nitish and Mr Ayush were presented with the Monali Day award. The Alumni Award was given to Mr Soumavo and Mr Harsh. The prestigious R P Vaid Award was given to Mr. Jasneet Singh. The association released the annual magazine PHENOMENON in the month of April, 2012.

During the first semester 2012-13, the association was involved in organizing the Engineer's Day celebration (September 15th), in collaboration with mechanical engineer association. During September 21-22, 2012, the association took part in organizing the major national event SCHEMCON. It was a 2 day event with "Vedanta Hindustan Zinc" as the Platinum Sponsor. Five major events were conducted in SCHEMCON namely MP Chary Memorial Award Lectures Session, Invited Lecture by Eminent Personalities, Poster presentation, Technical quiz, and Cultural Programme. A large attendance was present for the lectures. The poster presentation presented a budding ground for innovative ideas on various chemical disciplines. All the events were well appreciated by the visiting eminent personalities and students. This 2 day event was conducted for the first time in BITS, was attended by about 500 participants and was a huge success.

The association organized a talk by Abhishek Agarwal, the former secretary and PU coordinator on various techniques for making resume, facing interviews, etc. The association was also involved in organizing talks by the delegates of various companies, in collaboration with mechanical association. The farewell was organized for the first semester of class of 2013. The association also brought out two T-shirts widely appreciated for their design during August 2012 to generate revenue for working of the association.

B1.10.4 Department: Chemistry

Number of faculty members (as on 31 January 2013)

Senior Professors, Professors	02
Associate Professors	03
Assistant Professors	12
Lecturers	00
Visiting Faculty	00

Head of the Department: Prof. Subit Kumar Saha**Contact details:** sksaha@pilani.bits-pilani.ac.in**Number of Ph D Scholars:** 39**Ph.D. Thesis Submitted and awarded during the year:** 03**A. SPONSORED RESEARCH ACTIVITIES**

Total number of Sponsored Projects in the department: 19. Details are given below.

(i) Ongoing projects

PI	Funding Agency	Title of the Project	Amount (in lakhs)
HOD	DST	DST-FIST Programme	87.00
Dr. Inamur Laskar	CSIR	Syntheses of Platinum (II) based pure blue emitting triplet harvesting materials and their applications in white organic light emitting diodes as single emissive dopants	20.20
Dr. Madhushree Sarkar	DST	Crystal engineering of metal organic frameworks using organic linkers derived from template-controlled solid-state reactions	23.40
Dr. Inamur Laskar	DST	Syntheses of efficient and pure blue triplet emitting materials for fabrication of white organic light emitting diodes (WOLEDs)	22.17
Dr. Dalip Kumar	CSIR	Design and Synthesis of Novel Bioactive Heterocycles as Anticancer	13.58
Dr. Anil Kumar	UGC	Novel Synthetic Methodologies for Biologically Important Compounds using Lanthanide Triflates as Lewis Acids in Ionic Liquids	8.77
Dr. Ram Kinkar Roy	DST	Conceptual Density Functional Theory Based Modeling of Biomolecular Systems	24.52
Dr. Madhushree Sarkar	BITS	Guest Exchange Dynamics of Porous Metal-organic Frameworks	14.65
Dr. Dalip Kumar jointly with Dr. Okram Mukherjee Singh (Deptt. of Chemistry, Manipur University, Imphal)	DBT	Synthesis of Novel N,O,S containing heterocycles and evaluation of their anticancer activities	54.38

PI	Funding Agency	Title of the Project	Amount (in lakhs)
Dr. Saumi Ray	DST	Synthesis and detailed characterization of 'ship-in-a-bottle' complexes inside the microporous and mesoporous materials	19.94
Dr. Dalip Kumar	UGC	Design, Synthesis And Biological Evaluation of Indole-based Heterocycles as Anticancer Agents	07.50
Dr. Prashant U Manohar	DST	An Extensive Computational Development of Multi-reference Coupled-cluster Methods for Electronic Structure Investigations of Big Molecules	22.40
Dr. Paritosh Shukla	UGC	Transition metal-catalysed coupling/reductive coupling of saturated alkyl halides with 32electron withdrawing alkenes	11.96
Dr. Indresh Kumar	DST	Organocatalysis as green approach for synthesis of pyrrolidine/fused pyrrolidines: towards the synthesis of related alkaloids	21.90
Dr. Surojit Pande	BITS	Synthesis and Characterization of Metal Oxide (TiO ₂ and IrO ₂) Dendrimer-Encapsulated Nanoparticles (DENS) for Catalysis and Electrocatalysis	2.00
Dr. Rajeev Sakhuja	BITS	Design and Synthesis of Bile acid Nucleosides conjugates linked via amino acids as potential anticancer agents.	2.00
Dr. Indresh Kumar	BITS	Organocatalytic cascade towards substituted pyrrole-3-carboxyaldehydes: A variation in Paal-Knorr Pyrrole Synthesis	2.00
Dr. Dalip Kumar and Dr. Anil Kumar	Ranbaxy	Development of a novel synthetic route for anti-HIV drug	27.00
Dr. Subit Kumar Saha	Aditya Birla Group	Study on physicochemical and interfacial properties of some mixed micellar systems of novel Gemini and conventional surfactants in water and water-organic solvent mixed media	10.00

(ii) Projects sanctioned

PI	Funding Agency	Title of the Project	Amount (in lakhs)
Dr. Rajeev Sakhuja	UGC	Novel-Amino, α -Aminoxy and α -Hydrazino acids Linked Bio-conjugates: Design, Synthesis and Biological Evaluation	6.0
Dr. Surojit Pande	UGC	Size-Dependent Hydrogenation Catalysis with Mono-(Pd and Pt) and Bimetallic (Pd@Pt) Nanoparticles in Quantum Dot Region.	6.0
Dr. Rajeev Sakhuja	DST	Design of Synthetically Tunable Azino-fused Chromene Conjugates as Potential Organogelators.	23.00
Dr. Surojit Pande	DST	Synthesis and Characterization of (Metal Oxide) _{core} - Metal _{shell} Nanoparticles in Quantum Dot Region and Their Application in Electrocatalysis	23.00

(iii) Projects completed

PI	Funding Agency	Title of the Project	Amount (in Lakhs)
Dr. Anil Kumar	CSIR	Synthesis of novel ionic liquid supported reagents and their applications in organic transformations	15.76
Dr Subit Kumar Saha	CSIR	Twisted intramolecular charge-transfer(TICT) fluorescence probing studies of micropolarity and microviscosity of different types of Gemini miscelles	12.13
Dr. Bharti Khungar	DST	Synthesis and catalytic applications of environmentally benign ionic liquid tagged Schiff base metal complexes"	19.47
HOD		Infrastructural Development Grant Under UGC-SAP Programme	20.00
HOD		UGC-SAP Programme	35.00

B. PUBLICATIONS

The faculty of the department published thirty seven papers in international/national refereed journals during the year.

1. Tania, Córdova-Sintjago, Rajeev Sakhuja, K. Kondabolu, C. E. Canal, R. G. Booth, "Molecular determinants for ligand binding at serotonin 5-HT_{2A} and 5-HT_{2C} GPCRs: Experimental affinity results analyzed by molecular modeling and ligand docking studies". *Int. J. Quantum Chem.*, **2012**, 112, 3807.
2. Ajay K. Sah, Kiran Soni, "Synthesis of cupric acetate selective receptor derived from alanyl glycoconjugate and their application in selective oxidation of benzylic alcohols", *Catal. Commun.* **2012**, 28, 120-123.
3. A. Sarmah, S. Saha, P. Bagaria (Gupta), R. K. Roy "On the complementarity of comprehensive decomposition analysis of stabilization energy (CDASE) – Scheme and supermolecular approach.", *Chem. Phys.*, **2012**, 394, 29.
4. A. K. Tiwari, Sonu, M. Sowmiya, Subit K. Saha, "Micellization behavior of gemini surfactants with hydroxyl substituted spacers in water and water-organic solvent mixed media: The spacer effect", *J. Molecular Liquids*, **2012**, 167, 18.
5. M. Sowmiya, Subit K. Saha, "Exploration of twisted intramolecular charge transfer fluorescence properties of trans-2-[4-(dimethylamino)styryl]benzothiazole to characterize the protein-surfactant aggregates", *J. Luminescence*, **2012**, 132, 2166.
6. M. Sowmiya, A. K. Tiwari, Sonu and Subit K Saha, "A cationic surfactant-concentration dependent binding of a guest molecule with the nanotubes of β -cyclodextrin and its release from the nanotubular cavities", *Soft Matter*, **2012**, 8, 11072.
7. Rajeev Sakhuja, S. S. Panda, K. Bajaj, "Microwave assisted synthesis of five membered azaheterocyclic systems". *Curr. Org. Chem.*, **2012**, 16, 789.
8. A. R. Katritzky, L. Huang, M. Chahar, Rajeev Sakhuja, C D. Hall, "N-Hydroxyamidoxime, N-aminoamidoximes and hydrazidine", *Chem. Rev.*, **2012**, 112, 1633.
9. Alam P., Karanam M., Roy Choudhury A., Laskar I. R. "One-pot synthesis of strong solid state emitting mono-cyclometalated iridium (III) complexes: Study of their aggregation induced enhanced phosphorescence" *Dalton Trans.*, 2012, 41, 9276.
10. Indresh Kumar, N. A. Mir, C. V. Rode, B. P. Wakhloo, "Intramolecular Huisgen [3+2] cycloaddition in water: Synthesis of fused pyrrolidine-triazoles", *Tetrahedron: Asymm.* **2012**, 23, 225.
11. Indresh Kumar, Nisar A. Mir, Vivek K. Gupta and Rajnikant; "Organocatalytic direct Mannich/cyclization cascade as [3+2] annulation: Asymmetric synthesis of 2,3-substituted pyrrolidines"; *Chem. Commun.* **2012**, 48, 6975.

12. Indresh Kumar, Nisar A. Mir, Panduga Ramaraju, Basant P. Wakhloo; "Organocatalytic Mannich/cyclization/ aromatization sequence: direct synthesis of substituted pyrrole-3-carboxaldehydes"; *RSC Advances* **2012**, 2, 8922.
13. Anil Kumar, MS Rao, "An expeditious and greener one-pot synthesis of 4H-chromenes catalyzed by Ba(OTf)₂ in PEG-water", *Green Chem. Lett. Rev.* **2012**, 5, 283-290.
14. K Pericherla, P Khedar, B Khungar, Anil Kumar, "Click chemistry inspired structural modification ofazole antifungal agents to synthesize novel "drug like" molecules", *Tetrahedron Lett.* **2012**, 53, 6761-6764.
15. P Khedar, K Pericherla, Anil Kumar, "Exploration of CuAAC reaction for the synthesis of novel 3-(triazol-1-yl)methyl-imidazo[1,2-a]pyridines", *Synlett* **2012**, 2609 -2614.
16. MS Rao, BS Chhikara, R Tiwari, AN Shirazi, K Parang, Anil Kumar, "A greener synthesis of 2-aminochromenes in ionic liquid and evaluation of their antiproliferative activities", *Chem. Bio. Interface* **2012**, 2, 362-372.
17. Anil Kumar, MK Muthyala, S Choudhary, RK Tiwari, K Parang, "Ionic liquid as soluble support for synthesis of 1,2,3-thiadiazoles and 1,2,3-selenadiazoles", *J. Org. Chem.* **2012**, 77, 9391–9396.
18. MK Muthyala, S Choudhary, Anil Kumar, "Synthesis of ionic liquid-supported sulfonyl azide and its application in diazotransfer reaction", *J. Org. Chem.* **2012**, 77, 8787-8791.
19. M Rathore, A Dalvi, Anil Kumar, "Ionic liquid [Bmim][BF₄] - glass composites for solid state battery applications", *Int. J. Phy. Math. Sci.* **2012**, 2(S1), 1-5.
20. MK Muthyala, Anil Kumar, "A novel and efficient one pot synthesis of 2,4-disubstituted thiazoles and oxazoles using PTT in ionic liquid", *J. Heterocyclic Chem.* **2012**, 49, 959-964.
21. B Khungar, MS Rao, K Pericherla, P Nehra, N Jain, J Panwar, Anil Kumar, "Synthesis, characterization and microbiocidal studies of novel ionic liquid tagged Schiff bases", *C. R. Chimie* **2012**, 15, 669-674.
22. Anil Kumar, MK Muthyala, BS Chhikara, K Parang, "Ionic liquid supported TBD: An efficient and recyclable organocatalyst for Michael addition to α,β -unsaturated ketones", *Can. J. Chem.* **2012**, 90, 290-297.
23. K Pericherla, B Khungar, Anil Kumar, "One-pot, three-component synthesis of 1-amidomethylimidazo[1,2-a]pyridines catalyzed by ytterbium triflates", *Tetrahedron Lett.* **2012**, 53, 1253–1257.
24. MS Rao, BS Chhikara, R Tiwari, AN Shirazi, K Parang, Anil Kumar, "Microwave-Assisted and scandium triflate catalyzed synthesis of tetrahydrobenzo[a]xanthen-11-ones", *Monatsh Chem.* **2012**, 143, 263–268.
25. MK Muthayala, Anil Kumar, "Ionic liquid supported aldehyde: A highly efficient scavenger for primary amines", *ACS Comb. Sci.* **2012**, 14, 5-9.
26. MK Muthyala, BS Chhikara, K Parang, Anil Kumar, "Ionic liquid-supported synthesis of sulfonamides and carboxamides", *ACS Comb. Sci.* **2012**, 14, 60–65.
27. VK Rao, BS Chhikara, R Tiwari, AN Shirazi, K Parang, Anil Kumar, "One-pot regioselective synthesis of tetrahydroindazolones and evaluation of their anticancer and Src kinase inhibition activities", *Bioorg. Med. Chem. Lett.* **2012**, 22, 410–414.
28. K Soni, Anil Kumar, AK Sah, "Saccharide derived dinuclear Cu(II) complex: An efficient catalyst for oxidation of catechol and benzylic alcohols", *Catal. Commun.* **2012**, 17, 95–98.
29. Manjuri K. Koley, Seshadri C. Sivasubramanian, Babu Varghese, Periakaruppan T. Manoharan, Aditya P. Koley, "A paramagnetic octahedral trans-dihydroxy chromium(IV) complex with dianionic tetradentate Schiff base salophen and crystal structure of its transdiisothiocyanato analog", *J. Coord. Chem.* **2012**, 65, 3623-3640.
30. Manjuri K. Koley, Seshadri C. Sivasubramanian, Sumit Biswas, Periakaruppan T. Manoharan, Aditya P. Koley, "Dioxygen binding and activation by a highly reactive Cr(II) compound

- containing S,N-donors derived from o-aminothiophenol”, *J. Coord. Chem.* **2012**, 65, 3329-3351.
31. Shamik Chakraborty, Kohei Yamada, Shun-ichi Ikuichi, and Masaaki Fujii, “Gas phase IR spectra of tri-peptide Z-Pro-Leu-Gly: Effect of C-terminal amide capping on secondary structure”, *Chem. Phys. Lett.* **2012**, 531, 41-45
 32. Dalip Kumar, V. Arun, N. Maruthi Kumar, G. Acosta, B. Noel, K. Shah, “A facile synthesis of novel bis-(indolyl)-1,3,4-oxadiazoles as potent cytotoxic agents”, *ChemMedChem*, **2012**, 7, 1915.
 33. Dalip Kumar, N. Maruthi Kumar, Brett Noel, Kavita Shah, “A series of 2-arylamino-5-(indolyl)-1,3,4-thiadiazoles as potent cytotoxic agents”, *Eur. J. Med. Chem.* **2012**, 55, 432.
 34. Dalip Kumar, G. Patel, L. Vijayakrishnan, S. G. Dastidar, A. Ray, “Design and synthesis of 3,5-disubstituted-1,2,4-oxadiazoles as potent inhibitors of phosphodiesterase4B2”, *Chem. Biol. Drug. Des.*, **2012**, 79, 810-818.
 35. Dalip Kumar, K P Chandra Shekar, B. Mishra, A. Kumar, K. Akamatsu, E. Kusaka, T. Ito, “A facile synthesis and cytotoxicity of a novel porphyrin-cryptolepine conjugate”, *Chem. Bio. Interface* **2012**, 2, 114-121.
 36. Dalip Kumar, N. Maruthi Kumar and Mukund P. Tantak, “A convenient and facile synthesis of naturally occurring 2,5-diaryloxazoles”, *Chem. Bio. Interface* **2012**, 2, 331-338.
 37. Dalip Kumar, N. M. Kumar, S. Ghosh, K. Shah, “Novel bis(indolyl)hydrazide-hydrazones as potent anticancer agents”, *Bioorg. Med. Chem. Lett.*, **2012**, 22, 212-215.

C. CONFERENCES ATTENDED/PAPERS PRESENTED

1. Prashant U Manohar, “Electronic structure of 2- and 5- dehydro m-benzoquinone versus 2- and 5- dehydro m-xylene: A comparative study”, (poster) in the Theoretical Chemistry Symposium 2012 (TCS-2012) held at IIT Guwahati, **December 19-22, 2012**.
2. Parvez Alam, Inamur R. Laskar, “Syntheses of Highly Efficient Divalent Iridium Complexes and Study of their Aggregation Induced Enhanced Emission Properties”, held at BITS, Pilani, Rajasthan (Dept. of Physics), **February, 24-25, 2012 (poster)**.
3. Inamur R. Laskar, “Triplet Harvesting Materials : Applications in Organic Light Emitting Devices, National Conference on Nanoscience and Nanotechnology”, held at Aligarh Muslim University (AMU), **March 10-12, 2012 (invited lecture)**.
4. Parvez Alam and Inamur R. Laskar, “Microwave-Assisted Facile and Clean Synthesis of Cyclometalated Iridium(III) Complexes Useful for Organic Light Emitting Diodes”, held at BITS, Pilani, Rajasthan (Dept. of Chem.), **March, 25, 2012 (poster)**.
5. Kumari Suman and Madhushree Sarkar, “Effect of Counter Anions and Guest Molecules in Assembling Metal-Organic Frameworks (MOFs): A Case Study on the MOFs formed by Amide-Based *Exo* bidentate ligands”. National Symposium on Recent Trends in Chemical Science and Technology, Held in IIT Patna **March 3-4, 2012. (Poster)**.
6. Subit K. Saha, “Study on Guest Molecule Induced Nanotubes of Cyclodextrins and Their Secondary Aggregation Forming Rod-like Structures”, National Conference on Condensed Matter Physics (NCCMP), Department of Physics, BITS Pilani (**February 24-25, 2012 (Invited Speaker)**).
7. Subit K. Saha, “Study on mixed micellization behavior of cationic gemini surfactants with hydroxyl substituted spacer and ionic liquid in water and water-organic solvent mixed media”, Conference on Photochemistry and Luminescence, Department of Chemistry, Indian Institute of Technology, Guwahati (**March 9-10, 2012 (Invited Speaker and Co-chaired a technical session)**).
8. Subit K Saha, “Aggregation behavior of gemini surfactants with a room temperature ionic liquid and microenvironment of mixed micelles in water and water-organic solvent mixed media”, World Congress on Oleo Science (WCOS 2012) and 29th ISF Congress-JOCS/AOCS/KOCS/ISF Joint Meeting, Arkas Sasebo, Nagasaki, Japan (**September 30 – October 4, 2012. (Oral)**).
9. Amit K. Tiwari, M. Sowmiya, Sonu, Jagdish Kumar, Subit K. Saha, “Binding Interactions between a hemicyanine dye and the nanotubes of β -cyclodextrin”, National Conference on Condensed Matter Physics (NCCMP-2012), BITS Pilani, **February 24-25, 2012 (Poster Presentation)**.

10. Amit K. Tiwari, Subit K. Saha, "Study on binding interactions of a hemicyanine dye with nanotubes of β -cyclodextrin and effect of a Hofmeister series of potassium salts on it", Symposium on Recent Trends in Chemical Sciences, BITS Pilani, **March 25, 2012 (Oral Presentation)**.
11. Sonu, Amit K. Tiwari, Jagdish Kumar, Subit Kumar Saha, "Study on Intramolecular Charge Transfer Fluorescence Properties of trans-4-[4'-(N,N'-dimethylamino)styryl]pyridine in Homogeneous and Non-ionic Micellar Medium". National Conference on Condensed Matter Physics (NCCMP) at BITS, Pilani. **February 24-25, 2012 (Poster)**.
12. Sonu, Amit K. Tiwari, Subit Kumar Saha, "Study on Intramolecular Charge Transfer Fluorescence Properties of trans-4-[4'-(N,N'-dimethylamino)styryl]pyridine in Homogeneous and Non-ionic Micellar Medium". Symposium on Recent Trends in Chemical Science at BITS, Pilani **March 25, 2012 (Poster)**.
13. Sonu, Amit K. Tiwari, Bijender and Subit K. Saha, "Dynamics of Solvent and Rotational Relaxation of Coumarin 490 in Cationic Gemini Surfactant Reverse Micelles: A Picosecond Time-Resolved Fluorescence Spectroscopy Study". National Conference on "Global Challenges :New Frontiers in Chemical Sciences" Department of Chemistry, Kurukshetra University, Kurukshetra, Haryana, **22nd-23th September, 2012 (Poster)**.
14. Sonu, Amit K. Tiwari and Subit K. Saha, "Effect of Solvents and pH on Intramolecular Charge Transfer Fluorescence Properties of trans-2-[4'-(N,N'-dimethylaminostyryl)]pyridine". Chemical Constellation Cheminar – 2012 (CCC-2012) (An International Conference), Department of Chemistry, Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, Pujnjab, **10th-12th September, 2012 (Poster)**.
15. Amit K. Tiwari, Sonu, Bijender and Subit K. Saha, "Dynamics of solvent and rotational relaxation of Coumarin-480 in the micelles of Gemini surfactants: The Spacer effect". Chemical Constellation Cheminar – 2012 (CCC-2012) (An International Conference), Department of Chemistry, Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, Pujnjab, **10th-12th September, 2012 (Poster)**.
16. Ram Kinkar Roy, "Can Hardness Potential Remove The N-Dependence Problem of Local Hardness Descriptor?" National Symposium on Current Trends in Computational Chemistry (CTCC-2012) at North Eastern Hill University (NEHU), Shillong, Meghalaya, **16-17th March, 2012**.
17. Priya C Sande and Saumi Ray, "Modeling and Simulation of Nitrogen Fluidized Bed of Copper Dichloride using Computational Fluid Dynamics". National conference on Modeling Computational Fluid Dynamics and Operational Research Department of Mathematics, BITS Pilani **(4-5 February, 2012, Oral)**.
18. Archana Choudhary and Saumi Ray, "Study of Host – Guest systems prepared by "Ship in a Bottle complexes" synthesis and its characterization", Symposium on Recent Trends In Chemical Sciences, Chemistry Department, BITS Pilani, Rajasthan **(March 25, 2012).(Poster)**
19. Priya C Sande and Saumi Ray, "Simulation of Reactive and Inert Fluidized bed using CFD approach", Symposium on Recent Trends in Chemical Sciences, Chemistry Department BITS Pilani **(25 March, 2012, Oral)**.
20. Archana Choudhary and Saumi Ray, "Design and Synthesis of Nanostructural Heterogeneous Catalyst and Characterization", 4th National Symposium for Material Research Scholars, IIT Bombay **(May 4-5, 2012) (Oral)**.
21. Pankaj Nehra, Anil Kumar, Bharti Khungar, "Synthesis, characterization and applications of Ionic liquid supported Schiff bases", National Conference on Material Science: Current Trends and Future Prospects, Department of Chemistry, Lachoo Memorial college of Science and Technology, Jodhpur, **Feb. 6-7, 2012 (Oral)**.
22. Pankaj Nehra, M. Sudershan Rao, S. C. Sivasubramanian, Anil Kumar, Bharti Khungar, "Copper mediated catalytic oxidation of alcohols in presence of ionic liquid supported Schiff bases", National Symposium on Recent Trends in Chemical Science and Technology, Department of Chemistry, IIT Patna, **March 3-4, 2012 (Poster)**.
23. Indresh Kumar; Poster Presentation entitled "An "Organocatalytic Direct Mannich–Cyclization Cascade as [3+2] Annulation: Asymmetric Synthesis of 2,3-substituted pyrrolidines" during International Symposium on Chemistry and Chemical Biology of Natural Products (CCBNP-2012) on **2-4 Aug 2012** at ICT-Hyderabad.

24. Indresh Kumar, Invited lecture entitled "Organocatalysis in Asymmetric Synthesis: A Green Strategy for Small Molecule Natural Products (SMNPs) Synthesis" at National Seminar on "Significance of Green Strategies for Environmental Protection" by Department of Chemistry at KBN-College, Vijaywada (A.P.) during **14-15 December 2012**.
25. Ajay K. Sah, "Copper complexes of 4,6-O-ethylidene- β -D-glucopyranosylamine derived ligand and their reactivities", National Symposium on Recent Trends in Chemical Science and Technology (RTCST 2012), held at Department of Chemistry, IIT Patna during **March 3-4, 2012**.
26. Kiran Soni, Ajay K. Sah, "Amino acid derived glycoconjugates: A selective sensor for cupric acetate", Recent Trends in Chemical Sciences, held at Department of Chemistry, BITS Pilani, **March 25, 2012**.
27. Naroolah Baig, Ajay K. Sah, "Synthesis, characterization and proposed reactivities of oxo metal complexes derived from 4,6-O-ethylidene- β -D- glucopyranosylamine based ligand, Recent Trends in Chemical Sciences, held at Department of Chemistry, BITS Pilani, **March 25, 2012**.
28. Dalip Kumar, Design and Synthesis of Azaheterocycles as Antitubulin Agents, 17th International Conference on "Expanding Horizons in Chemical and Biological Sciences: Innovations Crossroads", Solapur University, Solapur, during **January 21-24th, 2012** (Invited Lecture).
29. Dalip Kumar, Organoiodine(III)-Promoted Synthesis of Azaheterocycles as Novel Antitubulin Agents, DBT sponsored short term teacher training program on "Molecular Biology and Organic Synthesis" during **July 05-22, 2012**, Mody Institute of Technology and Science(Deemed University) Lakshmangarh, Sikar (Guest Lecture).
30. Dalip Kumar, Bhupendra Mishra, K. P. Chandra Shekar, presented a poster on "Synthesis of *meso*-functionalized porphyrins: their DNA binding and photocleavage studies" 17th International ISCB Conference on Expanding Horizons in Chemical and Biological Sciences: Innovations Crossroads, Solapur University, Maharashtra, **January 21-24, 2012**.
31. Dalip Kumar, K. P. Chandra Shekar, Bhupendra Mishra, presented a poster on "Synthesis and DNA interaction studies of porphyrin appended thiazoles", 17th International ISCB Conference on Expanding Horizons in Chemical and Biological Sciences: Innovations Crossroads, Solapur University, Maharashtra, **January 21-24, 2012**.
32. N. Maruthi Kumar, Dalip Kumar, Gautam Patel, Lalitha Vijayakrishnan, Sunanda G. Dastidar and Abhijit Ray, Presented a poster on "Design and synthesis of 3,5-disubstituted-1,2,4-oxadiazoles as potent inhibitors of phosphodiesterase4B2", International Symposium on "Airway diseases: Etiology to Clinic " Organized by Daiichi Sankyo India Pharma Private Ltd, and Ranbaxy Labs, Gurgaon, India, **February 24-25, 2012**.
33. N. Maruthi Kumar, presented a paper on "Synthesis of Indolyltriazoles as Potent Antimitotic Agents" Symposium on Recent Trends in Chemical Science, BITS-Pilani, **March 25, 2012. (oral presentation)**
34. Dalip Kumar, N. Maruthi Kumar, presented a poster on "Synthesis and anticancer activity of novel 5-(3-indolyl)-1,3,4-thiadiazoles" Symposium on Recent Trends in Chemical Science, BITS-Pilani, **March 25, 2012**.
35. Dalip Kumar, V. Arun, presented a poster on "Synthesis of novel bis(indolyl)-1,3,4-oxadiazoles as potent antimitotic agents" Symposium on Recent Trends in Chemical Science, BITS-Pilani, **March 25, 2012**.
36. Dalip Kumar, Meenakshi, presented a poster on "An efficient Iodobenzene diacetate mediated synthesis of amino-1,3,4-oxadiazoles" Symposium on Recent Trends in Chemical Science, BITS-Pilani, March 25, 2012
37. Dalip Kumar, Mukund. P. Tantak, presented a poster on "Synthesis of some biologically important indolyl thiazoles." Symposium on Recent Trends in Chemical Science, BITS-Pilani, **March 25, 2012**.
38. Dalip Kumar, Bhupendra Mishra, K. P. Chandra Shekar, presented a poster on "Synthesis of *meso*-(4-cyanophenyl)porphyrins: their interactions with ctDNA and photophysical studies" Symposium on Recent Trends in Chemical Science, BITS-Pilani, **March 25, 2012**.

39. Dalip Kumar, K. P. Chandra Shekar, Bhupendra Mishra, presented a poster on "Synthesis and DNA interaction studies of porphyrin appended thiazoles" Symposium on Recent Trends in Chemical Science, BITS-Pilani, **March 25, 2012**.
40. K. P. Chandra Shekar, presented a paper on "Synthesis and DNA interaction studies of porphyrin appended thiazoles" Symposium on Recent Trends in Chemical Science, BITS-Pilani, **March 25, 2012 (oral presentation)**.
41. R. K. Roy Use of Density Functional Theory in Studying Reaction Kinetics and Thermodynamics (TALK) Theoretical Chemistry Symposium 2012 (TCS-2012) held at IIT Guwahati, **December 19-22, 2012**.
42. Rituparna Bhattacharjee and R. K. Roy, "A brief review and probable extension of conceptual density functional theory based descriptors to predict regioselectivity of biological systems". (POSTER) NCCMP-2012, Dept. of Physics, BITS Pilani, **February 24-25, 2012**.
43. Rituparna Bhattacharjee and R. K. Roy, "Can hardness Potential Remove N-dependence Problem of Local Hardness?" (Poster) International Congress of Quantum Chemistry, University of Colorado, USA and University of California, Los Angeles, USA, 2012.
44. Amrit Sarmah and R. K. Roy, "A CDASE scheme Based Theoretical Justification to Predict The Most Suitable Combination of Cisplatin Analogue and Promising Cisplatin Modulator. Some Useful Findings for Cancer Treatment" (POSTER) Current Trends in Computational Chemistry (CTCC-2012) NEHU, Shillong, **March 16-17, 2012** BITS Pilani.
45. Parvej Alam and Inamur Rahaman Laskar, "One-pot synthesis of strong solid state emitting mono-cyclometalated iridium (III) complexes: study of their aggregation induced enhanced phosphorescence", held at Dr. B R Ambedkar National Institute of Technology, Jalandhar (Department of chemistry) **September 10-12, 2012 (poster)**.

D. BOOKS PUBLISHED/EDITED DURING THE YEAR: Nil

E. CONFERENCES, SEMINARS & WORKSHOPS CONDUCTED

Department organized a **One day symposium on "Recent Trends in Chemical Sciences"** on March 25, 2012. In this symposium faculty members from science and pharmacy departments were invited to deliver talks. For the students oral and poster presentation sessions were arranged. Selected young participants were encouraged by best poster and oral presentation awards. This event was supported by University Grants Commission, New Delhi.

F. INVITED TALKS GIVEN BY BITS FACULTY

1. Dr. Inamur R. Laskar delivered an invited lecture on "Triplet Harvesting Materials : Applications in Organic Light Emitting Devices", National Conference on Nanoscience and Nanotechnology, held at Aligarh Muslim University (AMU), during **March 10-12, 2012**.
2. Dr. Subit K. Saha delivered an invited lecture on "Study on Guest Molecule Induced Nanotubes of Cyclodextrins and Their Secondary Aggregation Forming Rod-like Structures", National Conference on Condensed Matter Physics (NCCMP) held at Department of Physics, BITS Pilani during **February 24-25, 2012**.
3. Dr. Subit K. Saha, Co-chaired a technical session and delivered an invited lecture on "Study on mixed micellization behavior of cationic Gemini surfactants with hydroxyl substituted spacer and ionic liquid in water and water-organic solvent mixed media", Conference on Photochemistry and Luminescence held at Department of Chemistry, Indian Institute of Technology, Guwahati **during March 9-10, 2012**.
4. Dr. Indresh Kumar delivered an invited lecture on "Organocatalysis in Asymmetric Synthesis: A Green Strategy for Small Molecule Natural Products (SMNPs) Synthesis" at National Seminar on "Significance of Green Strategies for Environmental Protection" held at Department of Chemistry at KBN-College, Vijaywada (A.P.) during **14-15 December 2012**.
5. Dr. Dalip Kumar delivered an invited lecture on "Design and Synthesis of Azaheterocycles as Antitubulin Agents", 17th International Conference on Expanding Horizons in Chemical and Biological Sciences: Innovations Crossroads held at Solapur University, Solapur, during **January 21-24th, 2012**.
6. Dr. Dalip Kumar delivered a guest lecture on "Organoiodine (III)-Promoted Synthesis of Azaheterocycles as Novel Antitubulin Agents", DBT sponsored short term teacher training

program on "Molecular Biology and Organic Synthesis" held at Mody Institute of Technology and Science (Deemed University) Lakshmangarh, Sikar during **July 05-22, 2012**.

7. Dr. Ram Kinkar Roy delivered an invited lecture on "Can Hardness Potential Remove The N-Dependence Problem of Local Hardness Descriptor?", National Symposium on Current Trends in Computational Chemistry (CTCC-2012) held at North Eastern Hill University (NEHU), Shillong, Meghalaya during **16-17th March, 2012**.

G. INVITED TALKS ARRANGED IN THE DEPARTMENT

Speaker	Designation	Topic	Date
Prof. Rakesh Kumar Mahajan Department of Chemistry Guru Nanak Dev University Amritsar	Professor	Chemical sensors based on new ionophores	27.02.2012
Prof. Ashok Kumar Mishra Department of Chemistry Indian Institute of Technology Madras, Chennai	Professor	Excited Prototropism in fluorescent molecular probing	27.02.2012
Dr. Mukund Jha Department of Biology and Chemistry, Nipissing University, Canada	Assistant Professor	Synthesis of Novel Heterocycles using Indilin-2-ones and Indoline-2-thiones as Building Blocks	05.05.2012
Prof. Chien-Hsiang Chang Department of Chemical Engineering, National Cheng Kung University, Tainan, TAIWAN	Professor	Physical Stability and Charge Characteristic Control of Catanionic Vesicles with Double-Chained Cationic Surfactants and Cholesterol	08.05.2012
Dr. Amitabh Jha Department of Chemistry, Acadia University, Wolfville, Canada	Professor	Development of Selective Estrogen Receptor Modulator	19.05.2012

H. AWARDS AND RECOGNITIONS WON BY FACULTY AND STUDENTS

1. Mr. Amit K Tiwari, Mr. V. Kameswara Rao and Mr. M. Manoj Kumar awarded Senior Research Fellowship by CSIR New Delhi.
2. N. Maruthi Kumar received best poster award on "Synthesis and anticancer activity of novel 5-(3-indolyl)-1,3,4-thiadiazoles" Symposium on Recent Trends in Chemical Science, BITS-Pilani, March 25, 2012.
3. Mrs. Archana Choudhary received best oral presentation award on "Design And Synthesis of Nanostructural Heterogeneous Catalyst and Characterization" presented in the 4th National Symposium for Material Research Scholars, IIT Bombay (May 4-5, 2012).
4. Mr. Ashok Sharma received best poster award on "Nickel catalyzed reductive Heck reaction" presented in the Symposium on Recent Trends in Chemical Science at BITS, Pilani March 25, 2012.
5. Mr. Sonu received best poster award on "Study on Intramolecular Charge Transfer Fluorescence Properties of trans-4-[4'-(N,N'-dimethylamino)styryl]pyridine in Homogeneous and Non-ionic Micellar Medium" presented in the Symposium on Recent Trends in Chemical Science at BITS, Pilani, March 25, 2012.
6. Mr. Sonu received best oral presentation award on "Effect of Solvents and pH on "Intramolecular Charge Transfer Fluorescence Properties of trans-2-[4'-(N,N'-dimethylaminostyryl)]pyridine" presented in Chemical Constellation Cheminar – 2012 (CCC-2012) (An International Conference), Department of Chemistry, Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, Pujnjab, 10th-12th September, 2012.
7. Mr. Amit K. Tiwari received second prize in the oral presentation on "Study on binding interactions of a hemicyanine dye with nanotubes of β -cyclodextrin and effect of a Hofmeister series of

potassium salts on it" presented in the Symposium on Recent Trends in Chemical Sciences, BITS Pilani, March 25, 2012.

8. Mr. Yash Kothari an M.Sc. (Chemistry) student received first prize in the oral presentation on "An eco-friendly one-pot synthesis of substituted pyrazolo [1,5-a] pyrimidines using ytterbium triflate as green catalyst" presented in the Symposium on Recent Trends in Chemical Sciences, BITS Pilani, March 25, 2012.
9. Mr. M. Manoj Kumar received third prize in the oral presentation award on "Ionic liquid supported synthesis of azaheterocycles" presented in the Symposium on Recent Trends in Chemical Sciences, BITS Pilani, March 25, 2012.
10. Dr. Anil Kumar received ISCB Young Scientist Award 2013 by Indian Society of Chemists and Biologists, Lucknow and Harrison McCain Foundation award by Acadia University, Canada for 2011-2012.

I. FACULTY DEVELOPMENT, INTERNATIONAL COLLABORATION & INDUSTRY IMMERSION

1. Dr. Anil Kumar visited University of Rhode Island, Kingston, RI, USA as Visiting Scientist and for research collaboration with Prof. K. Parang during May 2012-July 2012.
2. Dr. Anil Kumar visited Acadia University, Canada during December 2012 to January 2013.
3. Department has signed a MoU with College of Pharmacy, University of Rhode Island, USA.

J. SIGNIFICANT NEW EQUIPMENTS/EXPERIMENTAL FACILITY ADDED DURING THE YEAR

Temperature controller, spin coater, rota-evaporator have been procured under various project grants. Theoretical and computational facilities for teaching and research have been created.

K. DEPARTMENTAL ASSOCIATION/CLUB ACTIVITIES

Activities of Chemistry Association

Informal Meet

An informal meet was held in Sky Lawns on August 09, 2012. The meet started with an informal introduction of all fresher followed by introduction of Executive Committee members. An informal overview of all the activities done by the Chemistry Association was explained to the fresher's. Towards the end, various fests and events like Science Week and Apogee were discussed at length and then the meet concluded.

Formal Meet

A formal Meet was held on August 24, 2012. This meet started off with a brief overview by Yash Kothari, President of Chemistry Association of all the activities by the association. Executive members were formally introduced and then the faculty members were introduced to the fresher's. All queries regarding Chemistry and general student life were addressed. Towards the end of the meet, all students had an interaction with their seniors which was later followed by snacks and tea.

Science Week

Chemistry Association in collaboration with Biology and Physics associations took part in the Science week celebrations where a treasure hunt was organized for all the students and various science fiction movies were screened in the FD-II QT.

Lab Visit

A laboratory visit was held on September 28, 2012. The students were taken to all the research laboratories of chemistry department under the guidance and supervision of Yash Kothari. The interaction between research scholars and students was very educative where doubts and queries of students were cleared by research scholars. This interaction encouraged the students to take up Lab Oriented Projects to gain hands-on experience while working on various lab equipment.

Executive Committee Review Meet

A meet for all the members of the executive committee was held on November 10, 2012 in SAC (Student Activities Centre) to review all the activities done by the association in the semester and various suggestions were taken to improve the activities of the association. Second semester activities were briefly discussed.

APOGEE Meet-1

The first APOGEE meet was held on November 20, 2012 in 3245. Students of all disciplines were invited for this meet. A rough idea of all the events and projects was given to all the first year students. They were encouraged to come up with their own ideas so that the ideas can be polished and taken further in the second semester. Few seniors described their experience and projects they have done in the previous APOGEE.

Nobel Laureate's Visit

Nobel Laureate Prof. Aaron Ciechanover whose major field of research is in chemistry, visited BITS pilani, Pilani Campus on 28 November, 2012. All the executive committee members got the opportunity to have lunch with him at VFAST. A very interactive session took place between Prof. Ciechanover and the executive members of all the disciplines. It was also a very knowledgeable session for all the students.

B1.10.5 Department: Computer Science & Information Systems

Number of faculty members (as on 31st December 2012)

Senior Professors, Professors	05
Associate Professors	01
Assistant Professors	04
Lecturers	19
Visiting Faculty	01

Head of the Department: Professor Navneet Goyal

Contact details: goel@pilani.bits-pilani.ac.in

Number of PhD Scholars: 06

A. SPONSORED RESEARCH ACTIVITIES & FUNDING

1. **Goyal Navneet, Goyal Poonam and B. Sundar, A New Distributed Computing Framework for Data Mining**, Dept. of Electronics and Information Technology, INR 1.20 Crores, 3 Years.
2. **Banerjee Rahul, Highly-Available Tactical Network for Battlefield Communication** (Project HATNet), Armament Technology Board, Indian Army, Department of Defence, Govt. of India, INR 49 Lakhs, 18 months.
3. **Misra J. P. and Goyal Poonam, Study, Analysis, and development of Network Security Operations Center for Military Networks of Indian Army**, Armament Technology Board, Indian Army, Department of Defence, Govt. of India, INR 49 Lakhs, 18 months.
4. **Sharma Yashvardhan, An Agent-Based Tool For Prediction, Analysis, Reporting And Dispensing of Climate Data**, UGC, New Delhi, India, INR 8.85 Lakhs 3 years

B. PUBLICATIONS

The faculty of the department published 07 papers in international refereed journals during the year.

1. **Gupta Vishal and Rohil Mukesh**. Interworking of 3G and 802.11 Networks: Present and the Future Ahead, International Journal of Mobile and Adhoc Network. Vol. 2, 106-110. IFRSA.
2. **Vishal Gupta and Mukesh Rohil**, Enhancing wi-fi with ieee802.11u for mobile data offloading,

- International Journal of Mobile Network Communications and Telematics (IJMNCT), 2, 19-29, AIRCC
3. **Yashvardhan Sharma**, Dinesh Saini, Soft Computing Particle Swarm Optimization based Approach for Class Responsibility Assignment Problem, International Journal of Computer Applications, 40, 12, 19-24, Harward Libraries, NewYork, USA
 4. **K Haribabu**, C Hota, **Arindam Paul**, *GAUR*: a method to detect *Sybil* groups in peer-to-peer overlays, Int. J. Grid and Utility Computing, 3, 2/3, 145-156, Inderscience <http://www.inderscience.com/info/inarticle.php?artid=47765>
 5. **Nirmal Kumar Gupta**, **Rohil Mukesh Kumar**, Measuring Maintenance Effort in Object Oriented Software with Indirect Coupling, International journal of Computer Applications, 54, 2, 19-24, Foundation of Computer Science, USA
 6. **Shekhawat Virendra Singh**, Saini Amrit Kumar and Chaubey V K, "*Efficient Heuristic Algorithms for Routing and Wavelength Assignment in Optical WDM Networks*", IUP Journal of Telecommunications, Vol. 4, no. 3, pp. 31-43, Aug 2012
 7. **Shekhawat Virendra Singh**, **Tyagi D K** and Chaubey V K, "*Design and Characterization of a Modified WDM Ring Network - An Analytical Approach*", Optik- International Journal for Light and Electron Optics, Elsevier, Vol. 123, Issue 12, pp. 1103-1107, June 2012

C. CONFERENCES

The faculty of the department published 22 papers in international/national Conferences during the year.

(i) Conferences attended/papers presented outside India:

1. Sailesh Conjetti, **Rahul Banerjee**, Rajiv Ranjan Singh, Bio-Inspired Wearable Computing Architecture and Physiological Signal Processing for On-Road Stress Monitoring, The IEEE-EMBS International Conference on Bio-medical and Health Informatics, Hong Kong China, January 5-7, 2012.
2. Swati P. Keskar, **Rahul Banerjee**, **Rajkiran Reddy**, A Dual PSoC based Reconfigurable Wearable Computing Framework for ECG Monitoring, The International Conference on Computing in Cardiology (CinC 2012) 11th, September 9-12, 2012, September 9-12, 2012, AGH University of Science and Technology, Krakov, CinC, USA, Krakow, Poland.
3. **Yashvardhan Sharma**, **Arindam Paul**, **Varuni Ganesan**, **Jagat Sesh Challa**, HADCLEAN: A Hybrid Approach to DataCleaning in Data Warehouses, IEEE, International Conference on Information Retrieval and Knowledge Management, Twenty First, 03-13, 03-15, 136 – 142, Malaysia Society of Information Retrieval and Knowledge Management (PECAMP), together with Universiti Putra Malaysia (UPM), Universiti Pertahanan Nasional Malaysia (UPNM), Universiti Kebangsaan Malaysia (UKM), and Universiti, Teknologi MARA (UiTM), IEEE Mines Wellness Hotel, Kuala Lumpur, Malaysia.
4. **Yashvardhan Sharma**, Raghbir Nasri and Kumar Askand, *Building a Data Warehousing Infrastructure based on Service Oriented Architecture*, IEEE, International Conference on Cloud Computing Technologies, Applications and Management 2012 (ICCCTAM-12), First, 12-08, 12-10, 15-21, BITS-Pilani, Dubai Campus, IEEE, BITS-Pilani, BITS-Pilani, Dubai Campus, Dubai, UAE.

(ii) Conferences attended/papers presented in India:

1. **Gupta Vishal and Rohil Mukesh**. An Experimental Measurement of Contradictory Judgement Matrices in AHP, The 2nd IEEE International Conference on Parallel, Distributed and Grid Computing, 06-08 December, JUIT, Wagnaghat, Wagnaghat, Distt Solan
2. **Gupta Vishal and Rohil Mukesh**. Information Embedding in IEEE 802.11 Beacon Frame, Seventh National Conference on Communication Technologies and its impact on Next Generation Computing CTNGC 2012, Oct, 20, ITS Ghaziabad, Ghaziabad
3. **Gupta Vishal** and Swaroop Shanti. Handover Procedure using Probability Based Mobility Patterns in 3G-WLAN Interworking Environment, Recent Advances in Computing and Software Systems (RACSS), April 25-27, SSN College of Engineering, Chennai

5. **Kumar Suneel**, A knowledge Acquisition System for a University Educational Process, 7th ICIIS 2012, August 06-09, IEEE, IIT Chennai, IIT Chennai, Chennai, India, <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6304805>
6. Singh Rajiv Ranjan, **Banerjee Rahul**, K Sailesh, Bio-signal Based On-road Stress Monitoring for Automotive Drivers, 18th National Conference on Communications (NCC) 2012, 3-5 February, 2012, Joint Telematics Group of IITs and IISc, IIT Kharagpur, IT Kharagpur, Kharagpur, India, Print media only.
7. **Rohil Mukesh Kumar**, A Fuzzy Logic Based Model for Analysis of a Research Design for its Suitability to Avoid Non-Sampling Errors in Market Research, Second International Conference on Business Analytics, Second, December 22-23, Great Lakes Institute of Management, Manamai Village, Tamilnadu, Manamai Village near Chennai, <http://www.greatlakes.edu.in/about-us/events>.
8. **Vyas Pankaj**, Mittal Ravi Kant, 1st Conference on Eliciting Additional Safety Requirements from Use-Cases Using SFTA, RAIT-2012, from 15-17 March, 2012 ISM, DHANBAD
9. **Gupta Nirmal Kumar, Rohil Mukesh Kumar**, Exploring Possibilities of Reducing Maintenance Effort in Object Oriented Software by Minimizing Indirect Coupling, 2nd International Conference on Computer Science, Engineering and Applications, from 25-27, May 2012, New Delhi, India
10. **Gupta Nirmal Kumar and Rohil Mukesh Kumar**, 5th Object Oriented Software Maintenance in presence of Indirect Coupling, International Conference on Contemporary Computing, 6-8, August 2012, Noida, India
11. **Gupta Nirmal Kumar and Rohil Mukesh Kumar**, Software Quality Measurement for Reusability, International Conference on Software Engineering and Mobile Application Modelling and Development, from 19-21 December 2012, S Abdur Rahman University Chennai, India
12. **D.C. Kiran, Gurunarayanan S. and Misra J.P.**, 1st Conference on An Efficient Method to Compute Static Single Assignment Form for Multicore Architecture., RAIT 2012, from 15-17 March, 2012 ISM, Dhanbad, Dhanbad, http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6194553
13. **D.C. Kiran, Gurunarayanan S. and Misra J.P.**, 6th Conference on Compiler Driven Inter Block Parallelism for Multicore Architecture. ICIP 2012, from 09-11 august, 2012 UVCE, Bangalore, http://link.springer.com/chapter/10.1007%2F978-3-642-31686-9_50
14. **D C Kiran, S. Gurunarayanan and Misra J.P.**, 1st Conference on Compiler Efficient and Power Aware Instruction Level Parallelism for Multicore Architecture, ICECCS, from 10-12, August, 2012, RSET, Cochin, Cochin http://link.springer.com/chapter/10.1007%2F978-3-642-32112-2_2
15. **Goyal Poonam, Mehala N** and Thakkar Dipen, Incremental model for query clustering fire 2012, from 17-19 December, 2012, ISI KOLKATA, <http://www.isical.ac.in/~clia/>
16. **Agarwal Vandana and Bhanot Surekha**, 1st Conference on "A Dynamic Data Structure for Real Time Face Recognition 2012 International Conference on Computer Technology and Science (ICCTS), from 18-19 August 2012, Tivoli Garden Resort Hotel, New Delhi, <http://www.ipcsit.com/vol47.htm>
17. **Gautam Avinash, Mohan Sudeept, Misra J.P.**, 7th Conference on A Practical Framework for Circle Formation by Multiple Mobile Robots ICIIS 2012, 4-8 August, 2012, IIT Madras, Chennai, DOI: 10.1109/ICIInfS.2012.6304765
18. **Gautam Avinash and Mohan Sudeept**, 7th Conference on A review of research in multi-robot systems, ICIIS 2012, 4-8 August, 2012, IIT Madras, Chennai, DOI:10.1109/ICIInfS.2012.6304778

D. BOOKS PUBLISHED/EDITED /CHAPTER WRITTEN DURING THE YEAR

Gupta Vishal, Rohil Mukesh, Chapter Named "Mobile data offloading: Benefits, Issues, and Technological Solutions", in the book "Advances in Computer Science, Engineering and Applications", Springer –Verlag, Berlin Heidelberg, Vol. 167, Page 73 to 80, ISBN-978-3-642-30110-0.

E. CONFERENCES, SEMINARS & WORKSHOPS CONDUCTED

NIL

F. INVITED TALKS GIVEN BY BITS FACULTY

1. **Banerjee Rahul**, "A Pervasive Computing Approach for Assisting the Elderly Computia 2012", Keynote Lecture, Second national conference on computation and mathematical sciences January, January 28, 2012, VIT University, Jaipur, India
2. **Banerjee Rahul**, "Cloud-Assisted Pervasive Computing: State-of-theArt", Invited Expert Lecture, February, 4, 2012., PCE, Jaipur, India
3. **Navneet Goyal**, "Data Mining: A System's Perspective", Invited talk at South Asia Workshop on Research Frontiers in Computing, organized by School of Computing, National University of Singapore (NUS), 29th May – 01st June 2012
4. **Navneet Goyal**, "Decision Trees and Ensemble Classifiers", Invited Lecture in Workshop on Machine Intelligence, 10-14 September, 2012, Department of Computer Engineering, Malaviya National Institute of Technology, MNIT, Jaipur, India.
5. **Goyal Poonam**, "Incremental Mining Algorithms and their Role in Data Stream Mining", Invited Lecture in Workshop on "Machine Intelligence", 10-14 September, 2012, Department of Computer Engineering, Malaviya National Institute of Technology, LMNIT, Jaipur, India
6. **Vyas Pankaj**, "Software Safety Analysis of Object Oriented Software Systems using SFTA" on March 29, 2012 at Rajasthan Institute of Engineering and Technology, Jaipur
7. **Vyas Pankaj**, "Software Safety Analysis of Object Oriented Software Systems using SFTA" on March 29, 2012 at Rajasthan College of Engineering for Women, Jaipur

G. INVITED TALKS ARRANGED IN THE DEPARTMENT

Prof. Ioannis A. Kakadiaris, Depts. of Computer Science, Electrical and Computer Engineering, Biomedical Engineering, University of Houston, TX, USA, delivered a talk on "Computational Intelligence: From Biometrics to Biomedicine", on 16th Jan. 2012.

H. AWARDS AND RECOGNITIONS WON BY FACULTY AND STUDENTS

1. Sonal Kumari, a full time Ph.D. scholar, working with Navneet Goyal and Poonam Goyal got the prestigious TCS Ph.D. scholarship from Jan. 2012 for a period of 4 years.
2. Sonal Kumari, a full time Ph.D. scholar, working with Navneet Goyal and Poonam Goyal also got the Canadian Govt. Commonwealth research scholarship to work for 6 months at Carleton University, Canada. (Scholarship amount- CAD \$ 10000)
3. Ankit Chaudhury – Poster got accepted in MSR Techvista, Kolkata

I. FACULTY DEVELOPMENT, INTERNATIONAL COLLABORATION AND INDUSTRY IMMERSION

1. **Poonam Goyal** faculty attended MSR Theoretical Computer Science Day at IISc., Bangalore on 04th Jan. 2012.
2. **Navneet Goyal** attended the **Microsoft Research Techvista** at Kolkata on 21st Jan. 2012.
3. **Mukesh Kumar Rohil** attended the Two day Workshop on **Digital Video Analytics and Processing (DVAP-12) First**, December, 21-22, Indian Institute of Technology, Madras (IITM), Indian Institute of Technology, Chennai India.
4. **Poonam Goyal** attended the International Conference on **Big Data Analytics**, 24-26 December 2012, India International Centre Organized by Delhi University, New Delhi, <http://bda2012.net/>
5. **P Murali** attended the International Workshop on Information Security at BITS-Pilani, Hyderabad Campus, Hyderabad from December 15-19, 2012.
6. **Asma Rani** attended the International Workshop on Information Security at BITS-Pilani, Hyderabad Campus, Hyderabad from December 15-19, 2012

7. **Rani Asma**, National Workshop on Cryptography and Number Theory, 3-6 May, 2012, Banasthali University, Banasthali University, held at Banasthali University, Banasthali, India

J. **SIGNIFICANT NEW EQUIPMENTS/EXPERIMENTAL FACILITY ADDED DURING THE YEAR**

In 2012, the department purchased equipment, hardware and software for approximately 45 Lakhs to upgrade its teaching and research labs. A new teaching lab was set up with 30 PCs. The lab is used for conducting labs of various courses and is also used by students of the department. A list of equipment, HW/SW procured during the year are:

1. 40 high end PCs for CSIS teaching lab.
2. 1 dual processor server
3. Two 24-port managed switches
4. 2 printers (1 multifunction color and 1 network printer)
5. 1 20KVA UPS
6. Mathematica Software (30 + 30 Licenses)
7. IBM SPSS PSW modeler premium (25 licenses)
8. Proteus Software (25 Licenses)
9. 1 LCD projector
10. 1 wireless router

K. **DEPARTMENTAL ASSOCIATIONS ACTIVITIES**

1. **Computer Science Association (CSA)**

During the annual year 2012, the Computer Science Association of BITS Pilani organized Alumni Research Talks, 3 Pre-apogee events and 6 Apogee events out of which 2 were kernel events. In the later part of the year we had started Parallel Programming and SEIG sessions as an initiative. Along with this CSA also organized DevFest along with GDG BITS Pilani for the first time in BITS. All our events throughout the year grossed a great response from the attendees.

Month	Name	Date
January	Alumni Research Talks	Jan 12,13 & 14, 2012
February	Pre Apogee - Windows Phone App dev Workshop	03/10/2012
	Qrious	02/12/2012
	Scratch	02/12/2012
March	Apogee Events	
	Windows Phone Hackathon	
	Coder	
	smashthebug	
	Istrike	
	MINDsweeper	
	codestorm	
August	Cyberfiesta	
	Mindturner 5.0	8/31/2012
September	Parallel Programming Session #1	8/30/2012
	Parallel Programming Session #2	09/05/2012
	Parallel Programming Session #3	09/12/2012
	Parallel Programming Make-up Session	9/18/2012
	Internship Session by Seniors	9/19/2012
	SEIG Introductory Session	9/20/2012
	CSA + GDG organized DevFest	Sep 21, 22 & 23 2012
	Parallel Programming Session #4	9/26/2012
ML SIG Session #1	9/27/2012	

October	Parallel Programming Session #5	10/15/2012
	SEIG Session #1	10/19/2012

2. Information Systems Association (ISA)

February 2012 - **Qrious**, an online riddle based quizzing event.

March 2012 - **Coder**, an IntraBITS programming contest using C language.

Apogee 2012, 16th - 20th March 2012 -

- **Mindsweeper** - A combination of typical minesweeper and interactive puzzles,
- **3D Treasure Hunt** - A 3D game environment completely developed by students which involves typical treasure hunt puzzles.
- **Algotron** - Event completely on tricky algorithms and pseudo codes
- **Smash the Bug** - Java debugging event
- **Windows Hackathon** - Windows mobile application development event
- **Codestrom** - Programming contest using C language.

25th August, 2012 - **C DOKU** Sudoku, which involves problem solving using C language.

September 2012 - **Adobe Photoshop** tutorial lecture

13th October 2012 - Application process to US Institutions of Higher Learning by USIEF

B1.10.6 Department: Economics and Finance

Number of faculty members (as on 31 December 2012)

Professors	03
Associate Professor	01
Assistant Professor	04
Visiting Faculty and Lecturer	03

Head of the Department: Dr. Arvind Sudarsan

Contact details: arvinds13@pilani.bits-pilani.ac.in

Number of PhD Scholars: 04

A. PUBLICATIONS

The faculty of the department published the following papers in international/national refereed journals during the year.

1. Samik Chowdhury, "The Quality of Governance: How Have Indian States Performed?" (with Sudipto Mundle, Pinaki Chakraborty and Satadru Sikdar), (Special Article), Economic and Political Weekly, Vol 47, No. 49, December 8, 2012, pp 41-52.
2. Samik Chowdhury, "The Quality of Governance How Have Indian States Performed?" (with Sudipto Mundle, Pinaki Chakraborty and Satadru Sikdar) 2012, Working Paper No. 2012-104, National Institute of Public Finance and Policy (NIPFP), New Delhi.
3. Kashiramka S. and Rao. N.V.M., "Do Target Firms Gain on M&A Announcement ?", Evidence from Indian IT&ITeS Sector, International Journal of Research in Management, Vol. 5(2), September, 2012, pg 65-81.
4. A K Giri and Geetilaxmi Mohapatra (2012) "Financial Development and Economic Growth: Evidence from Indian Economy" International Journal Applied Research and Studies, Vol.1, Issue 2, Sept.-Nov. No.2012/206.

5. Arya Kumar, Entrepreneurial Ecosystem in India, NEN360 Newsletter for Entrepreneurs, Vol 1 Issue 6, Nov. 2012.
6. Arya Kumar , Managing Change in Higher Educational Systems, University News, 50(53), December 31, 2012- January 6, 2013.
7. Sudarsan, A. (2012). Problems at the Seth Group. South Asian Journal of Management Research (SAJMR), Vol. 1, No. 4. pp 321 – 328.
8. Sudarsan, A. (2012). The New Product Design. GITAM Journal of Management, Vol. 10, No. 3, pp. 253 – 259.
9. Sudarsan, A. (2012). Turnaround at TASS. Indira Management Review, Vol. 6, No. 1, pp. 59 – 68.
10. Sudarsan, A. and Mahesh, J. (2012). Case Analysis: The Complex Organization. Indira Management Review, Vol. 6, No. 1, pp. 54 – 58.

B. CONFERENCES

The faculty of the department published the following papers in international/national Conferences during the year.

1. Samik Chowdhury, "Public Retreat, Private Expenses and Penury: A Study of Illness Induced Impoverishment in Urban India". June 14th-18th, 2012: 13th Global Development Network (GDN) Annual Conference, Central European University, Budapest, Hungary. Paper shortlisted as one of the five finalists for the GDN award on Research on Development.
2. Jayanthi, C. V. and Sudarsan, A. (2012). A Perspective on Intercultural Dialogue in Language Learning. Paper presented at the Third International ELT@ Rajasthan Conference on Interfacing Language, Culture and Technology, October 8–9, 2012, organized by Department of Languages, Birla Institute of Technology and Science, Pilani, India in collaboration with English Language Teachers' Association of India, Jaipur, India

C. BOOKS PUBLISHED / WRITTEN DURING THE YEAR:

1. Arya Kumar , Entrepreneurship – Creating and Leading an Entrepreneurial Organisation, Pearson, 2012

D. INVITED TALKS GIVEN BY BITS FACULTY

1. Prof Arya Kumar delivered an invited talk on Entrepreneurial Opportunities to the students of VIT Jaipur on 1st September 2012.
2. Prof Arya Kumar delivered an invited talk in the Entrepreneurship Awareness Drive organized by IIT Kharagpur in association with Amity University on 15th Oct 2012; MGIT, Hyderabad on 18th Oct 2012 and SIES Graduate School of Technology on 19th Oct 2012 on Basics of Entrepreneurship and What it takes to Teach Entrepreneurship.

E. AWARDS AND RECOGNITIONS WON BY FACULTY AND STUDENTS

Prof Arya Kumar was conferred with Global Excellence Award for outstanding contribution to Management Education by Management Teachers Consortium (MTC), Bangalore in their Annual Convention 2012 held on 1st September 2012 at Jaipur.

F. DEPARTMENTAL ASSOCIATION/CLUB ACTIVITIES

Economics and Finance Department took various steps during the year to strengthen the course curriculum and teaching pedagogy of various courses offered by the department. The main emphasis continued to be on development of analytical skills, intellectual capability, and problem solving ability by fostering interdisciplinary approach to the degree programs offered.

Department faculty actively participated in teaching off-campus courses like Project management, Financial Management and Project Appraisal. Seminars were organized during the semester wherein faculty members and research scholars shared their research findings and developments with regard to their research work. Faculty members of the department had been actively involved in their research pursuit by guiding and acting as Doctoral Advisory Committee members for more than 10 candidates pursuing their PhD on campus and off-campus programme.

The students gained practical experience in studying and analyzing various aspects of the subject in areas such as financial analysis, business valuation, microfinance issues, monetary policy issues, environmental economics issues, Indian economic development, econometric modeling and quantitative applications of economics and Finance through project work undertaken as part of various courses, as study oriented projects, computer projects and special projects undertaken directly under the supervision of faculty members. More than 50 projects in the above mentioned area were individually supervised by the group faculty members during 2012.

EFA had three events during APOGEE 2012: SMS, Numero Uno and Age of Economics. Stock Market Simulation, popularly known as SMS was designed on the concept of live trading floor. The event recorded 600+ participation from different colleges of the country and was the kernel event of the technical festival. A decent number of projects were displayed in the finals of Project Competition of Apogee. EFA also organized Financial Modeling workshop (by financial training agencies: IPLAN and PRISTINE) in March.

Economics and Finance Association started the new semester in August with interaction with the new batch of first year Economics and Finance students in first week. In September, an Arthashastra lecture was conducted by Shubham Dubey (currently working for Futures First Group) which focused on imparting basic knowledge related to the fields of finance and risk management. Last semester, two events were also conducted by the association. First was BITSian CEO which was a case study cum business quiz competition, aimed at testing participants analytic and case solving skills. The other event was Mock Stocks conceptualized as a basic stock trading game. The editorial team also came up with the association newsletter "The Economic Insight". Planning and preparing for Apogee 2013, a project meet was held in November and students from the first and second year got an overall idea about the abstracts submission for paper presentation and projects under the category Economic Modeling and Finance.

B1.10.7 Department: Electrical, Electronics & Instrumentation

Number of faculty members (as on 31 December 2012)

Senior Professors, Professors	07
Associate Professors	01
Assistant Professors	07
Lecturers	19

Head of the Department: Dr. Anu Gupta

Contact details: anug@pilani.bits-pilani.ac.in

Number of PhD Scholars: 10

A. SPONSORED RESEARCH / DEVELOPMENT ACTIVITIES

Total number of Sponsored Project in the department: 01. Details are given below.

- Ministry of Communications and Information Technology, Department of Electronics and Information Technology has accepted our Proposal for Grant of Rs. 1.55 Crore as Technology Incubation and Development of Entrepreneurs (TIDE) and Expansion of Technology Incubation and Development of Entrepreneurs (TIDE).

Projects sanctioned/ completed/ ongoing during the year

- Dr. Navneet Gupta has completed a project on "Study of electrical Behaviour of Nanocrystalline Silicon Thin-Film Transistor (nc-TFT)" granted by University Grant Commission.
- Dr. H D Mathur completed the Research Project: Inter-area oscillation Control using Embedded Energy Storage in Interconnected Power System with Distributed Generation by Seed Grant Scheme, BITS, Pilani, Amount: 11.15 Lakhs.

3. Dr. Anu Gupta completed the project on “Development of silicon prototype of low power and low noise clock-less pipelined/multi stages data -converter based on 180/90nm technology for low power portable self-trigger able integrated circuit applications” under seed grant from BITS, Pilani. Amount Rs. 8.30 Lakhs.

B. PUBLICATIONS

The faculty of the department published 20 papers in international/national refereed journals during the year.

1. Virendra Singh Shekhawat, Amrit Kumar Saini and V K Chaubey (2012), "Traffic Modeling of Ring and Mesh Networks with Improved Quality of Service" The IUP Journal of Telecommunications India , Vo. IV,no.3, August 2012, pp.31-43.
2. Manoj Kumar Dutta, V.K. Chaubey (2012) "Modeling and performance analysis of optical WDM node architecture using SRR protocol" Optic (Elsevier) 123, issue 21, pp.1971-1974.
3. M K Dutta and V K Chaubey (2012) "Performance Analysis of Modified Optical Burst Switching (OBS) Ring Network using Dummy Node" Optic (Elsevier) 123, issue 20, pp.1847-1851.
4. Vinita Tiwari, Debabrata Sikdar, V.K. Chaubey (2012) "SPM induced limitations for 40 Gbps chirped Gaussian pulses in optical channel" Optik (Elsevier) Volume 123, Issue 16, August 2012, Pages 1482–1485.
5. Manoj Kumar Dutta, V.K.Chaubey (2012) "Comparative Analysis of Wavelength Conversion and Segmentation Based Dropping Method as a Contention Resolution Scheme in Optical Burst Switching (OBS) Network", Procedia Engineering (Elsevier) Vol.30, pp. 1089 – 1096.
6. Debabrata Sikdar, Saurabh Chaubey, Vinita Tiwari and V K Chaubey (2012) 'Simulation and Performance Analysis of Duobinary 40 Gbps Optical Link" Journal of Mod. Optics (Taylor & Francis), 59, No. 10, 903–911.
7. Manoj Kumar Dutta, V.K. Chaubey (2012) "Modeling and Characterization of Modified Optical Burst Switching (OBS) Ring Network Using Proxy Node" International Journal of advance Science Engineering Information Technology, Vol. 2 , No. 1, pp. 75-79.
8. Virendra S. Shekhawat, D.K. Tyagi, V.K. Chaubey (2012) "Design and characterization of a modified WDM ring network – An analytical approach" Optic (Elsevier) 123, issue 12, pp.1103-1107.
9. R.P. Khare, K.C. Satⁱ and Abhinav Asati, "Investigations on (S_{rx}B_{a(1-x)})S:Cu phosphors for thermograph", International Journal of Applied Engineering, Vol. 2 pp 144-147 (2012)
10. R. Purohit and R. P. Khare, "Fiber Optic fluorescent probe for measurement of temperature", Journal of Instrumentation Technology & Innovation – Accepted for publication
11. Abhijit Asati and Chandra Shekhar, "A Purely MUX Based High Speed Barrel Shifter VLSI implementation Using Three Different Logic Design Styles," Advances in Intelligent and Soft Computing, Vol. 125, pp. 639-646, December 2011.
12. Deepak Bharti and Abhijit R. Asati, "A Novel Multi-Planar Band Structure Algorithm: Planar Region Matrix Approach" International Technology Research Letters (ITRL), Vol. 1, pp. 11-17, 2012.
13. H O Bansal, R Sharma and P.R.Shreeraman, "PID Controller Tuning Techniques: A Review", International Journal of Control Engineering and Technology, Vol. 2, Issue 4, pp. 168-176, October 2012.
14. H O Bansal and D Malik, "Solar powered mini steam power plant: a simulation approach", International Journal of Renewable Energy Technology, Vol.3, No. 3, pp.316–322, 2012.
15. Ashish K.Sharma and Navneet Gupta, "Material Selection of RF-MEMS Switch used for reconfigurable antenna using Ashby's methodology" Progress in Electromagnetics Research Letters (PIER-L), 147-157, vol. 31 (2012), Cambridge, USA. [Impact factor: 3.74]
16. B.N.Aditya and Navneet Gupta, "Material Selection methodology for gate dielectric material in metal-oxide-semiconductor devices", Materials and Design, 696-700, vol. 35 (2012)[Impact factor = 2.20]
17. S.Subramanian and Navneet Gupta, "Sensitivity to overetching of improved V-shaped microcantilever", Advanced Material Research Journal, 3326-3329, vol. 403 (2012).

18. H.D. Mathur, "Fuzzy Based HVDC Regulation Controller for Load Frequency Control of Multi-Area System" International Journal of Computer Aided Engineering and Technology, Vol. 4, No. 1, 2012, pp. 72-79.
19. Yogendra Arya, Narendra Kumar and H.D. Mathur, "Automatic Generation Control in Multi Area Interconnected Power System by using HVDC Links" International Journal of Power Electronic Drives and System, Vol. 2., No. 1, March 2012.
20. Yogendra Arya, H.D.Mathur and S.K.Gupta, "A Novel Approach for Load Frequency Control of Interconnected Thermal Power Stations", International Journal of Energy Optimization and Engineering, Vol. 1, Issue 2, 2012, pp. 85-95.

C. CONFERENCES

The faculty of the department published 43 papers in international/national Conferences during the year.

(i) Conferences attended/papers presented outside India:

1. Swati Keskar, R. Banerjee, R. Reddy, "A Dual-PSoC Based Reconfigurable Wearable Computing Framework for ECG Monitoring ", CinC 2012, AGH University , pp.85-89, Poland, 2012.
2. Lucky Sharan, VK Chaubey (2012) "Design and Simulation of Long-Haul 32 x 40 Gb/s Duobinary DWDM Link in the Presence of Non-Linearity with Under-compensated Dispersion" 3rd International Conference on Photonics 2012, organized by IEEE Photonics Society, Malaysia during 1 - 3 October 2012 at PARKROYAL Penang Resort, MALAYSIA.
3. M.K. Dutta, V. Chamola, A.Rajandekar and V.K.Chaubey (2012) "Modeling and Characterization of Multi Rate Direct Sequence CDMA System Using Dynamic Resource Allocation Scheme", Presented in IEEE WIAD 2012, King's College London. 25-27 June, 2012.
4. Abhijit Asati and Chandra Shekhar, "A Purely MUX Based High Speed Barrel Shifter VLSI implementation Using Three Different Logic Design Styles," 3rd International Asia Conference on Informatics in Control, Automation and Robotics (CAR– 2011), Shenzhen, China, 24-25 December, 2011.
5. Sailesh Conjeti, Rajiv Ranjan Singh and Rahul Banerjee, "Bio-inspired Wearable Computing Architecture and Physiological Signal Processing for On-road Stress Monitoring". IEEE-EMBS International Conference on Bio-medical and Health Informatics (BHI 2012), Hong Kong, Shenzhen, China, Jan 5-7, 2012. Available on IEEE *Xplore*: pp. 479 - 482, doi: 10.1109/BHI.2012.6211621.
6. Rajiv Ranjan Singh, Sailesh Conjeti and Rahul Banerjee, "An Approach for Real-Time Stress-Trend Detection Using Physiological Signals in Wearable Computing Systems for Automotive Drivers". Proceedings of the 14th International IEEE Annual Conference on Intelligent Transportation Systems (ITSC 2011), The George Washington University, Washington, DC, USA, 05-07 October 2011. Available on IEEE *Xplore*: pp. 1477 - 1482, doi: 10.1109/ITSC.2011.6082900.
7. Nitin Chaturvedi, N. Rohila, S. Baro, Nidhi.Chaturvedi "Investigation on doping configurations in Gallium Nitride HEMTs epitaxial design for bio-sensing" in proceedings of International Conference EXMATEC-2012, 28th May-1st June , Island of Porquerolles (France).
8. Nitin Chaturvedi, N. Rohila, S. Baro, Nidhi.Chaturvedi "Simulation of AlGaIn/GaN HEMTS Epitaxial Layers for bio-sensing applications" in proceedings of International Conference WOCSDICE-2012 , 28th May-1st June , Island of Porquerolles (France)

(ii) Conferences attended/papers presented in India:

1. Sivaram Prasad Koppa, Ishit Makwana, Anu Gupta, "Asynchronous 8-bit Pipelined ADC for Self-Triggered Sensor based Applications", Asia-Pacific Conference on Postgraduate Research in Microelectronics and Electronics (Prime Asia), Dec 5-7 2012, BITS-Pilani, Hyderabad Campus

2. Sivaram Prasad Koppa, Ishit Makwana, Anu Gupta, "An Asynchronous 8-bit 5 MS/s Pipelined ADC for Biomedical Sensor based Applications", International Conference on Electronics, Computing and Communication Technologies (IEEE CONECCT) , Jan 17-19, 2013, World Trade Center, Bangalore, India
3. Sneha Murotiya, Aravind Matta and Anu Gupta, "Performance evaluation of CNTFET based SRAM cell design." Proc. of Inter National Conference on Electrical Engineering and Computer Science", May 12, 2012, Trivandrum, Kerala, pp-88-92
4. Vandana Agarwal and Surekha Bhanot, "A dynamic data structure for real time face recognition" International Conference on Computer technology and Science, Aug 18-19, 2012, New Delhi, published in International Proceedings of Computer Science and Information Technology, IACSIT press , IPCSIT vol 47, pp101-106,
5. Pradyumna, P Raghavendra, CKS Tarun, Surekha Bhanot , "Remote experimentation of "No-load tests on a transformer" in electrical engineering," 2012 IEEE International Conference on Engineering Education: Innovative Practices and Future Trends (AICERA), 19-21 July 2012, pp.1-6,doi: 10.1109/AICERA.2012.6306740
6. Vinay Chamola, Manoj Kumar Dutta, V.K.Chaubey (2012) "Performance Analysis of Optical Burst Switching (OBS) Network using Fiber Delay Line: A simulation Approach" at International Conference on Communication, Information and Computing Technology (ICCICT-2012) at Sardar Patel Institute of Technology, Mumbai during Oct. 19-20, 2012.
7. Manoj Kumar Dutta, V.K.Chaubey (2012) "Contention Resolution in Optical Burst Switching (OBS) Network: A Time Domain Approach" Photonics 2012, during Dec. 9-12, 2012 at IIT Madras, Chennai.
8. Lucky Sharan and V K Chaubey "Design and Simulation of CSRZ Modulated 40 Gbps DWDM System in Presence of Kerr Non Linearity", International Conference on wireless and Optical communications Networks WOCN2012, 20-22 Sept. 2012 at Sri Aurobindo Institute of Technology, Indore, M. P., INDIA.
9. Dinesh Kumar Tyagi, Virendra S. Shekhawat, V. K. Chaubey (2012) "Resource efficient survivability approach for resilient WDM optical networks", Proceedings of the ICACCI-2012, August 03 - 05, 2012, pp 619-624, CHENNAI, India, doi>10.1145/2345396.2345497
10. Manas Madhup, R.P. Khare and Ankush Sharma, "Four Fiber Based Distributed Strain Sensor", Presented in International Conference on Optical Engineering Visvesvaraya Technological University, Belgaum, July 26-28, (2012)
11. Dishank Upadhyay, R.P. Khare and Sumit Bajaj, "Design and development of fiber optic distributed sensors for strain measurement in critical load bearing structures." AdMet 2013 - 8th International Conference on Advances in Metrology (To be held from February 21 to 23, 2013), National Physical Laboratory, New Delhi – Accepted for oral presentation.
12. R. Kumar, "Dependence Of Hill Climbing MPPT Algorithm On ADC And Digital Filter Parameters", IEEE 5th India International Conference On Power Electronics (IICPE) DEC. 6- 8, 2012, New Delhi, India
13. A Panday and H O Bansal, "Temperature Dependent Circuit-based Modeling of High Power Li-Ion Battery for Plug-in Hybrid Electrical Vehicles" IEEE, International Conference on Advances in Technology and Engineering (ICATE 2013), Mumbai, January 23th-25th, 2013.
14. H O Bansal, R Kumar, R K Singh and S Bhardwaj, "Design and Analysis of Intelligent Controller for Artificial Pacemaker", IEEE 2nd International Conference on Power, Control and Embedded Systems (ICPCES-2012), Allahabad December 17th -19th, 2012.
15. Ashish Mishra, Kritika garg, A.R. Asati Kota, S.R. "Hardware Software Co-design using profiling and clustering" International Conference on "Communication, Information and Computing Technology (ICCICT)", Oct-19-20, 2012.
16. Deepak Bharti and Abhijit R. Asati, "Design of a Static Current Simulator Using Device Matrix Approach," International Symposium on Electronic System Design (ISED 2012), Kolkata, India, 19-22 December, 2012.

17. Deepak Bharti and Abhijit R. Asati, "Device Matrix Algorithm: A New Semiconductor Modeling Approach for Plotting Band Structures", International Conference on Materials Science and Technology (ICMST 2012), Kottayam, India, 10-14 June, 2012.
18. Deepak Bharti and Abhijit R. Asati, "A Novel Multi-Planar Band Structure Algorithm: Planar Region Matrix Approach", International Conference on Mat lab Applications in Engineering and technology (ICMAET-2012), Bangalore (India), 1-2 January 2012.
19. Deepak Bharti and Abhijit R. Asati, "3-D Device Matrix Approach: A New Algorithm for Plotting Energy Band Diagrams in Semiconductors", IEEE Students' Conference on Electrical, Electronics and Computer Sciences (SCEECS-2012), Bhopal, India, 1-2 March 2012.
20. Abhijit Asati and Dr. Chandra Shekhar, "A Fully Pipelined 8x8 Baugh Wooley Multiplier Design using Modified TSPC Logic Design Style", COMMUNE Conference on Advancements in Communication & Computing Systems (CACCS), Gr. NOIDA,UP, India, 24-25 March 2012.
21. Ashish K. Sharma and Navneet Gupta, "Material Selection Approach for Dielectric Layer in RF-MEMS Switch", International Conference on Emerging Technologies - Micro to Nano; ETMN-2013, BITS, Pilani - KK Birla Goa Campus, India, February 23-24, 2013. [Accepted]
22. Prachi Sharma and Navneet Gupta, "Model for Drain Current based on the Exponential Distribution of Tail States for Nanocrystalline Silicon Thin Film Transistor" 3rd IEEE International Advance Computing Conference (IACC-2013), AKGEC, Ghaziabad (UP), India, 22-23 February, 2013. [Accepted]
23. Abhishek Mukherjee, Prachi Sharma and Navneet Gupta, "Modeling of Field Effect Mobility using Grain Boundaries on Nanocrystalline Silicon Thin-Film Transistor (nc-Si TFT)", Second International Symposium on Semiconductor Materials and Devices (ISSMD-2), January 31 to February 2, 2013.
24. Rashi Khatri, Sahil Sheth, Navneet Gupta, "Modeling of Zinc Oxide (ZnO) based Thin-Film Transistors (TFTs)", Second International Symposium on Semiconductor Materials and Devices (ISSMD-2), January 31 to February 2, 2013.
25. Neha Mittal and Navneet Gupta, "Design of improved microcantilever profile for sensing applications", IEEE International Conference on "Emerging Technology Trends in Electronics, Communication and Networking (ET2ECN-2012)" SVNIT, Surat, December 19-21, 2012.
26. Jitendra Kumar and Navneet Gupta, "Symmetrical T-Shaped DRA with Unique Micro strip Excitation for Wideband Applications", 8th International Conference on Microwaves, Antenna, Propagation and Remote Sensing, ICMARS 2012, Jodhpur, Rajasthan India, December 11-15, 2012.
27. Ashish K. Sharma and Navneet Gupta, "Micro-electro-mechanical-system (MEMS) Switches for radio frequency (RF) applications-An Overview", National Conference on Recent Advancement in Communication System & Image Processing RACSIP-2012, BKBIET, Pilani, April 2-3, 2012.
28. M. Gurwani, S. Parakh and H.D. Mathur, "Smart grid and its impact on environment", In the proceedings of Conference on Technological Advancement in Chemical and Environmental Engineering, 23-24 March, 2012, BITS, Pilani, India.
29. S. Mittal, N. Mamidwar and H.D. Mathur, " Wind Turbine Modeling for Distributed Generation with PID controller", In the proceedings of Conference on Technological Advancement in Chemical and Environmental Engineering, 23-24 March, 2012, BITS, Pilani, India.
30. H.D. Mathur and H. Ahuja, " Empowering Youth through Value and Peace Education" In the proceedings of National Seminar on Youth, Peace and Development, 21-22 March, 2012, Imphal, Manipur, India.
31. Y.K. Bhatsevar and H.D. Mathur, "Comparative Dynamic Analysis on Frequency Stabilization for Multi-Area Power System in Deregulated Environment" In the proceedings of IEEE International Conference on. Signal Processing, Computing and Control (2012 IEEE ISPCC), March 15-17, 2012, Solan, H.P., India.

32. Y.K. Bhatesvar and H.D. Mathur, "Frequency Stabilization using Fuzzy Logic based Controller for Multi-Area Power System in Deregulated Environment" In the proceedings of 2nd International Conference on Advances in Control and Optimization of Dynamical Systems (ACODS), IISc, Bangalore, India, 16-18 February' 2012.
33. Yogendra Arya, Narendra Kumar, H.D. Mathur and S. K. Gupta, "Automatic Generation Control of Multi Area Interconnected Hydro-Thermal Power System with HVDC Links" National Electrical Engineering Conference on Power and Energy Systems for Tomorrow, Delhi, Paper ID-348, December 16-17, 2011
34. H.D.Mathur, " A Critical Review of Soft Computing Techniques on Power System Control" In the proceedings of National Conference on Advancement in Convergence of Technologies, Amity University, Haryana, 8-9 September, 2011, pp.150-158
35. Rajiv Ranjan Singh, Sailesh Conjeti and Rahul Banerjee, "Bio-signal based On-road Stress Monitoring for Automotive Drivers", Eighteenth National Conference on Communications (NCC 2012), IIT Kharagpur, India, February 3-5, 2012. Available on IEEE *Xplore*: pp. 1 - 5, doi: 10.1109/NCC.2012.6176845.

D. BOOKS PUBLISHED/EDITED /CHAPTER WRITTEN DURING THE YEAR

1. Ashish K. Sharma and Navneet Gupta, Book Chapter entitled, "MEMS Switches for RFApplications - A Review", Sensors and Biosensors, MEMS Technologies and its Applications, Second volume, published by Sensors & Transducers journal, Canada, 2013.
2. H.D. Mathur, N.C. Hien, N. Mithulananthan, D. Joshi, R.C. Bansal, "Distributed Generation: A Power System Perspective", Chapter 22 in Handbook on Renewable Energy Technology, Published by World Scientific Publishing Co., Singapore, 2011, pp. 563-583.

E. CONFERENCES, SEMINARS & WORKSHOPS CONDUCTED

Dr. Surekha Bhanot conducted a Workshop on "Control system design using MATLAB" for NTPC Engineers on July 16-20, 2012, member of organizing committee

F. INVITED TALKS GIVEN BY BITS FACULTY

1. Prof Surekha Bhanot gave invited talks on "Conventional Controllers, and Recent Trends in Controllers" at Power management Institute, NTPC, Noida on Dec 3, 2012.
2. Invited talk by V K Chaubey on "Optical Communication Systems" at Two-day Seminar on Photonic Devices & LTCC Technologies at CEERI Pilani during 6th – 7th September, 2012.
3. Invited talk by V K Chaubey on "High Speed Optical Networks" at a 2nd National Conference on Emerging Technologies in Computer Engineering NCETCE-2012 at SKIT Jaipur on 3rd November, 2012.
4. Dr. H O Bansal delivered key note address on "Smart Grids" in the National Conference on Engineering Trends in Power System Engineering held at MEC, Bikaner on April 23, 2012.
5. Dr. H O Bansal delivered expert lecture on "Hybrid Electric Vehicles" in a Short term program on Smart Grid Technologies held at MNIT, Jaipur on May 14, 2012.
6. Dr. H O Bansal delivered a talk at national workshop on "Distributed Generation and its Impact on Power System Restructuring" in the National Workshop on Restructuring of Power System and Recent Electricity Markets held at Poornima College of Engineering, Jaipur on Sept 15, 2012.
7. Mr. R R Singh gave an invited talk on "Architecting the BITS-Lifeguard Wearable Computing System: A Bio-signal-based approach for Stress-level Monitoring of Automotive Drivers" at Durham Hall, Center for Embedded Systems for Critical Applications at Bradley Department of Electrical and Computer Engineering, Virginia Tech., Blacksburg, USA on 11th October 2011.

G. INVITED TALKS ARRANGED IN THE DEPARTMENT

1. Mr. Praful Jain, Design Engineer, Cosmic Circuits, Bangalore, delivered a talk on "Next Generation Research Opportunities in Electronics" on 20th Oct, 2012 in the Department.
2. An invited lecture on "Entrepreneurial experiences in Indian electronics industry" by Mr. Jayant Somani, Vice President, Cypress Semiconductor.

H. AWARDS AND RECOGNITIONS WON BY FACULTY AND STUDENTS

Project (Titled-- Design of Ultra Low Power, Low Noise Implantable Neural Recording Amplifier for Brain Machine Interface) submitted by Dr. Anu Gupta and four BITS Pilani students was selected for second position(reward money Rs 20,000) in Cadence Design contest 2012.

I. FACULTY DEVELOPMENT, INTERNATIONAL COLLABORATION & INDUSTRY IMMERSION

Three faculty members Dr. Abhijit Asati , Ms. Swati Keskar and Mr. Anand Kumar attended STM Training Program for Faculty on STM32 , a family of 32-bit microcontrollers with different memory sizes, packages and peripherals, conducted during 10-11 October, 2012 at ST Microelectronics India, Plot No. 1, Knowledge park -IIII, Greater Noida-211308.

J. SIGNIFICANT NEW EQUIPMENTS/EXPERIMENTAL FACILITY ADDED DURING THE YEAR

- Mixed Signal Oscilloscope MSO3012; Digital Phosphor, 100 MHz, 2.5 GS/s, 5 M Record Length is added to OLab for testing of fabricated designs.
- Wireless Sensor Network Kit added in Virtual Instrumentation Lab
- Complete package of Technology library files of UMC 180 nm technology from Europractice IC service is installed in OLAB with padframe insertion/ GDSII export facility
- For the first time, a team of students and Dr. Anu Gupta, designed a complete silicon chip integrated circuit design and sent for fabrication to Europractice IC service thereby competing the full design flow starting from schematic design to layout with I/O pads and padframe insertion.

K. DEPARTMENTAL ASSOCIATION/CLUB ACTIVITIES

(i) EEE Association

- Robosoccer--- EEE Association and Instrumentation Forum organized a simple robotics event for first year students with the objective of encouraging and instilling interest in the area. The event was conducted on January 19, 2013. Each match involved two manually controlled wheeled bots trying to score goals against each other, following the problem statement made by slightly bending soccer rules to suit the event. There were six participating teams.
- An invited lecture on 'Entrepreneurial experiences in Indian electronics industry' by Mr. Jayant Somani and Mrs. Sumita Somani.

(ii) Instrumentation Forum

- The Lab View Workshop— was held on 22nd September 2012. It was conducted with the help of National Instruments and Siddharth Rajagopalan was sent to conduct the workshop. Siddharth is a mechanical engineer from BITS Pilani, who was recruited into National Instruments recently as an Application Engineer. The workshop was divided into 3 parts. The first part was an exclusive NI hardware session only for the Forum members. It went on for one and a half hours. It cleared a lot of doubts among the forum members which generally used to come while working on projects. Immediately after this was the open-for-all workshop. This was scheduled to be a 6 hour long workshop, and was divided into two parts, each of 3 hours. This workshop was attended by first, second as well as third year students. Approximately there were 180 people in the audience. Everyone was asked to install the latest Lab View 2012 version for these two sessions. The topics covered in the first session were basics of Lab View, Virtual Instruments, a general introduction to user interface, moving on to structures, Sub VI's, recursion techniques, shift registers and graphs. The second session featured topics like Active, property nodes, and data communication basics like global variables, shared variables etc. The workshop included many hands-on assignments, which were enjoyed by the students. National Instruments gave a copy of evaluation version of Lab View 2012 to the Instrumentation Forum as token of gratitude.
- Cypress PSoc Workshop-- 17-18 December, 2012, a workshop on basics of PSoc was organized in collaboration with Cypress University Alliance. The Cypress professionals visited the campus for the workshop, were Mr. Sidharth Vijay, graduate from BITS, Pilani-Hyderabad Campus. EEE Association collaborated with Instrumentation Forum for this workshop. About 130 students had registered for the workshop. The workshop had a theory

session, hands-on session. The theory session covered the history, architecture, importance, various features of PSoC 1, 3 and 5. This was followed by an introduction to PSoC Creator software for simulation and programming. The hands-on sessions let the students get training of programming PSoC 3 boards and solve certain simple design problems. The Cypress professionals also took questions from the audience at the end of all sessions, ensuring thorough understanding.

- A two-day workshop on Wireless sensor networks, Data Acquisition and LabVIEW-2012 was organised in BITS on 26th and 27 January, 2012. . The workshop was held by two engineers from Electron Solutions. Electron Solutions takes care of workshops for National Instruments. The workshop curriculum featured the introduction and configuration of Wireless sensor networks and Data acquisition in Lab View. On 26th January, two sessions were held. The first session, from 10am to 1pm, was based on basics of Lab View. This session also included a small discussion on latest toolkits of Labview-2012. In the second session, data acquisition was taught and a demonstration of USB 6009 and PCI card was given. First/ second year students of EEE/ INSTR attended the workshop and benefited from tutorial/ hands on session.

(iii) IEEE BITS Pilani Chapter

- Two days workshop on “Programming of ARM Microcontroller and Development of Autonomous Navigation system” was organized by IEEE BITS Pilani Chapter on 27-28 October 2012 at the Information Processing Center of the Institute. The workshop focused on teaching the Development of Autonomous Navigation System. The workshop provided hands on training in the following areas: ARM Microcontroller Basics, ARM Microcontroller Programming and Debugging, Basics of Electronics, Working and Application of Sensors: Global Positioning Sensor (GPS Sensor), Magnetometer (Digital Compass), Optic Flow Sensor, Interfacing of Sensors with ARM Microcontroller, Design and Development of Autonomous Navigation System. The purpose was to teach the students to apply their knowledge to the above five modules to develop an autonomous Navigation System.

B1.10.8 Department: Humanities and Languages

Number of faculty members (as on 31 December 2012)

Senior Professors, Professors	–
Associate Professors	1
Assistant Professors	12
Lecturers	1
Visiting Faculty	5

Head of the Department: Dr. Geetha B.

Contact details: geetha@pilani.bits-pilani.ac.in

Number of PhD Scholars: 12

Ph.D. Thesis Submitted during the year: Nil

Research achievements, (ongoing projects, sanctioned/completed this year), Publications- research articles, books, chapters, conference proceedings)

1. **Sangeeta Sharma** completed the UGC major research project funding for the project entitled “Developing Teaching Modules For English Learning Through Multimedia Technology For Rural Children From ClassV –VIII” in April 2012.
2. **Sangeeta Sharma** completed “Pratham Education Foundation” funding for the project “Evaluation for Teach India Campaigns in Rajasthan” January 2012.

3. **Kumar Neeraj Sachdev**, received research project on “A Normative Analysis of Selflessness as the Inner Perspective of Good Life”, sponsored by Indian Council of Philosophical Research (ICPR), New Delhi (2012-2014).

PUBLICATIONS

S.No.	Name	Title of the paper	Journal	Vol.	Page
1.	Geetha Bakilapadavu	Moving Beyond the Mainstream: Teaching Science Fiction in India.	Contemporary Discourse	Volume-3, Issue-1, January 2012	
2.	Sharma, Manju and Geetha. B	Portrayal of Gujrat Riots in Literary and Cinematic Texts: A Comparative Study of Rajiv Dholakia's Film Parzania and Raj Kamal Jha's Novel Fireproof	Literary Insight	Volume-3, Issue-1, January 2012	
3.	Sharma Sangeeta, PoonamVyas	<i>“Communication: the Omphalus of the Curriculum of Technical Education”</i>	Proceedings of the National workshop on Science, Technology and Development Communication		115-122
4.	Vyas Poonam, Sangeeta Sharma	<i>“Augmenting Learner Autonomy through Information and Communication Technology (ICT)”</i>	Spark International Online Journal.	Vol.IV Issue VII	85-94.
5.	Sangeeta Sharma and Krishna Mohan	The impact of University-Industry Linkages on English Language Teaching.	Education for Human Resource Development.	Edited by VijayaDeshmukh, Atlantic Publishers	263-272
6.	Madhusmita Das and Sangeeta Sharma	Women and Politics : The Game of Power”	Asian Academic Research Journal of Social Science & Humanities,	Vol.1, Issue 3	164 - 181
7.	VyasPoonam, Sangeeta Sharma	“ Educational Technology: Need , Nature and Scope in Language Teaching and Learning in India”	Voices of Interdisciplinary Critical Explorations	Vol 2	94-102.
8.	Sangeeta Sharma and Madhusmita Das	“Women in Advertising: Metamorphosis from docile to dynamic”	International Journal of Business management	Vol. 2. No.1	27

S.No.	Name	Title of the paper	Journal	Vol.	Page
9.	Lata, Pushp and Suman Luhach,	“Integrating Web 2.0 Tools for Enhancing Collaborative Writing Skills: Challenges and Prospects”	Published in Interfacing <i>ELT with Culture and Technology: Directions for New Classrooms</i> , edited International	New Delhi: Jain Brothers, 2012	pp 83-90

			Conference Proceedings, 3 rd ELT@ International Conference, BITS, Pilani.		
10.	Lata, Pushp and Rajni Singh	"Enhancing Learner Autonomy through Self Instructional Materials"	Published in <i>Interfacing ELT with Culture and Technology: Directions for New Classrooms</i> , edited International Conference Proceedings, 3 rd ELT@ International Conference, BITS, Pilani.	New Delhi: Jain Brothers, 2012	pp 173-180
11.	Lata, Pushp	"Integration of Web based Interactive and Multimedia Learning Materials for Off-Campus Students: A Case Study"	Conference Proceedingsed. Danie / Newman at Annual International Conference on Language, Literature and Linguistics (L3 2012), during 9 - 10 July 2012 at Hotel Fort Canning, Singapore, 3L is indexed in <i>Scopus</i> ,	Global Science and Technology Forum, Singapore, 2012	pp 193-198
12.	Kumar Neeraj Sachdev	Nature of Valuational Consciousness in Good Life	Philosophy Study	Volume 2, No. 10, October 2012	767-771
13.	Kumar Neeraj Sachdev and GS Chauhan	Business Ethics: Employee Loyalty and Whistle Blowing	International Journal of Multi-disciplinary Management Studies	Vol. 2, Issue 9, September 2012	147-152
14.	GS Chauhan and Kumar Neeraj Sachdev	Green Communication: Let the Corporate Walk the Talk	International Journal of Trends in Humanities and Social Science	Vol. 1, Issue 9, September 2012	90-101
15.	Geetika Shree and Kumar Neeraj Sachdev	Enhancing Quality of Educational System through Moral Development and Positive Psychology	Indian Journal of Positive Psychology	Vol3, Issue 4, December 2012	415-417
16.	David Gómez Arredondo and Hari Nair	"Between café and cigarillos: Notes towards mapping the research trajectory and the intellectual legacy of Fernando Ortiz through a study of his select works"	Priti Singh and Raymond Izarali (eds). <i>The Contemporary Caribbean: Issues and challenges</i> , Delhi: Shipra Prakashan, 2012-13, ISBN-139788175416598.		269-305
17.	Swaha Das and Hari Nair	"Republican conception of citizenship"	Ashok Acharya, ed., <i>Citizenship in a globalizing world</i> , (Delhi: Pearsons,		92-108

			Released in 2012).		
18.	Devika, Sushila Rathore and Virendra Singh Nirban	Unobtrusive Dissemination of the Didactic Teachings through the Indian Folklore	Canons of Children's Literature	2012	95-109
19.	Gupta, Piyush and Devika	Developing Lexical Database through Word-Image Association	Interfacing ELT with Culture and Technology: Direction for New Classroom	2012	75-82
20.	Devika	Breaking the barrier to move beyond: a charismatic display of self belief in Arundhati Roy and Manju Kapur	Language, Literature & Linguistics	2012	308-311
21.	Devika	Maximizing the Benefits through Creativity: An IDEA Approach	Creativity and Innovation: Breaking the Barriers to Reach the Bottom of the Pyramid	2012	103-111
22.	Rathore, Sushila.	Dexterous Projection of the Feminine Sensibility: A Study of Anita Desai's Works"	The Literati: A Peer Reviewed Journal of Language and Literature	Volume 2. Issue 1A	5-14
23.	Rathore, Sushila and Devika.	Depiction of Individual Ideology against the backdrop of philosophy in the Movies of Alfred Hitchcock, Orsen Welles and Jean Renoir".	Literary Insight: Refereed International Journal.	Volume 3	41-45.
24.	Shekhawat, Sushila.	Variiegated Shades of a Female in Indian Films: A Study of Mirch Masala and Arth". Language, Literature and Linguistics (I3 2012).	Ed. Prof. Daniel Newman. Conference Proceedings. Singapore: Global Science and Technology Forum (GSTF).		343-348.
25.	Rathore, Sushila and Devika	Tumultous Ordeal of Women to Self Assertion in Manju Kapur's Difficult Daughters and Married Woman".	Contemporary Discourse. Refereed International Journal.	Volume 3. Issue 1. January. (2012)."	113-118.
26.	Kumar Sankar Bhattacharya	"Caste as a Social Construct in Indira Goswami's <i>The Moth-Eaten Howdah of the Tusker</i> and <i>The Offspring</i> ."	Journal of Post-Colonial Cultures and Societies.	Vol.3 (2): 2012,	9-34.
27.	Kumar Sankar Bhattacharya	"Doubly "Othered" Dorothy Brown and Indira Goswami's Idea of Female Emancipation in <i>The Man from Chinnamasta</i> ."	Streelipi: An International Journal of Feminist Studies.	Vol.1 (2): July-August 2012,	1-8.
28.	Diksha Sharma	The Theme of Partition in Chaman Nahal's Azadi	The Criterion ISSN 0976-8165	Vol.III , Issue IV , Dec 2012	

BOOKS

1. Lata, Pushp, Devika, and Gajendra Singh Chauhan, eds. *Interfacing ELT with Culture & Technology: Direction for New Classroom*. New Delhi: Jain Brothers, 2012.
2. Devika. EDD notes for TOC C215: *Language Lab Practice*. August 2012.
3. Sanjay Kumar and Pushp Lata, *English Language and Communication Skills*, New Delhi: Oxford University Press (OUP), 2012.
4. Diksha Sharma *Shashi Tharoor's Novels: A Postcolonial and Postmodern Perspective* ISBN 13:9789350500767 B R Publishing Corporation, Delhi- 110052 2012.

CONFERENCES

28 papers were presented in different areas in International/ National conferences.

S.No.	Name of faculty	Title	Organization/ Conference Name	Place	Date
1.	Balasubramaniam, Sundar, Geetha Bakilapadavu, Sai Jagan Mohan.	Integrating Humanities into Engineering Education Using Design as the Focus: An Interdisciplinary Teaching Experience	Fifth Symposium on Engineering and Liberal Education,	Union College, Schenectady, NY	1-3 June, 2012.
2.	Manju Sharma and Geetha Bakilapadavu	Understanding the Dynamics of Religious Intolerance through the Language of Cinema: An Analysis of the Film <i>Amu</i> by Shonali Bose	3 rd ELT@I Conference on Interfacing Language, Culture and Technology	BITS Pilani, Pilani	8– 9 October, 2012
3.	Geetha Bakilapadavu and Sukanya Mondal	OrhanPamuk's <i>My Name is Red</i> as a Postmodern Text: A Study of Fragmented Narration and Self Reflexivity	International Conference on Language, Literature and Culture. Institute of Advanced Study in English	Pune	10-12 December, 2012
4.	Sukanya Mondal and Geetha Bakilapadavu	Breaking the fourth wall in OrhanPamuk's <i>Istanbul: Memories and the City</i>	International Conference on Language, Literature and Culture. Institute of Advanced Study in English	Pune	10-12 December, 2012
5.	Sangeeta Sharma	Brand Building of Management Institutes through Social Media	9 th AIMS International Conference	FLAME , Pune	1 st – 4 th January 2012
6.	Madhusmita Das and Sangeeta Sharma	Are women aware of their rights: An empirical study	National Seminar on Female foeticide and Gender violence: The human rights	University of Rajasthan, Jaipur	11 th -12 th August 2012.

S.No.	Name of faculty	Title	Organization/ Conference Name	Place	Date
			perspective		
7.	Madhusmita Das and Sangeeta Sharma	Driving Force of Advertisements Behind Women's Health and Beauty	Tenth Conference of Indian Association for Social Sciences and Health on "Health, Regional Disparities and Social Development"	Centre of Social medicine and Community Health School of Social Sciences, Jawaharlal Nehru University	21-23, November 2012
8.	PushpLata	"Integration of Web based Interactive and Multimedia Learning Materials for Off-Campus Students: A Case Study"	Global Science and Technology Forum	Hotel Fort Canning, Singapore	9 - 10 July 2012
9.	PushpLata	"Integrating Web 2.0 Tools for Enhancing Collaborative Writing Skills: Challenges and Prospects"	3 rd ELT@ International Conference	BITS, Pilani	8-9 October 2012
10.	PushpLata	"Enhancing Learner Autonomy through Self Instructional Materials"	3 rd ELT@ International Conference	BITS, Pilani	8-9 October 2012.
11.	Kumar NeerajSachdev	An Ethical Revision of Cultural Orientation of Language	Third International ELT@ Rajasthan Conference on Interfacing Language, Culture and Technology	Department of Humanities and Languages, BITS, Pilani, India	October 8-9, 2012
12.	Kumar NeerajSachdev	An Analytical Study of the Relation between Ethics and Professions	UGC Sponsored National Seminar on Applied Ethics: Emerging Issues and Response of World Religions	Department of Guru Nanak Studies, Guru Nanak Dev University, Amritsar, India	September 26-27, 2012
13.	Kumar NeerajSachdev	Nature and Relevance of Ethical Communication in a Cybernetic Society	National Conference on Recent Trends in Language and Society	Department of Social Sciences, Institute of Engineering & Technology - Bhaddal, Ropar, India	January 20-21, 2012
14.	Devika	Breaking the barriers to move beyond: A charismatic display of self belief in Arundhati Roy's <i>The God of Small Things</i> and Manju Kapur's	Annual International Conference on Language, Literature and Linguistics (L3 2012)	Singapore	9-10 July 2012

S.No.	Name of faculty	Title	Organization/ Conference Name	Place	Date
		<i>Difficult Daughters</i>			
15.	Gupta, Piyush and Devika	Developing Lexical Database through Word-Image Association	International Conference on Interfacing Language, Culture and Technology	BITS Pilani	8-9 October, 2012
16.	Devika	Maximizing the Benefits through Creativity: An IDEA Approach	International Conference on Creativity and Innovation: Breaking the Barriers to Reach the Bottom of the Pyramid	Gurgaon	17-18 Feb. 2012
17.	Gupta, Piyush and Devika	Dolly Mishra in Vishal Bhardwaj's Omkara (2006): A Feminist Reading of the Film	International Conference on Women in Shakespeare: A Post-Feminist Scrutiny	Kota	4-6 Oct. 2012
18.	Gajendra Singh Chauhan	Power of New Media and Language Change: What's Next?"	Third International ELT @I Conference on Interfacing Language, Culture and Technology	Department of Humanities and Languages, BITS Pilani.	8-9 October, 2012
19.	Gajendra Singh Chauhan	"Language Change and Advertising Communication: Footloose and Fancy Free.	Institute of Engineering & Technology, Bhaddal-Ropar.	Ropar.	20-21 January 2012
20.	Shekhawat, Sushila	Variegated Shades of A Female in Indian Films: A Study of Mirch Masala and Arth	Annual International Conference in Language, Literature and Linguistics	Singapore	9-10 July 2012.
21.	Shekhawat, Sushila	Use of multimedia Language Laboratory for Teaching Business Communication	3rd International EITAI Rajasthan Conference on Interface of Language, Technology and Culture	BITS, Pilani, Rajasthan	8-9 October 2012.
22.	Chasul and SushilaShekhawat.	Techniques for Enhancing Vocabulary	3rd International EITAI Rajasthan Conference on Interface of Language, Technology and Culture	BITS, Pilani, Rajasthan	8-9 October 2012.
23.	Virendra Singh Nirban	Death of a Vowel: Surviving in the shadows of New	Third ELTAI International Conference on	BITS Pilani	8-9 October, 2012

S.No.	Name of faculty	Title	Organization/ Conference Name	Place	Date
		Media	Language, Culture and Technology		
24.	NeejaVyas and Virendra Singh Nirban	Breaking Time and Space Barriers: Using Mobile Technology in Classroom	Third ELTAI International Conference on Language, Culture and Technology	BITS Pilani	8-9 October, 2012
25.	Kumar Sankar Bhattacharya	"The 'Other' and its Representation in Kunal Basu's <i>The Yellow Emperor's Cure</i> ."	Institute of Advanced Studies in English, International Conference on Language, Literature and Culture	Pune, Maharashtra.	December 10-12, 2012.
26.	Kumar Sankar Bhattacharya	Postcolonial theory and culture : Open Talk	Seminar on Postcolonial Theory	LPU, Phagwara, Punjab	November 29, 2012
27.	Diksha Sharma	Presented a paper titled "Cultural implications of English Language Teaching "	Third International ELT@I Rajasthan Conference titled "Interfacing Language, Culture and Technology"	Organised by the Department of Humanities and Languages , BITS Pilani , Rajasthan.	08-09 Oct 2012
28.	Diksha Sharma	Presented a review of OrhanPamuk's "My Name is Red"during a seminar	Pamuk's novel held at BITS Pilani.	BITS Pilani	21 Apr 2012

WORKSHOPS AND INVITED TALKS

14 Workshops were conducted in the areas of Communication in various reputed institutes and organizations. One workshop was organized. One Film curatorial Film Festival was curated by one faculty member.

Guest editor for journals, editorials

Five faculty members acted as guest editor for journals and editorials.

Departmental activities (conferences, seminars & workshops, invited talks)

The department organized a two- day 3rd ELT@I International Conference at BITS, Pilani during 8-9 October 2012 as attended by 130 participants from across the country (Tamil Nadu, Andhra Pradesh, Bihar, Haryana, Delhi, UP, Goa, Punjab to name a few) and also from Nepal.

A three -day workshop was organized at BITS Pilani, Pilani campus from 18-20 Feb. 2012 for the course Short Film and Video Production. The resource persons were Mr. George M. Thomas and Ms. Ashwini Chaudhary.

A lecture by Peter Cooke, Head, School of Drama, University of Carnegie Mellon was organized on the topic Technology and the Arts on 17 November 2012.

5 invited lectures were organized in the areas of Advertising, Technology in Education, Animation, Constitution Design.

Two faculty members conducted four workshops in the areas of Group discussion, interviews and common errors in English. Fourteen workshops were conducted in other institutions by the faculty members.

Awards and recognitions won by faculty and students

Sangeeta Sharma Received AIMS Outstanding Editor's Award, 2012 by The Association of Indian Management Scholars, International, USA.

B1.10.9 Department: Mathematics

Number of faculty members (as on 31 December 2012)

Senior Professors, Professors	02
Associate Professors	02
Assistant Professors	15
Lecturers	00
Visiting Faculty	03

Head of the Department: Dr. Pradipkumar Haribhau Keskar

Contact details: keskar@pilani.bits-pilani.ac.in

Number of Ph. D. Scholars: 06

Ph.D. Thesis Submitted during the year: 00

A. SPONSORED RESEARCH ACTIVITIES

Total number of Sponsored Projects in the department: 05. Details are given below.

1. Ongoing projects: 02

a) Principal Investigator: **Dr. Padma Murali**

Project titled "Cardiovascular Disease in Human Population: Mathematical Modeling and Analysis of its Incidence, Risk Factors and Preventive Strategies", UGC Major project grant received w.e.f. from 1.2.2011 till Feb., 2014 for a period of 3 years. Grant amount is Rs. 8,44,000/-.

b) In addition to the individual projects, the department is supported by the UGC-SAP (DRS-I) of Rs. 71.5 lakhs, No.: F.510/2/DRS/2010/(SAP-I) for a period of 5 years (1.04.2010 to 31.03.2015).

2. Projects sanctioned during the year : 01

a) Principal Investigator : Ms. Atasi Patra

Project titled "Dynamics of Biological Species: Some Mathematical Models", under the scheme WOS-A of DST, Govt of India, for 3 years. Grant Amount is 10.86 Lakhs

3. Projects completed this year : 02

a) Principal Investigator: **Dr. Dilip Kumar Maiti**

Project titled "Computational Investigation of Vortex Shedding and Heat Transfer Enhancement from a Heated Square Cylinder in Presence of Eddy-Promoting Rectangular Cylinder Near a Wall", Department of Science & Technology (DST), INDIA under SERC Fast Track Proposals for Young Scientists Scheme for a period of 3 years. Grant amount is Rs. 10.81 lakhs.

b) Undergraduate Student: Olive Chakraborty

Principal Investigator: RDCIS, SAIL

Project titled "Hybrid Modeling of Flat rolling process" by Dept of Science and Technology, under INSPIRE from 21/05/2012 to 25 /07/2012. Grant amount Rs. 20,000/-

B. PUBLICATIONS

The faculty of the department published 40 papers in international/national refereed journals during the year.

1. **Amit K. Verma** : "The Monotone iterative method and regular singular nonlinear BVP in the presence of reverse ordered upper and lower solutions", *Electronic J. Differential Equation*, Vol 2012 (2012), No. 4, 1-10, ISSN: 1072-6691, Published from Department of Mathematics, Texas State University-San Marcos, USA.
2. **Amit K. Verma**, Ravi P. Agarwal and **Lajja Verma**: "Bessel functions and singular BVPs arising in physiology in the presence of upper and lower solutions in reverse order", *Journal of Applied Mathematics and Computing* (Springer), Volume 39, Numbers 1-2 (2012), 445-457.
3. **Amit K. Verma** and Ravi P. Agarwal: "Upper and lower solutions method for regular singular differential equations with quasi-derivative boundary conditions", *Communications in Nonlinear Science and Numerical Simulation* (Elsevier), Volume 17, Issue 12, December 2012, Pages 4551–4558.
4. K. Pandey, **Lajja Verma** and **Amit K. Verma**: "Du Fort-Frankel finite difference scheme for Burgers' equation", *Arabian Journal of Mathematics* (Springer) Accepted on 12 September 2012.
5. **A. Tiwari**, S. Deo and A.N. Filippov: "Effect of the magnetic field on the hydrodynamic permeability of a membrane", *Colloid Journal*, 74 (4) (2012), 515-522
6. **A. Tiwari** and S. Deo: "Pulsatile flow in a cylindrical tube with porous walls: Applications to blood flow", *Journal of Porous Media* (Accepted in 2012).
7. Pramod Kumar Yadav, **Ashish Tiwari**, Satya Deo, Manoj Kumar Yadav, Anatoly Filippov, Sergey Vasin, and Elena Sherysheva: "Hydrodynamic Permeability of Biporous Membrane", *Colloid Journal* (Accepted in 2012).
8. **Dubey B.**: "Modelling effects of two interacting populations on a renewable resource, *Natural Resource Modeling*", 25(2), 325 – 363, 2012.
9. **Dubey B.**, and **Patra Atasi**: "Optimal Management of a Renewable Resource Utilized by a Population with Taxation as a Control Variable", *Nonlinear Analysis: Modelling and Control*, (accepted for publication in 2012).
10. **B. K. Sharma**: 'Comment on "Fluctuating hydromagnetic natural convection flow past a magnetized vertical surface in the presence of thermal radiation" by Ashraf, M., Asghar, S. and Hossain, M. A. [*Thermal Science*, Vol. 16, 2012, OnLine-First Issue 00, Pages: 45-45: doi: 10.2298/TSCI110805045A]. *Thermal Science*, Vol. 16 (4), 1255-1256.
11. **B. K. Sharma**, P. K. Sharma and R. C. Chaudhary: "Unsteady flow through porous medium induced by periodically rotating half-filled horizontal concentric cylindrical annulus with heat transfer", *International Journal of Physical Sciences* Vol. 7(10), (2012), 1530 - 1539. DOI: 10.5897/IJPS12.158
12. **B. K. Sharma**, K. Yadav, N. K. Mishra and R. C. Chaudhary: "Soret and Dufour effects on unsteady MHD mixed convection flow past a radiative vertical porous plate embedded in a porous medium with chemical reaction", *Applied Mathematics*, Vol. 3(7), (2012), 717-723. doi:10.4236/am.2012.37105 Published Online July 2012.
13. **B. K. Sharma**: Comment on "Analytical solution to the problem of MHD free convective flow of an electrically conducting fluid between two heated parallel plates in the presence of an induced magnetic field", *International Journal of Applied Mathematics and Computation*, Vol. 4(3), pp 312–313, 2012.
14. **B. K. Sharma**, T. Chand and R. C. Chaudhary: "Hydromagnetic forced flow between a rotating disc and a naturally permeable stationary porous disc saturated with fluid", *Journal of Petroleum and Gas Engineering*, Vol. 3(1), (2012), 8-15. DOI: 10.5897/JPG11.012.
15. **B. K. Sharma**: "Comment on "Induced magnetic field with radiating fluid over a porous vertical plate: Analytical study" by Sahin Ahmed [*Journal of Naval Architecture and Marine Engineering*

- 7(2010), 83-94], *Journal of Naval Architecture and Marine Engineering*, 9(2012), T1-T2. DOI: <http://dx.doi.org/10.3329/jname.v9i1.10579>
16. **C. B. Gupta**, S R Singh and Tarun Kumar: "Genetic algorithm based multi product and multi agent inventory optimization in supply chain management", *International journal of modeling and optimization*, Vol.2. No.6, December 2012.
 17. Jain, M., **Shekhar, C.** and Shukla, S, "Vacation Queueing Model for a Machining System With Two Unreliable Repairmen", *International Journal of Operational Research* (Accepted in 2012).
 18. Jain, M., **Shekhar, C.** and Shukla, S, "Queueing Analysis of Two Unreliable Servers Machining System with Switching and Common Cause Failure", *International Journal of Mathematics in Operational Research*, (Accepted in 2012).
 19. Jain, M., **Shekhar, C.** and Shukla, S, "Queueing Analysis of a Multi-component Machining System having Unreliable Heterogeneous Servers and Impatient Customers", *American Journal of Operations Research*, Vol. 2, No. 3, pp. 16-26 (2012).
 20. **Devendra Kumar**, and M. K. Kadalbajoo: "A parameter uniform method for singularly perturbed differential-difference equations with small shifts", *Journal of Numerical Mathematics* (Accepted).
 21. **Devendra Kumar**, A. S. Yadaw, and M. K. Kadalbajoo: "A parameter-uniform method for two parameters singularly perturbed boundary value problems via asymptotic expansion", *Applied Mathematics & Information Sciences* (Accepted).
 22. **Maiti, D. K.** : "Aerodynamic Characteristics of Rectangular Cylinders Near a Wall", *Ocean Engineering* (An Int. J. of R & D), Elsevier, 54, 251-260.
 23. M. Imdad, **Javid Ali** and M. Hasan: "Common fixed point theorems in fuzzy metric spaces employing common property (E.A)", *Mathematical and Computer Modeling* (Elsevier Press), 55(2012), 770-778.
 24. V. Popa, M. Imdad and **Javid Ali**: "On strict common fixed points of hybrid mappings in 2-metric spaces", *J. King Saud University-Science* (Elsevier Press), 24(2012), 289-294.
 25. M. Imdad, **Javid Ali** and M. Hasan: "Common fixed point theorems in modified intuitionistic fuzzy metric spaces", *Iranian J. Fuzzy Systems*, 9(5)(2012), 77-92.
 26. **Lajja Verma**: "L-stable derivative free error corrected trapezoidal rule for Burgers equation with inconsistent initial and boundary conditions", *International Journal of Mathematics and Mathematical Sciences*, (Hindawi) Accepted on 21-08-2012.
 27. **Padma Murali and Rajiv Kumar**: "Analysis of an Age Dependent Epidemic Model", *Journal of Informatics and Mathematical Sciences*, Vol. 4, No.2, pp. 137-156, 2012.
 28. **Padma Murali**, P. R. Deepa: "A Bio-mathematical Approach to Evaluate the Risk Burden of Hypertension and Hyperlipidemia in Diabetic Cardiovascular Disease", *American Journal of Bioinformatics Research*, vol 2, No.5, pp 86-91, 2012.
 29. **Padma Murali**, Murali Raman: "Modeling the dynamics of amyloid formation of islet beta cells under therapeutic interventions and its role in discovery of novel target for drug action", *International Journal of Life sciences and Medical Research* (Accepted for publication).
 30. **P. H. Keskar**: "Multiplication: From Thales to Lie", *Resonance, A Journal of Science Education*, Springer (published for Indian Academy of Sciences), vol 17, no 5, (2012).
 31. Geetanjali Sharma, G.N. Purohit, and **Rakhee**: "Analysis of Multiple Queue Model in Cellular Networks with Sub Rating of Channels", *King Abdulaziz University Journal*, (Saudi Arabia), Vol. 23, No. 1, pp.85-128, 2012.
 32. Seema Verma, **Rakhee** and Savita Kumari: "Channel Optimization for Wireless Data Broadcast", *IJCA Proceedings on National Workshop-Cum-Conference on Recent Trends in Mathematics and Computing 2011* RTMC(1), May 2012. Published by Foundation of Computer Science, New York, USA.
 33. **Rakhee**, Geetanjali Sharma, Kriti Priya: "Analysis of G-queue with unreliable server", *Opsearch*, (DOI) 10.1007/s12597-012-0117-y (online published on 14 December 2012).

34. Kusum Deep, **Shashi**, V. K. Katiyar : "A New Real Coded Genetic Algorithm Operator: Log Logistic Mutation", Advances in Intelligent and Soft Computing, Springer, Volume 130, 2012, pp 193-200.
35. Kusum Deep, **Shashi**, V.K Katiyar and Atulya K Nagar : "Minimization of Molecular Potential Energy Function Using newly developed Real Coded Genetic Algorithms", An International Journal of Optimization and Control: Theories & Applications, Vol. 2, No.1, pp.51-58, (2012).
36. **Shivi Agarwal** : "Sensitivity analysis in data envelopment analysis", IJOR (accepted in October 2012).
37. **Shivi Agarwal** : "Measure of Efficiency by Fuzzy Data Envelopment Analysis Model", in Fuzzy Information and Engineering, (Accepted in November2012).
38. **Trilok Mathur**, Ruchi Mathur and Deepa Sinha: "*Some starlike and convexity properties of Sakaguchi Classes for Hypergeometric Functions*", International Journal of Open Problems in Complex Analysis, Vol.4, No.1, (14-21), March 2012.
39. **Trilok Mathur** and Ruchi Mathur: "*Fekete-Szegő Inequalities for Generalized Sakaguchi Type Functions*", Lecture Notes in Engineering and Computer Science, Vol. 1, (210-213), July 2012.
40. **Trilok Mathur** and Ruchi Mathur: "*On Some New Inequalities Involving Generalized Fractional Integral Operator*", Journal of Rajasthan Academy of Physical Sciences, Vol.11, No.1, (63-68), 2012.

C.1 CONFERENCES ATTENDED/PAPERS PRESENTED

1. **Amit K. Verma** : Presented a paper entitled "On a Class of Singular BVP Arising in Thermal Explosion: Upper and Lower Solutions in Reverse Order" in 'National Conference on Modeling, Computational Fluid Dynamics & Operations Research' held at Department of Mathematics BITS Pilani, Rajasthan, February 4-5, 2012.
2. **Ashish Tiwari** : Presented a paper entitled "Pulsatile flow through cylindrical tube with porous walls: Application to blood flow" in National conference on Computational Fluid Dynamics, Mathematical modeling and Operation research held at BITS Pilani, 4-5 Feb., 2012.
3. Anil Kumar Sharma, **C. B. Gupta**, Naresh Kumar Agarwal and Satish Kumar Khurana: Presented a paper "Replenishment policy for single item with inflation time value of money of deteriorating items" in the National conference on Modeling, Computational Fluid Dynamics and Operations Research held at BITS Pilani, 4-5 February 2012.
4. **C. B. Gupta**, Neeraj Kumar and S R Singh : Presented a paper "An inventory model with K-release rule multivariate demand and lost sales with time value of money and limited storage facility" in the National conference on Modeling, computational Fluid dynamics and Operations Research held at BITS Pilani, 4-5 February 2012.
5. Naresh Kumar Agarwal, **C. B. Gupta**, Anil Kumar Sharma and Rahul Jain : Presented a paper "Ordering and Pricing policies of an inventory model for deteriorating items having known demand with second scale" in the National conference on Modeling, computational Fluid dynamics and Operations Research held at BITS Pilani, 4-5 February 2012.
6. **C. B. Gupta**, Sachin Kumar and R B Singh: Presented a paper "Impact of Family Planning Programme" at International conference on History and Development of Mathematical Sciences & Symposium on Non Linear Analysis held at Department of Mathematics, MDU, Rohtak during 21-24 November 2012.
7. **C. B. Gupta** : 'National Conference on Numerical and Mathematical Modeling in Electrical Engg. and Applied Sciences' at Department of Mathematics, Poornima College of Engg. Jaipur, 21.01.2012 (Invited speaker).
8. **C. B. Gupta** : 'National Seminar on Mathematical and Physical Sciences' at D. N. (PG) College, Meerut, U.P., 17-18 March, 2012 (Chief Guest and Keynote Speaker).
9. **C. B. Gupta** : 'National conference on Recent Advancements in Communication Systems and Image Processing' at BKBIET, Pilani, 2-3 April 2012 (Chief Guest on Valedictory function).
10. **C. B. Gupta** : 'International conference on History and Development of Mathematical Sciences & Symposium on Non Linear Analysis' at Department of Mathematics, MDU Rohtak, 22-23 November 2012 (Chaired a technical session).

11. **Deepmala Agarwal** : Presented paper 'On Affine (non) Equivalence of Kasami Bent Functions' in the 'International Conference on Mathematics in Engineering and Business Management' Organized by Stella Maris College and Loyola Institute of Business Administration, Chennai, March 9-10, 2012.
12. **Deepmala Agarwal**: Presented Paper 'Results on 8-Variable Rotation Symmetric bent Boolean functions' in the 'International Conference on Mathematical Sciences' Organized by Shri Shivaji Education Society, Amravati's Science College, Nagpur, December 28-31, 2012.
13. **Shekhar, C.** : Presented a paper "Queueing model for a unreliable repairmen machining system with vacation", in conference 'National Conference on Advances in Mathematical Sciences' organized by Motilal Nehru National Institute of Technology, Allahabad, held on October 5-7, 2012.
14. **D. K. Maiti** : Presented a paper "A Square Cylinder and A Rectangular Cylinder In a In-line Tandem Arrangement: With Planar Shear Flow" in 'The International Conference on Dynamical Systems at Jadavpur University, Kolkata, 11-14 January 2012.
15. **G. Venkiteswaran** : Presented a paper "Stratified Monte Carlo Integration and Applications" in 10th International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing held at The University of New South Wales, Sydney, Australia from 11 February 2012 to 17 February 2012.
16. **Javid Ali**: Delivered a contributed talk entitled "Strict Common Fixed Point Theorems for Hybrid Mappings via altering distances and applications" in 'International Conference on Differential Geometry, Functional Analysis and Applications' held at Jamia Millia Islamia (A Central Univ.), New Delhi, India during Sept 08-10, 2012.
17. **Javid Ali**: Delivered a contributed talk entitled "Common Fixed Point Theorems via δ -distances with an Application" in 'International Conference on Theory, Methods and Applications of Nonlinear Equations' held at Texas A&M University, Kingsville, TX, USA during Dec. 17-21, 2012.
18. **Lajja** : Presented a paper "L-Stable Derivative Free Error Corrected Trapezoidal Rule for Burgers" Equation' in 'National Conference on Modeling, Computational Fluid Dynamics & Operations Research', Department of Mathematics BITS Pilani, Rajasthan, February 4-5, 2012.
19. **Padma Murali**: Presented a paper "Modeling the Dynamics of Amyloid Formation of Islet Beta Cells under Therapeutic Interventions and its role in discovery of novel target for drug action" in 'International Conference on Mathematical and Theoretical Biology', a meeting co-organized by The society for Mathematical Biology and Indian Institute of Science Education and Research, Pune in Pune, India, January 23-27, 2012.
20. **Pankaj Biswas** : Presented Paper "Least-squares spectral element methods for parabolic problems using parallel computers" in 'International Conference on Applied Mathematics 2012: Modeling, Analysis, and Computation' at City University of Hong Kong, Hong Kong, May 28 - June 1, 2012.
21. **P. H. Keskar** : Algebra and Algebraic Geometry conference, Purdue University, U.S.A., 5-8 July 2012.
22. **Rajesh Bhatt and Dilip K Maiti** : "Aerodynamic Characteristics : Square Cylinder and Eddy-Promoting Rectangular Cylinder near wall" in 'National conference on Modeling, Computational Fluid Dynamics & Operations Research' Feb 4-5, 2012, held at BITS Pilani Rajasthan.
23. **Rajesh Bhatt and Dilip K Maiti** : "Effect of Inter Cylinder spacing on the vortex shedding suppression of flow past inline tandem cylinders near a wall" in 57th congress December 17-20, 2012, organized by ISTAM (Indian Society of Theoretical Applied mechanics) and Defense Institute of Advanced Technology, Pune.
24. **Rakhee** : Presented a paper entitled "Analysis of G-Queue with Unreliable Server" in the 'National conference on Industrial Mathematics and soft Computing-2012', organized by Department of Mathematics, School of Applied Sciences, KIIT University, Bhubaneswar during May 26-27, 2012.
25. **Rakhee** : Presented a paper entitled "Evaluation of Blocking Probabilities for Multiple Queue Model in Microcellular Networks with Subrating" in the 'International conference on Frontiers of

Statistics and its Applications', organized by Pondicherry University, Puducherry, held during 21-23 December 2012.

26. **Shashi** : 'Seventh International Conference on Bio-Inspired Computing: Theories and Application, 2012 (BIC-TA 2012)' held at ABV-Indian Institute of Information Technology and Management Gwalior during December 14 - 16, 2012 (*Chaired a technical session*).
27. **Shivi Agarwal** and Shiv Prasad Yadav : presented a paper "Fuzzy Slack Based Measure (SBM) of Data Envelopment Analysis" in 'International conference on optimization modelling and applications (OPTIMA-2012)' held at University of Delhi, Delhi during November 29-December 1-2012.
28. **Shivi Agarwal** and AK Pani : Presented a paper "Efficiency of Public Transport Sector of India by Neural Network Approach" in 'International conference on Frontiers of Statistics and its applications' held at University of Pondicherry, Puducherry during December 21- December 23-2012.
29. **Trilok Mathur** : Presented a paper "Fekete-Szegö Inequalities for Generalized Sakaguchi Type Functions" in 'World Congress of Engineering (WCE-2012); International Conference of Applied and Engineering Mathematics', organized by International Association of Engineers (IAENG), held at Imperial College, London, UK, from 4-6 July 2012.
30. **Trilok Mathur** : Presented paper "Characterization and Subordination Properties for λ -Spiral-like Generalized Sakaguchi Type Functions" in 'International Conference of Mathematical Sciences (ICMS-2012)', organized by Shri Shivaji Education Society, Amravati's Science College, Nagpur, December 28-31, 2012.
31. Olive Chakraborty (Undergraduate Student) presented paper on "Hybrid Modelling Of Flat Rolling Process in hot rolling" in the International conference of Rolling and finishing technology of Steel organised by RDCIS, SAIL at Ranchi, Jharkhand from 4-6 th October 2012.

C.2 WORKSHOPS ATTENDED

1. Nidhi Chaudhary attended a workshop 'Modelling, Operation Research and AIS 2012 on Numerical Analysis' at Panjab University, Chandigarh (18 June-7 July 2012)
2. Nidhi Chaudhary attended 'Advanced Level Workshop on Differential Equations in Ecology and Epidemiology', at IIT Roorkee, 10th - 14th Oct. 2012

D. BOOKS PUBLISHED/EDITED DURING THE YEAR

1. **C. B. Gupta** (Editor-in chief): Proceedings of 2nd international conference on Operations Research and Statistics held on 7-8 May 2012 at Bali, Indonesia.
2. Savita Kumari, Seema Verma, Rakhee Kulshrestha: "Performance Evaluation of Indexing Techniques for Wireless Environment" LAMBERT Academic Publishing, Germany, February 2012.

E. CONFERENCES, SEMINARS & WORKSHOPS CONDUCTED

1. The Mathematics Department, BITS-Pilani, Pilani campus organized 'National Conference on Modeling, Computational fluid Dynamics and Operations Research', 4-5, February, 2012 in BITS-Pilani at Pilani. Convenor: Balram Dubey, co-convenor: Dilip Kumar Maiti, Organizing Secretary: C. B. Gupta. The conference was supported by UGC-SAP DRS -I.
2. **C. B. Gupta** conducted a seminar on "Applications of Mathematics in Daily Life" at Sun Rise University, Alwar on 9.5.2012.

F. INVITED TALKS GIVEN BY BITS FACULTY

1. Amit Kumar Verma delivered a talk on "Learning Calculus with Mathematica" in BBVP, Pilani on 16 August 2012 as part of Mathematics Week celebration in BBVP, Pilani.
2. C. B. Gupta delivered a talk on "Simulation and its application in Queueing Theory" in 'National Conference on Numerical and Mathematical Modeling in Electrical Engg. And Applied Sciences' at Poornima college of Engg. Jaipur on 21.01.2012.
3. C. B. Gupta delivered a talk on "Application of Mathematics to Sciences" in 'National Seminar on Mathematical and Physical Sciences' at D. N. (PG) College, Meerut, U.P. on 17 March 2012.

4. C. B. Gupta delivered an invited talk titled "A lecture on Probability Distributions" at JVMGRR (PG) College, Charkhi Dadri (Haryana) on 20.09.2012.
5. C. B. Gupta delivered an invited talk on "How to teach?" at LCRT College of Education, Panipat (Haryana) on 21.11.2012.
6. Dilip Kumar Maiti delivered a talk on "Numerical Study on Vortex Shedding and Aerodynamic Characteristics: Square Cylinder and In-line Eddy Promoters Near Wall" at IISER, Kolkata in Jan.2012.
7. Dilip Kumar Maiti delivered a talk on "Computational Investigation on Vortex Shedding and Aerodynamic Characteristics of Square Cylinder Due to Eddy Promoters Near Wall" at VU, Midnapore, WB in Jan. 2012.
8. Dilip Kumar Maiti delivered a talk on "Computational Study on Interactions of Vortices of a Square Cylinder and a Rectangular Vortex Generator Near to Plane" at ICMSEC, Academy of Mathematics and Systems Science, CAS, Beijing, CHINA in Dec.7 2012
9. Dilip Kumar Maiti delivered a talk on "Computational Study on Interactions of Vortices of a Square Cylinder and a Rectangular Vortex Generator Near to Plane" at Institute of Applied Mathematics and Computational Mathematics, Beijing, China on Dec. 14, 2012.
10. Dilip Kumar Maiti delivered a talk on "Vortex Shedding and Aerodynamic Characteristics on Square Cylinder Due to Secondary Flow Generated by Rectangular Eddy-Promoter Near Plane" at Key Laboratory of Railway Vehicle Thermal Engineering, Lanzhou Jiaotong University, CHINA on December 19, 2012.
11. G. Venkiteswaran delivered a talk on "Networking in Unix Environment" at A. M. Jain College, Chennai on 22nd of February 2012.
12. P.H. Keskar delivered a talk on "Use of birational transformations in solving certain functional equations", in 'Algebra and Algebraic Geometry conference', Purdue University, U.S.A., on 5th July 2012.
13. Shashi delivered a short term course "Recent Advances In Genetic Algorithms and their Applications in Engineering Design" held at Indian Institute of Technology Roorkee during 25th June 2012 – 29th June 2012.
14. Trilok Mathur presented an Invited Talk on "Introduction to Fractional Calculus and its Applications to Fractional Order Dynamical Systems in Control Theory" in DST sponsored National Conference on 'Innovations in Mathematics and their Applications in Power Systems' (IMSAPS), held at RCEW, Jaipur on 21-22 September, 2012.

G. INVITED TALKS ARRANGED IN THE DEPARTMENT

1. Professor N. R. Garg, M. D. University, Rohtak delivered a talk on "Plain strain deformation Analysis of an Elastic Solid" on 26th March 2012.
2. Professor V. D. Sharma, Department of Mathematics, IIT Bombay delivered a talk on "Evolution and Asymptotic behavior of Nonlinear Waves in Compressible Flows" on 23rd April 2012.

H. AWARDS AND RECOGNITIONS WON BY FACULTY AND STUDENTS

1. Balram Dubey joined the Editorial Board of an International Journal "Mathematical Problems in Engineering", Hindawi Publication, USA in July 2012.
2. Bhupendra Kumar Sharma became an Associate Editor of the World Research Journal of Aeronautics and Aerospace Engineering.
3. Bhupendra Kumar Sharma became a member of Editorial Boards of 1) Journal of Statistics and Mathematics, 2) International Journal of Mathematics and Computer Applications Research (IJMCAR), 3) International Journal of Physics and Mathematical Sciences 4) Journal of Mathematics, USA and 5) Bulletin of Society for mathematical services and standards.
4. Bhupendra Kumar Sharma became a **member of Advisory Board of American Academic & Scholarly Research Center (AASRC), USA.**
5. C. B. Gupta was listed in top 100 scientists of 2012 by International Biographical Centre, Cambridge, England.

6. Chandra Shekhar became a member, Editorial Board, American Journal of Operations Research (USA).
7. Chandra Shekhar became a Reviewer for (1) Applied Mathematics and Computation, Elsevier, (2) International Journal of Engineering, (3) Journal of Mathematics in Operations Research, Inderscience Publishers, (4) Journal of Mathematics and Statistics, (5) Applied Mathematics.
8. Pranjali Prabhakar (undergraduate student) selected for Google Summer Of Code.
9. Rushabh Agrawal and Kunal Lad placed in Google US (1.22 Crore).
10. Udbhav Prasad selected for DAAD Summer Internship Program.
11. Sartaj Singh Manhas and Aman Agrawal selected for the prestigious Indian Academy of Sciences Summer Research Fellowship Program.
12. Olive Chakraborty Received the Best Research Paper Award in Pure Mathematical Research category at the International Conference of Rolling and Finishing Technology of Steel.

I. FACULTY DEVELOPMENT, INTERNATIONAL COLLABORATION & INDUSTRY IMMERSION

1. Chandra Shekhar worked as Observer, All India Pre-Medical Test, CBSE, New Delhi, India in 2012.
2. Dilip Kumar Maiti visited ICMSEC, Academy of Mathematics and Systems Science, CAS, Beijing and Key Laboratory of Railway Vehicle Thermal Engineering, Lanzhou Jiaotong University, CHINA

J. SIGNIFICANT NEW EQUIPMENTS/EXPERIMENTAL FACILITY ADDED DURING THE YEAR

The following hardwares/software were added to the Mathematics Laboratory:

1. Mathematica (software)
3. Techplot (software)
4. AMPL Optimization (software)
5. Five Dell computers (Hardware)

K. DEPARTMENTAL ASSOCIATION/CLUB ACTIVITIES

Mathematics Association

Events in apogee 2012

1. Fast And The Curious: Involved solving mathematical puzzles in least possible time.
2. Relay Mathematics: Working in teams, each of part of question had to be answered by individual member in team.
3. Problem Bazaar: Initially some points were given to a player, and a set of questions each with different points were given, out of which the player had to pick. The one with maximum number of points at the end wins.

Other events

1. Treasure Hunt conducted on 28th Feb 2012 as a part of Science Day Celebrations in association with all the Sciences Associations.
2. Su-do-ku held on 15th October 2012 as a part of Tech Weekends in association with Apogee Costaa body.
3. Math Olympiad was conducted on 26th October 2012 as a part of Tech Weekends in association with Apogee Costaa body.

B1.10.10 Department: Mechanical Engineering

Number of faculty members (as on 31 December 2012)

Senior Professors, Professors	2
Associate Professors	2
Assistant Professors	12
Lecturers	13
Visiting Faculty	0

Head of the Department: Prof. K. S. Sangwan

Contact details: kss@pilani.bits-pilani.ac.in

Number of PhD Scholars: 19

Ph.D. Thesis Submitted during the year: 0

A. SPONSORED RESEARCH ACTIVITIES

Total number of Sponsored Projects in the department:

Details are given below.

(i) Ongoing projects:

1. BITS Pilani Seed Grant: Design and Development of robotic exoskeleton for upper limb rehabilitation and assistance, 2011-2013, 15.1 Lacs, B. K. R Rout.
2. Gas authority of India Limited (GAIL): Design and development of condition monitoring of pipelines using WSN, Rs.71.36 Lacs, 2012-2014, PI: K. R. Anupama (Goa campus), Co-PI: A K Jalan, Sharad Shrivastava.
3. UGC Major Research Project: Design and Development of Test rig to understand the Dynamics of Nanorobots, Rs.9.37 Lacs, 2012-2014, Co-Investigator: J S Rathore.

(ii) Projects sanctioned during the year

1. Department of Science and Technology (DST): Fund for Improvement of S&T Infrastructure in Universities and Higher Educational Institutions (FIST), 2012-17, 165 Lacs, Dr K S Sangwan.
2. DAAD, Germany, Indo-German Automotive Life Cycle Engineering (InGA-LCE), 2013-14, 94423 € (Approximately 70 Lacs), Dr Kuldip Singh Sangwan and Prof Christoph Herrmenn.
3. Ministry of Information and Technology, (MIT): Development, Design and Engineering of 28-DOF Humanoid to avoid obstacles and handle specified objects in the environment, 2012-2014, 45 Lacs, B. K. Rout.

(iii) Projects completed this year

1. UGC SAP (2007-12), 38.00 Lacs

B. PUBLICATIONS

The faculty of the department published 18 papers in international/national refereed journals during the year.

1. J P Bhamu, S Kumar and Kuldip Singh Sangwan, "Productivity and quality improvement through Value Stream Mapping: A Case Study of Indian Automotive Industry", International Journal of Productivity and Quality Management, vol 10, No. 3, 2012, pp 288-306.

2. Navneet Khanna, Ainhara Garay, Luis M. Iriarte, Daniel Soler, Kuldip S. Sangwan and Pedro J. Arrazola, "Effect of Heat Treatment Conditions on the Machinability of Ti64 and Ti54M Alloys", *Procedia CIRP*, Vol 1, 2012, pp 477 – 482.
3. Kuldip Singh Sangwan, "Part Family Formation in Cellular Manufacturing using Fuzzy Mathematics", *Industrial Engineering Journal*, vol V, No. 6, 2012, pp 40-46.
4. Khanna N., Sangwan, K.S., "Comparative Machinability Study on Ti54M Titanium Alloy in different Heat Treatment Conditions", *Proc IMechE, Part B: J Engineering Manufacture*, Vol. 227, No. 1, pp. 96-101.
5. Khanna N., Sangwan, K.S., "Machinability study of α/β and β titanium Alloy in Different Heat Treatment Conditions", *Proc IMechE, Part B: J Engineering Manufacture*, DOI: 10.1177/0954405412469509.
6. Khanna N., Sangwan, K.S., "Interrupted Machining Analysis for Ti6Al4V and Ti5553 Titanium Alloys using Physical Vapor Deposition (PVD)-coated carbide inserts", *Proc IMechE, Part B: J Engineering Manufacture*, DOI: 10.1177/0954405412472888.
7. Sangwan, K. S. and Jindal, A. "An Integrated Fuzzy Multi-criteria Evaluation of Lithium-ion battery recycling processes". *International Journal of Sustainable Engineering*, 1-13.
8. Sangwan, K.S., Mittal, V.K., Singh, P.J. (2012), "Stakeholders for Environmentally Conscious Technology Adoption: An Empirical Study of Indian Micro, Small and Medium Enterprises", *International Journal of Management and Decision Making*, Vol. 12, No. 1, pp. 36-49.
9. Bera T. C., (2012), "An investigation of surface errors in thin-walled machining", *Journal on Mechanical Engineering*, Vol.2, No. 1, pp. 53-66.
10. Dwivedy M., Mittal R. K., (2012), "An investigation into e-waste flows in India", *Journal of Cleaner Production*, Vol. 37, pp. 229–242.
11. Javed A., Rout, B.K., "Investigation on parametric sensitivity of topologically optimized structures", *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, Nov 2012 vol. 226 no. 11 2791-2804, DOI: 10.1177/0954406212437513
12. Javed A., Sengar A.K, Rout B.K., "A FEM and Image Processing Based Method for Simulation of Manufacturing Imperfections" *Asian Review of Mechanical Engineering*, Vol. 1 No.2 pp 1-5.
13. Javed A., Rout, B.K., "Tolerance range section of topologically optimized structure using combined array design of experiments approach", *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, November 29, 2012 as doi:10.1177/0954406212468652
14. Mukherjee I., Routroy S. (2012), "Comparing the performance of neural networks developed by using Levenberg-Marquardt and Quasi-Newton with the gradient descent algorithm for modelling a multiple response grinding process", *Expert Systems with Applications*, Vol. 39, No. 3, pp. 2397-2407.
15. Majumdar R., Singh N. , Rathore J.S., Sharma N.N., "In search of materials for artificial flagella of nanoswimmers", *Journal of Materials Science*, Springer, Vol 48(1), pp. 240-250.
16. Rathore J.S., Majumdar R., Sharma N.N., "Planar Wave Propagation Through a Tapered Flagellated Nanoswimmer", *IEEE Transactions on Nanotechnology*, Vol 11(6), pp. 1117-1121.
17. Routroy S., Pradhan S. K. (2012), "Framework for Green Procurement: A Case Study", *International Journal of Procurement Management*, Vol. 5 No.3, pp. 316-336.
18. Srinivas N., Chandra P. R., Shrivastava S., Jalan A.K., "A review on mechanical behavior of natural fiber based hybrid composites", *Journal of Reinforced Plastics and Composites*, vol. 31 (11) ,pp.759-769.

The faculty of the department published 23 papers in conference proceedings during the year.

1. Bera T.C., "A flexible force model for peripheral milling of thin walled curved geometries", *Int. conference of Virtual Machining Process Technology 2012*, Monterial Canada, 61.
2. Bhakar V., Mahajan A., Digalwar, A. K., Sangwan, K.S., "Life Cycle Assessment of recumbent bicycle", *Proceedings of International Conference on Advancements and Futuristic Trends in*

- Mechanical and Materials Engineering (AFTMME-2012), 5-7 October 2012, PEC Kapurthala, pp. 373-377.
3. Bhakar V., Digalwar, A. K., Sangwan, K.S., "Imperative of Sustainability Measurement Framework for Manufacturing Industries, Proceedings of 6th ISDSI conference on Operational Excellence: A Key for Performance Excellence, 27-29 December 2012, IBS Hyderabad, pp. 20-29.
 4. Digalwar, A. K., Ganneri, G., "Roadmap for the growth of electric vehicles market in India", Proceedings of Conference on Technological Advances in Chemical and Environmental Engineering-2012 (TACEE-2012), 23-24 March 2012, Chemical Engineering Department of BITS Pilani, pp. 7-8.
 5. Digalwar A. K., Jain S., "Selection of manufacturing system for business sustainability: A MCDM approach", Proceedings of 25th AIMTDR 2012 Conference on Innovation for Sustainable Manufacturing, 14-16 December 2012, Jadavpur University Kolkata, pp. 1323-1328.
 6. Dubey S.K., N. Agarwal, Srinivasan P., " Three dimensional transient heat transfer model for steel billet heating in reheat furnace", Proc. of ASME HT2012, Puerto Rico USA, HT58151.
 7. Geetha B., Sundar B., M, Sai J. M., " Integrating Humanities into Engineering Education using Design as the Focus: An Interdisciplinary Teaching Experience", 5th symposium on Engineering and Liberal Education, 1-3, June Union College, Schenectady, New York,2012.
 8. Gupta D. K., Dasgupta M.S., "Simulation and Performance Evaluation of Finned Tube Gas Cooler for Trans-Critical CO₂ Refrigeration System" Proceedings 2nd International Conference on Mechanical Engineering, Materials and Energy 2012 (ICMEME2012), Dalian, China, E0148.
 9. Haridas, P. and Digalwar, A. K., "Quality management practices of software industries: An Empirical Investigation from India", Proceedings of 6th ISDSI conference on Operational Excellence: A Key for Performance Excellence, 27-29 December 2012, IBS Hyderabad, pp. 132-143.
 10. Javed, A., Rout B.K., " Issues in Design for Manufacturing using Topology Optimization Method", Presented in National Conference on Modeling, Computational Fluid Dynamics & Operations Research Under UGC-SAP, DRS-I, Birla Institute of Technology & Science, Pilani, Rajasthan, India, 4-5 Feb 2012.
 11. Javed, A., Sengar, A. K., Rout, B.K., "A FEM and Image Processing Based Method for Simulation of Manufacturing Imperfections", Proceedings of International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering, Punjab Technical University, Kapurthala, India, 5-7 Oct 2012, , pp. 225-229
 12. Javed, A., Rout B.K., "Parametric sensitivity studies for Reliable Topologically Optimized Structures" 3rd Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS 2012), IIT Delhi, India, 6-8 Dec 2012, pp. 252-255,
 13. Jindal, A. and Sangwan, K. S., "Fuzzy Multi Criteria Evaluation of Product Recovery Process " Bhattacharyya, B., Chakraborty, S. and Doloi, B. eds. 25th All India Manufacturing Technology, Design and Research Conference 2012, Jadavpur University, Kolkata: Excel, pp.1259-1265.
 14. Jindal, A. and Sangwan, K. S.,(2012), " Fuzzy Multi Criteria Evaluation of Collection Methods in Reverse logistics." , Shankar, R., Kumar, A. and Chadhuri, A. eds. XVI Annual International Conference of the Society of Operations Management 2012, IIT Delhi, pp. 296-307.
 15. Kant G., Rao V. V., Sangwan, K.S.," Predictive Modelling of Turning Operations using Response Surface Methodology", International Conference on Mechatronics and Computational Mechanics, 20-21 December 2012, Dubai.
 16. Khanna, N., Sangwan, K.S., " Effect of heat Treatment Conditions on the Machinability of Ti64 and Ti54 M Alloys ", Procedia CIRP, Volume 1, 2012, pp. 477-482.
 17. Mittal, V.K., Sangwan, K.S. (2012) "Environmentally Conscious Manufacturing Initiatives: Investigation on the Barriers in Indian Industry", in proc. of 4th International and 25th All India Manufacturing Technology Design and Research Conference - 2012, December 14 - 16, 2012, Jadavpur University, Kolkata, West Bengal, India, pp.

18. Pradhan, S.K, Routroy, S., "Identification, quantification and analysis of supply chain risk factors", Proceeding of First International Conference on "Best Practices in Supply Chain Management", 22-23 November 2012, SOA University, Bhubaneswar, pp. 54-61.
19. Purwar, Anupam, Joshi, Divya, Dasgupta, Mani Sankar, Intelligent Control of Electric Lamp", Proceedings of the Global Summit 2012 on Innovation, 2012, August 14-16, 2012, London, England
20. Routroy, S., Das P.K., Dixit, M., "Development of Optimum Dynamic Pricing Model for Perishable Product in Different Demand Environments", Proceeding of First International Conference on "Best Practices in Supply Chain Management", 22-23 November 2012, SOA University, Bhubaneswar, pp. 41-45.
21. Sangwan K.S., Kant G., Deshpande A., Sharma P. (2012), " Modeling of Stresses and Temperature in Turning using Finite Element Method", International Conference on Mechatronics and Computational Mechanics", 20-21 December 2012, Dubai.
22. Sonar P., Rout B.K., "Review on Design of Exoskeleton for Rehabilitation Engineering" 8th IAMI BIENNIAL CONFERENCE (Improving Health Through IT), NCMI, AIIMS, New Delhi, India, 3-5 Feb 2012.
23. Sonar P., Rout B.K., "Investigation on importance of different postures on biomechanical system by OPENSIM software and computational tools", Proceedings of 3rd Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS 2012), IIT Delhi, India, 6-8 Dec 2012, pp. 676 -679.

C. CONFERENCES ATTENDED/PAPERS PRESENTED:

1. Dr. A.K. Digalwar attended Indo-German Workshop on "Mobility 2020" Organized by Mercedes Benz at New Delhi on 1st Nov 2012
2. Prof. Mani Sankar Dasgupta presented a paper in 2nd International Conference on Mechanical Engineering, Materials and Energy 2012 (ICMEME2012) held at Dalian, China.
3. Dr. Srikanta Routroy, presented a paper in the First International Conference on Best Practices in Supply Chain Management during 22-23 November 2012 held at SOA University, Bhubaneswar, India.
4. Dr. Srikanta Routroy, presented a paper in the National Conference on Modeling, Computational Fluid Dynamics and Operations Research, during 4-5 February held at BITS Pilani, Pilani Campus.
5. Dr. Srikanta Routroy presented a paper in the Conference on Technological Advancements in Chemical and Environmental Engineering (TACEE – 2012), during 23-24 March held at BITS Pilani, Pilani Campus.
6. Dr. K S Sangwan presented a paper in International Conference on "Mechatronics and Computational Mechanics" held in Dubai during December 20-21, 2012.
7. Dr. Subrata B Ghosh, presented in the 12th International Conference on Biocomposites, May 6-8, 2012, held at Niagara Falls, Canada.
8. Dr. T.C. Bera, presented a paper in Int. Conference of Virtual Machining Process Technology (VMPT), 2012 held at Montreal, Canada.
9. Mr. A. Javed, presented a paper in the 3rd Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS 2012), 6-8, Dec 2012, held at IIT Delhi, India.
10. Mr. Navneet Khanna presented a paper in the 5th International Conference on High Performance Cutting , June 4-7, 2012 held at ETH Zurich, Switzerland
11. Mr. Satish Kumar Dubey, presented a paper in the National Conference on Modeling, Computational Fluid Dynamics and Operations Research, during 4-5 February held at BITS Pilani, Pilani Campus.
12. Mr. Satish K. Dubey presented a paper in the ASME Summer Heat Transfer Conference HT2012, July 8-12, 2012, held at Puerto Rico USA.
13. Mr. Girish Kant presented a paper in International Conference on Mechatronics and Computational Mechanics held in Dubai during December 20-21, 2012.

14. Mr. V. K. Mittal presented a paper in the 4th International and 25th All India Manufacturing Technology Design and Research Conference, 14 - 16 December 2012, held at Jadavpur University, Kolkata, West Bengal, India.
15. Mr. V.K. Mittal presented a paper in the 19th CIRP Conference on Life Cycle Engineering, 23-25 May, 2012, held at University of California, Berkeley, California, USA.

D. BOOKS PUBLISHED / EDITED DURING THE YEAR: NIL

E. CONFERENCES, SEMINARS & WORKSHOPS CONDUCTED

- Two Day Workshop on Rapid Prototyping was conducted during March 11-12, 2012.

F. INVITED TALKS GIVEN BY BITS FACULTY

1. Digalwar A.K. Assistant Professor in Mechanical Engg. delivered an expert lecture on "Green Manufacturing: Issues, Challenges and Research Opportunities" on 13th June 2012 in Short Term Training Programme on Energy Conservation and Management, during 11-14 June 2012, organized by BNCOE Pusad
2. Rout B.K, "How to Write Research Articles", Vivekananda University, JAIPUR Rajasthan, July 2012.
3. Prof. M S Dasgupta from Mechanical Engineering Department presented a Plenary Speech on "Issues with Montreal and Kyoto Protocol Implementation in Countries with Warmer Climatic Condition through a Window of Carbon Dioxide based Transcritical Cycle Refrigeration System" at 2nd International Conference on Mechanical Engineering, Materials and Energy (ICMEME 2012), Dalian, China from October 26 to 27 2012, Sponsored by Trans Tech Publications & IEEE Computational Intelligence.
4. Dr Kuldeep Singh Sangwan, "Lean management and Green Management" during UGC Refresher Course in Business Studies held at Academic Staff College, Guru Jambheshwar University of Science & Technology, Hisar, June 18, 2012
5. Dr Kuldeep Singh Sangwan, "Quality function deployment for Innovation in Product Design and Development", Government Engineering College, Bikaner, March 31, 2012.
6. Dr Kuldeep Singh Sangwan, "Sustainability in Energy Sector for India", Key note address during national conference on non conventional source of energy development and its application in rural areas and industry, Murudhar Engineering College, Bikaner, March 30, 2012
7. Dr Kuldeep Singh Sangwan, "Role of Rapid Prototyping in New Product Development" during 2-day workshop on rapid prototyping, BITS Pilani, March 11, 2012.

G. INVITED TALKS ARRANGED IN THE DEPARTMENT: NIL

H. AWARDS AND RECOGNITIONS WON BY FACULTY AND STUDENTS

1. Dr. A. K. Digalwar has been elected as a Secretary General of Indian Subcontinent Decision Sciences Institute (ISDSI) USA for two years 2012-2013.
2. Dr. B. K Rout, Mechanical Engineering Department was awarded Indo US Science and Technology Fellow for the year 2012-2013.

I. FACULTY DEVELOPMENT, INTERNATIONAL COLLABORATION & INDUSTRY IMMERSION

J. SIGNIFICANT NEW EQUIPMENTS/EXPERIMENTAL FACILITY ADDED DURING THE YEAR:

The department has purchased Inverted Metallurgical Microscope, Pneumatic Trainer, PLC based Hydraulic Trainer, Impact Testing Machine during the year 2012.

K. DEPARTMENTAL ASSOCIATION/CLUB ACTIVITIES

(i) Society of Automotive (SAE) Collegiate Club

SAE Collegiate Club, BITS Pilani is a group of budding engineers committed to the promotion of automotive knowledge and technologies. The club has been instrumental in providing students a link between practical and theoretical knowledge. With more than 150 student members, from various disciplines, the club encourages inter-disciplinary approach to finding automotive

solutions. The club organizes various activities such as Guest Lectures, Workshops, Quizzes, Project presentation, and Design competitions based on Land and Air transport technologies throughout the academic year. Inspired Karters, the flagship group formed under SAE has been successfully participating in BAJA SAE India, an ATV design challenge and SUPRA SAE India since its inception. In 2012 the team participated in Formula Student, Hungary competing with teams across the world.

(ii) ASME

The ASME student section in BITS-Pilani was started in September, 2008 to provide students an opportunity to enhance their technical knowledge, showcase their talent and network with professionals and other student members from all over the world. ASME organized various events like EGGCAP 2.0 for first year students in which participants were asked to construct a parachute egg case using straws, staplers cardboard, polythene and tapes and participated in EFFI-CYCLE 2012, organized by SAE, Northern India section in Chandigarh. The team won the first prize in Ergonomics. ASME students also participated in SHELL ECO MARATHON 2013.

(iii) RC

Radio Control (RC) club was founded in 2011 and aims to bring together all the RC enthusiasts from all the four BITS campuses, share knowledge and research work and also work on various multi-disciplinary projects. The club comprised of students mainly from Mechanical, Manufacturing, Electrical and Electronics and Instrumentation Engineering discipline. The club has organized micro-controller workshop, aero workshop, and glider workshop and also has given presentation on use of RC Vehicles for Disaster Management. Aero-modeling Workshop organized in October 2012, in collaboration with Aerodynamics Club, BITS Goa was unique attempt at promoting cross campus activities. Club members have actively participated in APOGEE and won prizes in various events like Battle-at-Waterloo, FTGP, up in the air, DMVC etc. Currently club members are developing sophisticated Automated Quad-Copters to come up with low cost UAV system that has various military as well as disaster management applications.

(iv) Team AcYut

Team AcYut represented BITS Pilani at the RoboCup Iran Open 2012. The competition involved a two-on-two soccer match between autonomous robots with little or no human intervention. Our team lost the Teen size Humanoid Final after a competitive match with the final score being 1:0.

B1.10.11 Department: Management

Seventh batch of forty six students was admitted to the M.B.A programme (launched from 1st sem.2006) this year. The department also admitted a sizable number of research scholars to provide an added emphasis on the research. A new faculty member (with a Ph.D. from Delhi University) joined the department in the area of operations and marketing.

STUDENT ACTIVITIES

Management association organized year-long activities through its clubs structured along four important functional areas of management viz. Marketing, Human Resource Management, Finance and Operations Management along with ***Interface 2012***.

Interface 2012

35th Annual Management Convention Interface 2012 was conducted by the students of Department of Management of BITS – Pilani. The theme of the event was “Aarambh”, which means “a creative beginning”. The event was for duration of 3 days from 10th February – 12th February, 2012. Fifty students from various management schools viz. Symbiosis(Pune), NITIE (Mumbai), NarseeMonjee Institute (Mumbai), DOM – IIT Roorkee, SRCC (Delhi), MICA (Ahmadabad), IMT (Ghaziabad), S.P. Jain (Mumbai) etc participated in the event. An active participation was seen from the on – campus students of BITS Pilani as well. The Chief Guest for the inaugural function was Mr. Valmeekanathan, Vice-President, Product Life Cycle Division, Infosys. The key note speaker was Mr. Sammer Hanchate, a reputed Bollywood director known for his contribution in making documentary films. On 10th of Feb, 2012, a workshop was conducted on Product Life Cycle Management by Mr. Valmeekanathan. The events started from morning of 11th Feb, 2012 with the Flagship event B-Plan followed by Case study event. Simultaneously events such as Biz-Quiz and Barter King were conducted. A workshop on film making was conducted by Mr. Sameer Hanchate, which saw a participation of over 100 students. In the evening, several on- the- spot events were conducted. Fundoo –

Manager was a finance based event to illustrate how well people can invest their money. The event which saw a huge attendance of above 300+ students, being conducted in three different slots was “York and Slog”, an IPL auctioning event. All the events were prepared and conducted by Marketing and Finance club of the Management Association. On 12th Feb, 2012, the final round for Barter King was conducted followed by a workshop on entrepreneurship by Mr. Sarath Babu, a famous BITSian entrepreneur (owner of Foodking- a food chain). The valedictory function was conducted in the evening of the same day. The winners of the each event were various prizes and certificates.

FACULTY ACTIVITIES

Department faculty members were involved in conducting of Management Aptitude Test and Group Discussion for admitting new MBA Students. The institute also took the decision to use CAT 2012 (conducted by IIM Authorities) scores for short-listing candidates for its MBA Programme for 2013 and accordingly the department has been coordinating with the Admission Division to execute this decision.

Use of “Case Methodology”, experiential techniques and other interactive pedagogic features was further institutionalized and strengthened in the MBA programme. Many practitioner guest lectures were arranged for the students. Several projects in various functional areas of management were supervised by the Department faculty members under special oriented projects, study oriented projects, and computer oriented projects, reading courses and first degree thesis. Regular faculty and research scholar seminars were conducted in the department.

The Department faculty members taught many courses in M Phil. (HHSM) and MPH programmes. Department continued to contribute to a number of off-campus management programmes both in terms of teaching as well as in conducting review and suggesting changes.

Faculty published fifteen papers in international journals, eight in national journals and seven in conference proceedings (a total of thirty in all). Three faculty members have submitted proposals for projects to the sponsoring organizations.

B1.10.12 Department: Pharmacy

Number of faculty members (as on 31 December 2012)

Senior Professors, Professors	03
Associate Professors	00
Assistant Professors	06
Lecturers	09
Visiting Faculty	00

Head of the Department: Dr. Hemant R. Jadhav

Contact details: hemantrj@pilani.bits-pilani.ac.in

Number of PhD Scholars: 15

Number of PhD Scholars being supported through Projects and External Funding: 13

Number of First Degree and Higher Degree Students being Supported by Sir Ratan Tata Trust: 13

Ph.D. Thesis Submitted during the year: 01

A. SPONSORED RESEARCH ACTIVITIES**(i) Ongoing projects:**

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. in Lakh)
1	Design, Synthesis and Study of Novel Benzopiperidine analogs as HIV-1 Reverse Transcriptase Inhibitors	Dr. S. Murugesan	BITS, Pilani	2.00
2	Possible mechanism of attenuation of the cardioprotective and neuroprotective effect of Ischemic preconditioning diabetic and hyperlipidemic rats.	Dr. Rajeev Taliyan	BITS, Pilani	2.00
3	Design of Modified Release Multi-Unit Particulate Delivery Systems for Fixed-Dose Combination of Artesunate and Amodiaquine for Paediatrics	Dr. Shrikant Charde	UGC Major	10.25
4	Pharmaceutical Application Studies of Polymers Manufactured by BASF	Dr. Shrikant Charde	BASF	2.00
5	Design and Synthesis of Novel Agents for the Management of Rheumatoid Arthritis	Dr. Hemant R Jadhav	UGC Major	8.35
6	Design and Synthesis of Novel Agents for the Treatment of Rheumatoid Arthritis	Dr. Hemant R Jadhav	DST -SERB	19.03
7	Synthesis and pharmacological evaluation of novel phosphodiesterase-4 inhibitors for their anti-depressant and anxiolytic potential	Prof R.Mahesh	DBT	51.69
8	Design and synthesis of novel antimalarial agents Indo-Canadian DBT Project (Indo-Canadian joint Research Project on Anti-Malarials)	Prof R.Mahesh	DBT	36.60
9	Design of Nasal Drug Delivery Systems for CNS Targeting	Prof. R. N. Saha	Torrent Research Centre, Ahmedabad	20.00
10	Studies of Carbopols Use for Controlled Release and Other Uses by Extrusion and Spheronization Techniques	Prof. R. N. Saha	Lubrizol, USA	12.00
11	Development of analytical and bioanalytical methods for racemic drugs by HPLC and HPTLC for pharmacokinetic studies	Mr. Sunil Kumar Dubey	UGC-Minor	1.80

Brief Write Up of Projects**Design, Synthesis and Study of Novel Benzopiperidine analogs as HIV-1 Reverse Transcriptase Inhibitors**

In the above mentioned project, some novel analogs of benzopiperidine were designed by using docking software like Autodock. Based on the results, the analogs were synthesized by optimized reactions, characterized by IR, NMR and Mass spectral analysis. Finally the characterized compounds were evaluated against HIV-1 reverse transcriptase inhibitory activity by RNA dependant DNA polymerase inhibitory assay in collaboration with Dr. Nicolas Cremer of Pittsburgh University, USA.

Possible mechanism of attenuation of the cardioprotective and neuroprotective effect of Ischemic preconditioning diabetic and hyperlipidemic rats.

Metabolic syndrome is characterized as a combination of cardio-metabolic risk determinants including insulin resistance and dyslipidemia and is associated with a significantly increased brain dysfunction. Reperfusion induced reactive oxygen or nitrogen species (ROS or RNS), including superoxide radicals, hydrogen peroxide, hydroxyl radicals, singlet oxygen, nitric oxide, and peroxynitrite plays major contribution to myocardial I/R injury. However, brief episodes of ischemia followed by reperfusion of myocardium increase the resistance against sustained ischemia of longer duration; this phenomenon is termed as ischemic preconditioning (IPC). IPC have shown cardioprotective and neuroprotective effect in various preclinical and clinical studies. However, some studies reported that the protective effect was abolished in heart failure, obesity and diabetes mellitus (DM). The exact nature of effect and mechanism involved of this endogenous protective phenomenon in insulin resistance, diabetic and obese rat associated with cognitive dysfunction, is still unknown.

Design of Modified Release Multi-Unit Particulate Delivery Systems for Fixed-Dose Combination of Artesunate and Amodiaquine for Pediatrics

Artesunate and Amodiaquine are used in the treatment of malaria, both the drugs are administered orally as fixed-dose combination tablets for better therapeutic efficacy. The research project aims at developing Modified release multi-unit particulate delivery systems (MUPS), this proposed formulation may exhibit an advantage of dose titration in pediatrics and also improved drug stability. Analytical methods have been developed for both the drugs and preformulation studies have been completed. Formulations for both the drugs have been optimized and in vivo studies are being planned.

Pharmaceutical Application Studies of Polymers Manufactured by BASF

This is an industry sponsored project. Various pharmaceutical applications of polymers manufactured by BASF has been undertaken. They are being evaluated for application in buccal, nasal and nano-particulate drug delivery systems.

Design and Synthesis of Novel Agents for the Management of Rheumatoid Arthritis

Rheumatoid Arthritis (RA) is a complex auto-immune systemic disease, affected in 1-2% of the population. TNF- α along with IL-1 stimulates fibroblast proliferation and induces proinflammatory cytokines, adhesion molecules and destructive enzymes such as collagenase, causing bone destruction. TNF- α found in membrane bound form is converted to its soluble form by TNF- α converting enzyme (TACE). Uncontrolled release of soluble TNF- α is characteristic of rheumatoid arthritis (RA) and Crohn's disease. We are currently working on lead identification and optimization of TACE inhibitors, using structure based and ligand based approach.

Design and Synthesis of Novel Agents for the Treatment of Rheumatoid Arthritis

Citrullination is a physiological process during inflammation and apoptosis, nearly 1% of population develops anticitrullinate peptide antibodies (ACPA) leading to immune reactions which is identified as one of the cause for RA. Citrullination reaction is carried out by a calcium- dependent enzyme Protein Arginine Deiminase 4 (PAD4). Currently we are involved in Design and synthesis of PAD4 inhibitors based on pharmacophore and molecular modeling, which will help in better understanding the the role of PAD4 in RA.

Design, Synthesis and Pharmacological Evaluation of Novel Phosphodiesterases-IV Inhibitors for their Anti-depressant and Anxiolytic Potential

Currently, clinically existing anti-depressants and anxiolytics are unfortunately known for their toxicity rather than their efficacy eg: MAOIs, TCAs. Phosphodiesterases-IV inhibitor has been reported for their anti-depressant activity but have not advanced significantly in terms of therapeutic efficacy and hence an attempt has been made to exploit this target. Novel molecules will be designed on the basis of required pharmacophoric model and will be synthesized. The synthesized molecules will be screened for their anti-depressant and anxiolytic potentials.

Design and synthesis of novel anti malarial agents

Malaria, being one of the dreaded infectious diseases in the world is prevalent in more than 90 countries, and about 40% of the world's population are at risk of malaria transmission. It is estimated that there are some 350–500 million cases resulting in over 1 million deaths each year. In the past two decades, the number of malaria cases has been growing steadily, mainly due to the development of drug resistance in the parasite, in particular Plasmodium falciparum. Thus, in many parts of the world, the parasite is now resistant against chloroquine, which was by far the most frequently used anti- malarial drug for half a century. Therefore, there is an increasing need to identify new targets and develop drugs aimed at these targets. Various potential biochemical targets have been proposed; among these, the cysteine protease falcipain-2

from *P. falciparum* is an attractive and most promising target enzyme, which plays a key role in haemoglobin degradation in throphozoites.

Design of Nasal Drug Delivery Systems for CNS Targetting

Suitable analytical and bio-analytical methods have been developed for dopamine and one more drug coded as NDD009, both CNS active drugs. In situ and in vivo nasal absorption model has been developed in rat. Nasal absorption of has been studied and good absorption has been found. Further, formulations of both the drugs have been made stability study and for nasal absorption.

Studies of Carbopols Use for Controlled Release and Other Uses by Extrusion and Spheronization Techniques

Carbopols, important pharmaceutical excipients, are brand products of Lubrizol USA and are used for different purposes for making formulations or drug delivery systems. Different carbopols have been selected and used, alongwith other excipients for making granules by extrusion and spheronization techniques. Other excipients used are MCC, starch, etc. Optimization of process parameters are going on. Also analytical methods, both UV spectrophotometric and HPLC, of selected drugs have been developed.

Development of analytical and bioanalytical methods for racemic drugs by HPLC and HPTLC for pharmacokinetic studies

Analytical and Bioanalytical method for some racemic drugs have been developed. Validation of the method developed have been carried out. Pharmacokinetic studies of ketorolac and its enantiomers has been done. LCMS/MS method has been developed for the above drug.

(ii) Projects sanctioned during the year

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs.in Lakh)
1	Design, Synthesis and Evaluation of Novel Tetrahydroquinoline & Tetrahydroisoquinoline analogs as anti-HIV agents	Dr. S. Murugesan	DST-SERB	24.75
2	Possible mechanism of attenuation of the cardioprotective and neuroprotective effect of Ischemic preconditioning diabetic and hyperlipidemic rats.	Dr. Rajeev Taliyan	BITS, Pilani	2.0
3	Studies on Cell Lines as Model for Predicting In Vitro Buccal Permeation of Various Classes of Drugs and its Co-relation with In Vivo Data	Dr. Shrikant Charde	DST-SERB	27.60
4	Design, synthesis and evaluation of novel beta secretase inhibitors for the treatment of Alzheimer's disease.	Ms. Priti Jain	UGC Minor	2.00
5	Design and characterization of novel buccal drug delivery system of felodipine	Mr. Murali Monohar Pandey	UGC Minor	1.70
6	Understanding the Epigenetic Regulation in modulating Inflammatory Response mediated by NF-kB through AT1 or AT2 receptor in Type II diabetic nephropathy	Dr. Anil Gaikwad	DST-SERB	Committed

Brief Write Up of Projects

Design, Synthesis and Evaluation of Novel Tetrahydroquinoline & Tetrahydroisoquinoline analogs as anti-HIV agents

In the above mentioned project, some novel analogs of 1,2,3,4-tetrahydroquinoline and 1,2,3,4-tetrahydroisoquinoline will be designed based upon the pharmacophoric requirements for the inhibition of HIV activity by using Schrodinger Glide molecular modelling software. Based on the results of the docking study, the hit molecule will be synthesized by optimized reaction procedures. It will be followed by purification and characterization by appropriate analytical methods like TLC, Column chromatography, IR, NMR, Mass and

Elemental analysis. Finally all these confirmed molecules will be subjected to screen against inhibition of HIV and other allied opportunistic infections. At last but not the least, based on the overall results, lead molecule will be identified and further will be optimized.

Possible mechanism of attenuation of the cardioprotective and neuroprotective effect of Ischemic preconditioning diabetic and hyperlipidemic rats

Metabolic syndrome is characterized as a combination of cardio-metabolic risk determinants including insulin resistance and dyslipidemia and is associated with a significantly increased brain dysfunction. Reperfusion induced reactive oxygen or nitrogen species (ROS or RNS), including superoxide radicals, hydrogen peroxide, hydroxyl radicals, singlet oxygen, nitric oxide, and peroxynitrite play major contribution to myocardial I/R injury. However, brief episodes of ischemia followed by reperfusion of myocardium increase the resistance against sustained ischemia of longer duration; this phenomenon is termed as ischemic preconditioning (IPC). IPC has shown cardioprotective and neuroprotective effect in various preclinical and clinical studies. However, some studies reported that the protective effect was abolished in heart failure, obesity and diabetes mellitus (DM). The exact nature of effect and mechanism involved of this endogenous protective phenomenon in insulin resistance, diabetic and obese rat associated with cognitive dysfunction, is still unknown.

Studies on Cell Lines as Model for Predicting In Vitro Buccal Permeation of Various Classes of Drugs and its Co-relation with In Vivo Data

The project investigates the co-relation between the in vitro permeation data obtained using developed cell culture model and in vivo buccal permeation data obtained using rabbit as an animal model. The final objective being usage for cell lines for predicting buccal permeation of drugs. Three classes of drugs will be studied in this project. Method development for analysis of drugs have been initiated and equipment and instruments are being purchased.

Design, synthesis and evaluation of novel beta secretase inhibitors for the treatment of Alzheimer's disease

In the above study, novel beta secretase inhibitors will be designed based upon the docking studies. These designed molecules will then be synthesized and characterized by appropriate conventional and novel methods as well as by spectral analysis respectively. Finally, these synthesized molecules will be screened for beta secretase inhibition as anti- alzheimer's agents.

Design and characterization of novel buccal drug delivery system of felodipine

Felodipine is a dihydroiridine used in heart failure and angina pectoris. Its solubility is less and hence bioavailability is only 15%. In this work, a novel buccal formulation for felodipine will be designed. Various strategies like solid dispersions, nanoparticulate preparations, etc will be explored to enhance the rate and extent of dissolution of felodipine, which in turn would improve bioavailability of drug through buccal route.

Understanding the Epigenetic Regulation in modulating Inflammatory Response mediated by NF- κ B through AT1 or AT2 receptor in Type II diabetic nephropathy

Covalent modifications of histone residues determine chromatin structure dynamics and transcription factor accessibility, i.e. epigenetic control of chromatin replication and gene transcription. For example, transcriptional activity of calmodulin-binding transcription activator (CAMTAs, promotes cardiomyocyte hypertrophy) is governed by association with class II histone deacetylases (HDACs), which negatively regulate cardiac growth. A recent study also reports the role of elevated acetylated histone in vascular injury and remodeling in type I diabetic patients. These reports imply the involvement of global epigenetic changes in the pathogenesis of the diabetic complications. Considering these facts in the proposed project we hypothesized that covalent modification of histone H3 may have an important role in chromatin remodeling in diabetic kidney and transcription of inflammatory genes. Different histone modifications will be studied in this kidney under diabetic complications.

(iii) Projects completed this year

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. in Lakh)
1	Novel Neuropharmacological Agents for the Treatment of Depression, Anxiety, Cognitive Dysfunction and CCIE: Design, Synthesis and Screening of Potential Serotonergic Modulator	Prof. R. Mahesh	ICMR	31.00

Brief Write Up of Projects

Novel neuropharmacological agents for the treatment of depression, anxiety, cognitive dysfunction, and cancer chemotherapy induced emesis: Design, synthesis and screening of potential serotonergic modulators.

The project involves the design of novel Serotonin type 3 (5-HT₃) receptor antagonists by combining molecular modeling and traditional medicinal chemistry approach. Synthesis of the designed molecules using conventional methods and an environmental benign technique, Microwave-induced Organic Reaction Enhancement (MORE) chemistry, followed by Characterization of synthesized molecules are envisaged. Evaluation of the new chemical entities for the 5-HT₃ receptor antagonist activity and existing 5-HT₃ modulators for central nervous system disorders such as depression anxiety, cognitive dysfunctions and which could have beneficial effect in the management of nausea and vomiting and psychiatric disturbances in patients receiving cancer chemotherapy, are planned. Finally, structural optimization of the lead compounds to improve upon its activity, would be carried out.

(iv) Financial Support Sanctioned to Department

S.No.	Scheme	Agency	Sanction (Rs. in Lakh)
1	Departmental Research Support Under Special Assistance Program	UGC	71.50
2	Fund for Improvement of S&T Infrastructure in Higher Educational Institutes (FIST)	DST	125.00
3	Fellowships to Research Scholars under Basic Scientific Research Scheme (BSR)	UGC	51.00*
4	Fellowship to First Degree and Higher Degree Students of Department	Sir Ratan Tata Trust	11.33

* 5 fellowships have been awarded for 5 years with a support of Rs. 16000/- per month to every research scholar and contingency grant of Rs.12000/- per student per annum.

Brief Write Up

DRS SAP

Department of Pharmacy has been sanctioned Rs. 71.50 lakh in 2009 under DRS SAP Phase II. Rs. 49 lakhs have been sanctioned for equipment and remaining amount has been sanctioned as recurring grant for chemicals, books and journals, etc. All the equipments sanctioned under the grant (zeta sizer, spray drier, fluid bed drier, animal monitoring system and PDA detector) have been purchased. The grant has major impact in terms of new projects received by the Department and in number and quality of research publications. The number of research scholars has also increased steadily since the sanction. Recently UGC recognized the growth of research activities of Department and sanctioned five fellowships for Department under Basic Scientific Research Scheme (BSR).

DST FIST

Department has been sanctioned Rs. 125 lakhs under DST FIST Phase II during this year. The fund has been sanctioned for purchase of LC-MS-MS and this will be an important addition to the laboratory infrastructure and will help faculty members to get more projects from various funding agencies.

B. PUBLICATIONS

S.No.	Authors	Title	Journals	Vol.	Page
1	Sanjana R Bhat and Bhat A	The Relationship Of Attitude Constructs in Behaviour Adoption Towards Alleviation of Nutritional Anaemia	International Journal of Behavioral and Healthcare Research	3(3/4)	167-177
2	Sanjana R Bhat	Ignorance Of The Literate: Time To Target Higher Educational Institutions For Anaemia Curse	American Journal of Pharm Tech Research	2 (1)	424-430
3	Sanjana R Bhat,	Efficacy of Vaccination	American Journal of	2(1)	489-

S.No.	Authors	Title	Journals	Vol.	Page
	Niharika Monala, Bharti Prabhakar	Counselling on Awareness, Attitude and Practices among Adolescent Students In Rajasthan, India	Pharm Tech Research		499
4	P. Ashok, Kakumanu Kishore Babu, S. Murugesan and S. Ganguly	Design and Docking studies of some novel 1-phenyl-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indole-3-carboxylic acids as inhibitors of Human Immunodeficiency virus type-1 reverse transcriptase	Asian Journal of Chemistry	24	5857-5860
5	Rajeev Taliyan and P.L Sharma	Protective effect and potential mechanism of Ginkgo-biloba extract-EGb-761 on STZ-induced neuropathic pain behavior in rats.	Phytotherapy Research	26	1823-1829
6	Priti Jain, Hemant R. Jadhav	Quantitative structure activity relationship analysis of aminoimidazoles as BACE-1 inhibitors	Medicinal Chemistry Research	DOI:10.1007/s00044-012-0166-z	
7	Satish N. Dighe and Hemant R. Jadhav	Microwave assisted mild, rapid, solventless & Catalyst-Free Chemoselective N-tert-Butyloxycarbonylation of Amines	Tetrahedron Letters	53 (43)	5803-5806
8	Jindal A, Mahesh R, Gautam B, Bhatt S, Pandey D	Antidepressant-like effect of etazolate, a cyclic nucleotide Phosphodiesterase 4 inhibitor – an approach using rodent behavioral antidepressant tests battery	European Journal of Pharmacology	689	125-131
9	Mahesh R, Devadoss T, Pandey DK, Dhar AK Sudali M, Mundra S, Bhatt S, Jindal A	Ligand-Based Design, Synthesis and Pharmacological Evaluation of 3-Methoxyquinoxalin-2-Carboxamides as Structurally Novel Serotonin Type-3 Receptor Antagonists	Archiv Der Pharmazie	345	687-694
10	Mahesh R, Bhatt S, Devadoss T, Jindal AK, Gautam BK, Pandey DK	Antidepressant Potential of 5-HT ₃ Receptor Antagonist, N-n-propyl-3-ethoxyquinoxaline-2-carboxamide (6n)	Journal of Young Pharmacist	4	235-244
11	Mahesh R, Kumar B, Jindal A, Bhatt S, Devadoss T, Pandey DK	Antidepressant-like activity of (4-phenylpiperazin-1-yl) (quinoxalin-2-yl) methanone (4a), a novel 5-HT ₃ receptor antagonist: An investigation in behaviour-based rodent models of depression	Indian Journal of Pharmacology	44	560-565
12	Kumar B, Jindal A, Pandey DK, Bhatt S, Devadoss D, Mahesh R	Antidepressant and anxiolytic-like effects of 4n, a novel 5-HT ₃ receptor antagonist using behaviour based rodent models	Indian Journal of Experimental Biology	50	625-632
13	Jindal A, Mahesh R, Gautam B,	Evaluation of anti-diabetic activity of methanolic extract from the	International Journal Of Green Pharmacy	6	134-137

S.No.	Authors	Title	Journals	Vol.	Page
	Bhatt S, Pandey D	bark of <i>Atalantia monophylla</i> (Linn.) in alloxan-induced diabetic mice			
14	Vasanthakumar S, Srinath S.T, R.N Saha	A Simple and Rapid 3D View Method for Selective and Sensitive Determination of Paclitaxel in Micro Volume Rat Plasma by LC-Diode Array UV and Its Pharmacokinetic Application.	Journal of Chromatographic Science	50	259-270.
15	Kollipara S, Bende G, Bansal Y, Saha R. N.	Stability-indicating reversed-phase liquid chromatographic method for simultaneous determination of losartan potassium and ramipril in tablets.	Indian Journal Of Pharmaceutical Sciences	74	201-210
16	Sunil K Dubey, Jangala Hemanth, R.N. Saha, S. Pasha	New Chiral Reverse Phase HPLC Method for Enantioselective Analysis of Ketorolac Using Chiral AGP Column.	Journal of Pharmaceutical Analysis	2	462-465
17	S.K. Dubey, R.N. Saha, N. Mittapelly, A. Anand	Enantioselective Disposition after Single Dose I.V Administration of Ketorolac in Male Wistar Rats	Arzneimittelforschung	62	1-4
18	S. K. Dubey, R. D. Ukawala, D. Jha	Prescription to over-the-counter movement and its regulations	Clinical Research and Regulatory Affairs	29	1-8
19	S. K. Dubey, Amit Anand and Hemanth Jangala	Laboratory information and management system: A tool to increase laboratory productivity	Clinical Research and Regulatory Affairs	29	46-56

C. CONFERENCES ATTENDED/PAPERS PRESENTED:

S.No.	Authors	Title	Name of Conference	Place	Date
1.	Jasdeep Kaur and Sanjana R Bhat	Out of Pocket spending on Healthcare and Awareness about Health Insurance among Patients seeking curative services at Birla Sarvajanic Hospital Pilani	56 th Annual National Conference of Indian Public Health Association	Kochi, India	10-12 February
2	R P Pareek, Rajat Agarwal, Gautam Jian, Eadera Srikanth.	A Study to Assess the Effectiveness and Reliability of the Telemedicine Bringing Specialist Healthcare to the Rural India with Optimized Cost-effective Services	National Conference on Medica Informatics 8th IAMI BIENNIAL Conference (Improving through IT)	AIIMS, New Delhi	Feb. 3-5, 2012
3	Shreya Sood , R.P.Pareek	A study to screen the risk of osteoporosis in the population of Pilani.	56th Annual National Conference of the Indian Public Health Association	Kochi, Kerala	Feb. 11-13, 2012
4	R.P.Pareek	Delegate	48th Annual Meeting	Berlin,	1- 5

S.No.	Authors	Title	Name of Conference	Place	Date
			European Association for the Study of Diabetes (EASD)	Germany	October 2012
5	Pareek R.P., Singh A., Siddhartha V., Pandey M.M. Pilani	Economic Burden of Type-2 Diabetes Mellitus in a Residential University In Northern India	International Conference of Pharmacoeconomics and Outcomes Research	India Habitat Centre, Jacaranda Hall Lodhi Road, New Delhi - 110003, India	23 & 24 November 2012
6	Pareek R.P., Siddhartha V., Singh A., Pandey M. M.	Cost Estimation of Asthma Management in a Residential University in Northern India	International Conference of Pharmacoeconomics and Outcomes Research	India Habitat Centre, Jacaranda Hall Lodhi Road, New Delhi - 110003, India	23 & 24 November 2012
7	Ashok. P, S. Murugesan and S. Ganguly	Design and Comparative Docking studies of novel 1-Phenyl-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indole-3-carboxylic acid analogs as Inhibitors of HIV-1 Reverse Transcriptase	World Conference on HIV and AIDS	Kottayam, Kerala	November 09-11
8	P. Ashok, S. Murugesan and S. Ganguly	Design and Docking studies of some novel 1-Phenyl-2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indole-3-carboxylic acids as Inhibitors of Human Immunodeficiency Virus Type-1 Reverse Transcriptase	International Conference on Global Trends in Pure and Applied Chemical Sciences	Udaipur, Rajasthan	March 3-4
9	Ashok. P, Kakumanu Kishore Babu, S. Murugesan and S. Ganguly	Design and docking studies of some novel 2-Substituted Tetrahydro- β -carboline as Human Immunodeficiency Virus type-1 Reverse Transcriptase Inhibitors	Antivirals for the Developing World, 10th Annual Symposium of International Consortium on Anti-Virals	New Delhi	February 7-10
10	Kakumanu Kishore Babu, S. Murugesan and S. Ganguly	Design and Docking Studies of some Novel H1N1 Neuraminidase Inhibitors	National Conference on Chemical Sciences in New Millennium	Udaipur, Rajasthan	January 08
11	Rajeev Taliyan and P.L sharma	Protective effect of FeTMPyP, a peroxynitrite catalyst, against STZ-induced neuropathic pain behavior in rats	Insight to the Evaluation of Natural Products with Special Reference to Anti-Obesity Drug	Etawa, Kanpur	22-23rd September
12	Jaipal A., Pandey M M.,	Design and Evaluation of Buccal Tablets of	APTI 17th Annual National Convention	Manipal	12- 14th October

S.No.	Authors	Title	Name of Conference	Place	Date
	Charde S Y., Vinay S	Buspiron Hcl: Effect of Hpc and Mannitol on Drug Release.			
13	Jaipal A., Pandey M.M., Tarun B., Shreya C., Charde S Y.	Design and Evaluation of Buccal Tablets of Hpmc by Direct Compression Method.	APTI 17th Annual National Convention	Manipal	12- 14th October
14	Jaipal A., Pandey M.M., Abhishek A, Praveen L., Charde S Y	Design and Evaluation of Buccal Tablets of Buspiron HCl : Effect of Polycarbophil and Mannitol on Drug Release	APTI 17th Annual National Convention,	Manipal	12- 14th October
15	Pandey M. M., Jaipal A., Kumar A., Malik R., Parwani M., Charde S.Y	Formulation and in vitro Evaluation of Buccal Tablets of Felodipine using Polycarbophil, a Mucoadhesive Polymer	APTI 17th Annual National Convention,	Manipal	12- 14th October
16	Pandey M. M., Jaipal A., Malik R., Kumar A., Charde S. Y.	Dissolution Rate Enhancement of Pioglitazone Hydrochloride by Solid Dispersions using Poloxamer 188	APTI 17th Annual National Convention,	Manipal	12- 14th October
17	Vadiraj Kurdekar, Hemant R. Jadhav	A New Python Script for QSAR study	Poster presentation at 2 nd International conference on open source for computer-aided Translational medicine	Chandigarh	22-25th February
18	Priti Jain, L. Naga Rajiv, Hemant R. Jadhav	Synthesis and anti bacterial activity profile of cyclized diazonium compounds	Oral Presentation at International Conference on Global Trends in Pure and Applied Chemical Sciences (ICGTCS – 2012)	Udaipur	3-4th March
19	Gupta D, Mahesh R, Kure Y	Diabetes associated depression: Ondansetron, as antidepressant for streptozotocin induced diabetic depression in mice	3rd World Congress on Diabetes and Metabolism (Omics Group)	Hyderabad	24th-26th Sept
20	Mahesh R, Bhatt S, Panjwani R, Devadoss T, Jindal A.	Neuro-pharmacological Evaluation of Novel Serotonin Type-3 (5-HT ₃) Receptor Antagonists QCM-15, QCM-16, QCT-16 & QCT-22 (Quinoxaline Derivatives) for their Anxiolytic Potential	Indian Pharmaceutical Association Convention	Manipal.	17-18th March
21	Mahesh R, Dhar AK, Jindal A, Muthu VS,	Design, synthesis and pharmacological evaluation of Novel 2-(4-	Indian Pharmaceutical Association	Manipal	17-18th March

S.No.	Authors	Title	Name of Conference	Place	Date
	Mundra S	substituted piperazine 1-yl)-1,8-naphthyridine 3-carboxylic acids as 5-HT ₃ receptor antagonists for the management of depression	Convention		
22	Mahesh R, Sudali MV, Murugesan S, Dhar AK, Mundra S, Jindal A	Design and docking study of 4-benzyl-3-oxo-3,4-dihydroquinoline-2-carboxamide analogues as phosphodiesterase-iv (PDE-IV) inhibitors	Indian Pharmaceutical Association Convention	Manipal	17-18th March
23	Mahesh R, Mundra S, Devadoss T, Dhar AK, Sudali MV	Design and synthesis of pyrimidine scaffold for their kinase inhibitor activity	National Conference of Pharmedex	Aligarh	19-20 February
24	Gupta D, Mahesh R, Bhatt S, Devadoss T	Antidepressant like activity of buspirone and role of HPA axis dysregulation in depression	National Conference on Pharmacy and Pharmaceutical Sciences Pharmedex (AIPER)	Indore	28-29th April
25	Ishu Agarwal, Ramya Sandra, Satish N. Dighe, Hemant R. Jadhav	Simple & convenient method for the synthesis of formamidines using ZnCl ₂ as a catalyst	APTI 17th Annual National Convention 2012	Manipal College of Pharmaceutical Sciences, Manipal.	October 12-14
26	Pratyusha I V., Swathi Avula, Satish N. Dighe, Hemant R. Jadhav	Zn & ammonium formate: A new mild reducing agent for the synthesis of amidine from amidoxime	APTI 17th Annual National Convention 2012	Manipal College of Pharmaceutical Sciences, Manipal.	October 12-14
27	Ramya Sandra, Ishu Agarwal, Satish N. Dighe, Hemant R. Jadhav,	Effect of various Lewis acids and solvents on time and yield of Friedel -Craft acylation	APTI 17th Annual National Convention 2012	Manipal College of Pharmaceutical Sciences, Manipal.	October 12-14
28	Swathi Avula, V. Pratyusha, Satish N. Dighe, Hemant R. Jadhav	Microwave assisted convenient method for the synthesis of formamidines using ZnCl ₂ as catalyst	APTI 17th Annual National Convention 2012	Manipal College of Pharmaceutical Sciences, Manipal.	October 12-14
29	Satish N. Dighe, Vadiraj Kurdekar, Hemant R. Jadhav	Green chemical approach for N-tert-Butyloxycarbonylation of Amines	APTI 17th Annual National Convention 2012	Manipal College of Pharmaceutical Sciences, Manipal.	October 12-14
30	Sunil K Dubey, R.N.Saha, Jangala	Stereoselective pharmacokinetics of ketorolac using	International Symposium on Drug Metabolism&	NIPER Mohali	16,17,18 and 19th Feb 2012

S.No.	Authors	Title	Name of Conference	Place	Date
	Hemanth,	enantioselective liquid chromatography and solid phase extraction.	Pharmacokinetics,		
31	Sunil K Dubey, Jangala Hemanth, R.N.Saha, S. Pasha	Ultra-Performance Liquid Chromatography/Mass Spectrometric Method for the determination of venlafaxine and its metabolite in plasma: Application to pharmacokinetic study.	19th International Mass Spectrometry Conference	Kyoto Japan.	17-23 rd Sep, 2012
32	Balwani G., Gupta A., Saha R N.	Studies on Effect of Excipients on Release of Stavudine From Controlled Release Tablets Prepared By Melt Granulation	12th International Symposium of CRS-Indian Chapter on "Advances In Technology And Business Potential Of New Drug Delivery Systems	Mumbai	9th-10th February 2012
33	G. Balwani, R. N. Saha.	Development and validation of spectrofluorimetric method for estimation of ganciclovir in bulk and formulations and development and validation of rp-hplc method for estimation of ganciclovir in bulk and formulations.	7th AAPS-NUS PharmSci @Asia Symposium 2012 on "Exploring Pharmaceutical Sciences: New Challenges & Opportunities"	National University of Singapore, Singapore	6th, 7th June 2012.
34	G. Singhvi, S. Shweta, G. Manish, G. Gautham, R. N. Saha.	Design and characterization of hydrophilic and hydrophobic matrix based sustained release tablet of SNRI drug candidate.	3 rd World Congress on bioavailability and Bioequivalence Pharmaceutical R & D Summit	Hyderabad	26-28 March 2012
35	Emil Joseph, Vibhu, Garima, Satish Reddi an R.N. Saha.	A Validated RP-HPLC Method for the Estimation of Olanzapine in Polymer and Solid Lipid Nanoparticles	AAPS Annual Meeting and Exposition	Chicago, USA	14-18 October 2012

D. BOOKS PUBLISHED/EDITED DURING THE YEAR

S.No.	Authors	Title	Publisher
1	Sanjana R Bhat, Nirupama Prakash	Empowering Women in Developing countries Through Better Healthcare and Nutrition	Centre for Science and Technology of The Non-Aligned and Other Developing Countries (NAM&ST) New Delhi

E. CONFERENCES, SEMINARS & WORKSHOPS CONDUCTED: NONE

F. INVITED TALKS GIVEN BY BITS FACULTY

S.No.	Authors	Title	Conference Name	Place	Date
1	R. P. Pareek	A session on Telemedicine	National Conference on Medica Informatics 8th IAMI BIENNIAL Conference (Improving through IT)	AIIMS, New Delhi	Feb. 3-5, 2012
2	Dr. Hemant R Jadhav	Computational Methods in Medicinal Chemistry	Symposium on Recent Advances in Chemical Sciences	BITS, Pilani	25th March, 2012
3	R.N. Saha	Nanoparticulate Systems and Its Applications in Animal Science		National Research Centre in Equines Haryana	9th February 2011
4	R.N. Saha	Novel Drug Delivery Systems: Opportunities and Challenges		KLE University, Belgaum	23rd April 2012
5	R.N. Saha	Advancement In Ocular Drug Delivery Systems And Opportunities Further		Sankar Netralaya, Chennai,	3rd May 2012
6	R.N. Saha	Targeting Through Selected Distribution		National Cancer Institute (NIH), Frederick, USA	5th October 2012
7	R.N. Saha	Studies of Nanoparticulate Drug Delivery Systems for Selected Anticancer Drugs		University of Toronto, Toronto, Canada,	12th October 2012
8	R.N. Saha	Collaborate and Contribute for Organization's Success		Hospira Pharma, Chennai,	3rd November 2012
9	R.N.Saha	New Vision and New Opportunities		University of Rhode Islands USA	USA, 1st October 2012
10	R.N.Saha	Novel Delivery of Drugs and Opportunities for Industrial Collaboration		VerGo Pharma, Goa	3rd December 2012

G. INVITED TALKS ARRANGED IN THE DEPARTMENT

1. Dr. Anu Puri, National Cancer Institute at Frederick, National Institute of Health, Frederick, USA delivered a talk entitled, "Lipid Based Nanotechnology Platforms for Drug Delivery" on 6th March 2012.
2. Dr. Chandrashekhar Udata, Director, Clinical Pharmacology, Biotech Unit, Pfizer, USA, delivered a talk entitled "Introduction to Population PK-PD and its applications in Clinical drug development" on 26th July 2012.

3. Dr. Murali Raman, GM, Operations, Apex Laboratories Ltd, Chennai, delivered a talk entitled, "GMP and cGMP" on 27th Nov 2012.

H. AWARDS AND RECOGNITIONS WON BY FACULTY AND STUDENTS

1. Ananya Chikitsak Award to Prof. R. P. Pareek by Abhivyakti Sahityik Manch, Chirawa, Jhunjhunu on 22nd April 2012 for commendable service to the society in the field of Medicine.
2. Best poster award was given for the poster entitled, "Protective effect of FeTMPyP, a peroxynitrite catalyst, against STZ-induced neuropathic pain behavior in rats", Authors: Rajeev Taliyan and PL Sharma presented during ICMR sponsored Conference: Insight to the Evaluation of Natural Products with Special Reference to Anti-Obesity Drug held during September 22-23, 2012 at Etawah, India.
3. Best Poster award was given by Pharmanext (AIPER) in April 2012 for the poster entitled, "Antidepressant like activity of Buspirone and role of HPA axis dysregulation in depression", Authors: R. Mahesh, Gupta Deepali, Bhat S. Devadoss T. presented during National Conference on Pharmacy and Pharmaceutical Sciences 2012 held during April 28-29, 2012 at Indore.
4. Second prize was awarded for the poster entitled, "Pharmacological evaluation of novel 1-(4-substituted piperazine-1-yl)-1,8-naphthyridine-3-carboxylic acids as 5-HT₃ receptor antagonists for the management of depression", Authors: R. Mahesh, Dhar AK, Jindar A, Muthu VS, presented during Indian Pharmaceutical Association Convention held during March 17-18, 2012 at Manipal.
5. Prof. Duggirala Visweswaram and Prof. Sreemantalu Satyanarayana Award (Pharmacology) given by Association of Pharmacy Teachers of India Conference 2012 held at Manipal in October 2012 for the paper "Anti-depressant like Effect of Pimozide in Acute and Chronic Animal Models of Depression", Published in IJPER 2011, vol 45, issue 1, Jan-March 2011, pp. 46-53. Authors are Radhakrishnan Mahesh, Dilip Kumar Pandey, Shvetank Bhatt and Baldev Kumar Gautam
6. Prof M. L. Khorana Memorial Prize for Best Publication Award in Pharmaceutical Analysis and Bioanalytical Methods Chemistry given in March 2012 by Indian Journal of Pharmaceutical Sciences, Mumbai : "Rapid and Sensitive Liquid Chromatographic Method for Determination of Paclitaxel from Parenteral Formulation and Nanoparticles", published in IJPS, 2010, 72 (4), 465-470. Authors: S Kollipara, G Bende, RN Saha
7. Mr. Sunil Kumar Dubey received travel award from International Mass Spectrometry society USA for attending 19th International Mass Spectrometry Conference in Kyoto Japan held from September 16-22, 2012.
8. Mr. Murali Monohar Pandey received travel award from CSIR, India for attending 2012- AAPS Annual Meeting and Exposition held in Chicago, USA held from Oct. 14- 18, 2012

I. SIGNIFICANT NEW EQUIPMENTS/EXPERIMENTAL FACILITY ADDED DURING THE YEAR

1. An old building was renovated during the year which is now geared up for undertaking projects from Industry. This facility will be dedicated for industry sponsored research projects.
2. Equipment and instruments that were added during this year include Extruder - spheronizer, HPLC, tray dryer, Elemental analyzer, UV-spectrophotometer, lyophilizer, etc.

K. DEPARTMENTAL ASSOCIATION

Pharmacy

In the year 2012 the Pharmacy Group, its students and faculty members, continued their untiring efforts for further betterment and had several achievements and activities during the year. Research activities of Department increased further in terms of sponsored projects, departmental projects, number of publications and conference presentations and number of doctoral students. During the year faculty members of Department received grants worth Rs. 60 lakh from various government funding agencies and industries. This resulted in Department being supported by various funding agencies under Departmental schemes. The total value of Departmental grants received for ongoing projects is more than Rs. 250 lakhs. The total value of projects and grants that are ongoing is more than Rs. 5 crore.

During APOGEE 2012, B. Pharmacy students along with M. Pharmacy students demonstrated their innovative ideas in various fields of engineering and pharmacy. The projects covered not just

Pharmacy or health sciences but even other fields like Design appliances, Energy and Environment, Communication and Network systems, Automation with fabricated working models. The ideas were best displayed with several animated presentations and posters useful for easy understanding of the theoretical concepts. This APOGEE was unique in the fact that 20 project ideas had been submitted out of which 15 projects were selected. These 15 projects were presented with working models which directly benefitted the students to explore various other fields where pharmacy can be applied. In addition to projects, they also submitted 6 papers in the field of Pharmacy. The Group was glad that it had bagged one prize during APOGEE for the paper titled "DOTS strategy in Jhunjhunu district and its analysis using arc GIS".

During APOGEE 2012, Pharmaceutical Society had organized the following events:

- 1) Doper's quiz: An online quiz event open for all students. Around 200 students participated. This event comprised of questions related to Pharmacy as well as some general questions.
- 2) ESPOIR: A Health Business plan competition open for all (in teams of 2) and 50 teams participated out of which 10 teams were selected for final.

The experiences acquainted by the Pharmacy Group Faculty Members and research scholars by visiting various conferences and workshops were shared with the staff and students of the Group. The Pharmaceutical society conducted Informal Interaction in the month of August for the students newly admitted in the year 2012-13 in order to interact with them and let them know about the activities the Association will do through the entire year. The Pharmaceutical Society also organized Freshmen Orientation for new students admitted to the Pharmacy Program, who were appraised of the Pharmacy curriculum, opportunities in academic, industrial and research organizations.

The Pharmaceutical society also conducted PBQ, a Quizzing event open for all in the month of September which was taken by nearly 50 students. The Pharmaceutical Society organized farewell dinner twice during the year (in both semesters) for the graduating students.

The department is maintaining a Medicinal Plant Garden where plants/herbs/trees of therapeutic value are cultivated including seasonal herbs, which are used for practicals. The faculty and students are also involved in organizing and conducting health care camps, periodically organized for illiterate people in villages around Pilani.

Department of Pharmacy has been sanctioned Rs. 71.50 lakh in 2009 under DRS SAP Phase II. Rs. 49 lakhs have been sanctioned for equipment and remaining amount has been sanctioned as recurring grant for chemicals, books and journals, etc. All the equipments sanctioned under the grant (zeta sizer, spray drier, fluid bed drier, animal monitoring system and PDA detector) have been purchased. The grant has major impact in terms of new projects received by the Department and in number and quality of research publications. The number of research scholars has also increased steadily since the sanction. Recently UGC recognized the growth of research activities of Department and sanctioned 5 fellowships for Department under Basic Scientific Research Scheme (BSR). Department has also been sanctioned Rs. 125 lakhs under DST FIST Phase II during this year. The fund has been sanctioned for purchase of LC-MS-MS and this will be an important addition to the laboratory infrastructure and will help faculty members to get more projects from various funding agencies.

During the year Sir Ratan Tata Trust, Mumbai and University Grants Commissions, New Delhi recognized the achievements of Department by sanctioning fellowships to students of Department. Sir Ratan Tata Trust, Mumbai gave scholarship to 13 meritorious students (first degree and higher degree). UGC sanctioned 5 more research fellows to Department for 5 years under Basic Scientific Research Scheme in addition to the 5 sanctioned in previous year.

Faculty members, research scholars and students of the Department published papers in various journals of repute and presented papers in national and international conferences. Two papers were selected as best papers published in the Indian Journals. Three posters of Department were given either best or second best poster awards during the year in various National and International Conferences. Two faculty members received the travel awards for attending international conferences. Prof. RN Saha was invited to speak at an International Conference and was invited to visit several US Universities.

B1.10.13 Department: Physics

Number of faculty members (as on 31 December 2012)

Senior Professors, Professors	01
Associate Professors	03
Assistant Professors	18
Lecturers	00
Visiting Faculty	00

HoD: Debashis Bandyopadhyay

Contact details: debashis.bandy@gmail.com, 01596-515288

Number of PhD Scholars: 16

Thesis Submitted: 02

RESEARCH ACHIEVEMENTS

Projects: (ongoing projects, sanctioned/completed this year): 08

Title	Sponsoring Agency	Amount	P.I.
Studies on electro-optic switching of Liquid crystals doped with carbon nanotubes	DST FAST TRACK	Rs. 14.1 lacs	Dr. Manjuladevi V.
Development of surface plasmon resonance with a novel optical design.	DST sponsored under Instrument Development Programme	Rs. 25.6 lacs	Dr. Raj Kumar Gupta
Steady state measurements of Fluorescent molecules in restricted environments	UGC	Rs. 11.63 lacs	Dr. D. D. Pant
Investigations on QuarkGluon Plasma through quarkonia suppression in QCD matter.	DST	Rs. 11.40 lacs	Dr. Madhukar Mishra
Study of Indus Valley Scripts Through Linguistic and Markov Chain Methods	Indian National Academy	Rs. 6.8 lacs	Dr. Niladri Sarkar
A multiple-scattering computing platform for nanomaerials	Marie Curie International Research Staff Exchange Scheme (IRSES) of the European Commission (EC) (7th Framework Programme (FP-7))	€25,200	Dr. Rakesh Choubisa
Design and characterization of electrochromic rear view mirrors using conducting polymers	DST major	Rs. 24.35 lacs	Dr. S. Sindhu

In addition to these individual projects (the list in Part A of the annual report) the department is supported by the UGC under its DRS-SAP and by DST under its FIST scheme.

PUBLICATIONS- RESEARCH ARTICLES, BOOKS, CHAPTERS, CONFERENCE PROCEEDINGS)

Book Edited

1. "Atomic and Molecular Physics-Introduction to Advanced Topics" edited by Srivastava and Choubisa, Narosa Publishing House, New Delhi (2012).
2. Dr. Raj Kumar Gupta and Dr Manjuladevi V have contributed a chapter "Molecular Interactions at Interfaces" in a book "Molecular Interactions" edited by Prof. A Meghea, Publisher: InTech, Croatia, 2012.

Research Articles

The department has published 12 papers in international refereed journals (the list in Part A of the annual report). Guest editor for journals, editorials

DEPARTMENTAL ACTIVITIES

(Conferences, seminars and workshops, invited talks, Significant new equipment/ experimental facility):

Significant new equipment/experimental facility: With 50% support from the DST under the FIST scheme the department has purchased a Rigaku X-ray Diffractometer.

Conferences, seminars & workshops organized

- The Physics Department has organized a National Conference on Condensed Matter Physics during 24-25 February 2012. There were about 20 invited speakers and 38 poster presentations in the conference. The conference was organized jointly with CSIR-CEERI Pilani, and it was partially supported by UGC. Dr Raj Kumar Gupta was the convener of the conference. The conference proceedings has been published in International Journal of Physics and Mathematical Sciences.

Invited Talks given by BITS faculty

1. Dr. D. D. Pant gave an invited talk entitled "Photophysics at the Surfaces of Dye Sensitized Semiconducting Nanoparticles: Solvation Dynamics and Non-linear Optics" in National Conference on Dye Sensitized Solar Cells, March 01-03, 2012, at Jaipur Engineering College, Jaipur.
2. Dr. D. D. Pant contributed an invited talk entitled "Photophysics of Fluorescent Molecules at Surfaces and Interfaces", in National conference on Condensed Matter Physics, February 24-25, 2012 at BITS Pilani, Pilani.
3. Dr. Kunal Bhattacharya gave an invited talk entitled "What is special about being critical?" at the Centre for Ecological Sciences, Indian Institute of Science, Bangalore on 27th June, 2012.
4. Dr. V. Manjuladevi delivered an invited talk entitled "Functionalized CNT and liquid crystals" in National Conference on Condensed Matter Physics 2012, organized by Physics Department, BITS Pilani in collaboration with CSIR-CEERI Pilani on 24th February 2012 .
5. Dr. V. Manjuladevi delivered an invited talk entitled "The role of Molecular Shape and Structure in Liquid Crystals", in Symposium on "Recent Trends in Chemical Sciences", 25th March 2012, organized by Department of Chemistry, BITS Pilani.
6. Dr. Tapomoy Guha Sarkar gave an invited talk at the Tata Institute of Fundamental Research (Mumbai) on 19th December 2012

Invited talks arranged in the department

- Prof Sandeep Kumar of Raman Research Institute, Bangalore has delivered a talk entitled "The Fascinating World of Liquid Crystals" on 21 Dec 2012.

Conferences attended/papers presented

1. "In Silico Study of Electron Ionization of Confined 2D Quantum Dot", Munendra Jain and Rakesh Choubisa, oral presentation in WHCI 2012 held at TIFR, Mumbai, 28-31, March, 2012.
2. "Relativistic inner-shell double ionization of Ca, Zn, Ag and Xe atoms", Rakesh Choubisa and Munendra Jain, poster presentation in WHCI 2012 held at TIFR, Mumbai, 28- 31 March, 2012.
3. "Spin dependent effects in the relativistic K-shell (e, 3e) processes on heavy atoms", Rakesh Choubisa, poster presentation in the NCAP held at Physics Department, IIT, Roorkee. on 25-26 Feb., 2012.

4. Sunita Joshi and Dr. D. D. Pant contributed a Poster paper entitled "Photophysics of Quinine Sulphate Dication in Micellar Environments", in National conference on Condensed Matter Physics, February 24-25, 2012 at BITS Pilani, Pilani. presented by Sunita Joshi.
5. Dr. V. Manjuladevi, Mr. Jitendra Kumar and Dr. Raj Kumar Gupta, contributed a poster presentation entitled "Effect of Functionalized CNT on Nematic anchoring", in the 24th International Liquid Crystal Conference, held in Mainz Germany, August 2012. It was presented by Dr. V. Manjuladevi.
6. Dr. Raj Kumar Gupta, Mr. C. Karthik, and Dr. V. Manjuladevi, contributed an oral presentation entitled "TriCycloquinazoline based discotic liquid crystal at air - water and air-solid interfaces", in the 24th International Liquid Crystal Conference, held in Mainz Germany, August 2012. It was presented by Dr. Raj Kumar Gupta.
7. Amar Singh and Navin Singh contributed a paper entitled "Stabilization of dsDNA molecule with salt concentration of solution", in National conference on "Condensed Matter Physics 2012", held at Birla Institute of Technology & Science, Pilani, February 24-25, 2012. Poster was presented by Mr. Amar Singh
8. Amar Singh, Bhaskar Mittal and Navin Singh contributed a paper entitled "Force Induced unzipping of dsDNA: The solvent effect", in a conference on "Condensed Matter days 2012", held at Birla Institute of Technology, Mesra, Ranchi, August 28-30, 2012. Poster was presented by Mr. Amar Singh.
9. Dr. Tapomoy Guha Sarkar presented a paper at the conference "Astrophysical Surveys Symposium" organized by ICTS and Tata Institute of Fundamental Research (Mumbai) December 2012.

International Collaborations

Conference proceedings

1. "K-shell (e, 3e) processes with transversely spin-polarized relativistic electrons", R. Choubisa and Munendra Jain, 2012 *J. Phys.: Conf. Ser.* 388 042051.
2. "Solvent effects on the absorption and fluorescence spectra of quinine sulphate: Estimation of ground and excited-state dipole moments". Joshi, Sunita; Pant, Debi D. SOLID STATE PHYSICS: Proceedings of the 56th DAE Solid State Physics Symposium 2011. AIP Conference Proceedings, Volume 1447, pp. 201-202 (2012).
3. "Photophysics of quinine sulphate dication in micellar environments", Sunita. Joshi and D. D. Pant International Journal of Physics and Mathematical Sciences (online) 2 (2012) 70-77.
4. "Studies on ultrathin films of tricycloquinazoline (TCQ) based discotic liquid crystal molecules", Raj Kumar Gupta, Manjuladevi V., C. Karthik, Sandeep Kumar, *Accepted for publication in Journal of Physics, IOP (Feb 2012)*.
5. "TriCycloquinazoline based discotic liquid crystal at air - water and air-solid interfaces", Raj Kumar Gupta, V. Manjuladevi, C. Karthik, Sandeep Kumar, 24th International Liquid Crystal Conference, 5551_0448, August 2012.
6. "Effect of Functionalized CNT on Nematic anchoring", Jitendra Kumar, Raj K Gupta, Sandeep Kumar, V. Manjuladevi, 24th International Liquid Crystal Conference, 5551_0449, August 2012.
7. "Functionalized CNT and liquid crystals", Manjuladevi.V, Jitendra Kumar, Raj Kumar Gupta, National Conference on Condensed Matter Physics-2012, International Journal of Physics and Mathematical Sciences, Vol 2, Issue S1, ISSN: 2277-2111, Pages 30-35.
8. "Alignment of liquid crystals on LB films of stearic acid", Keerti Choudhary, Monika Poonia, Jitendra Kumar, Manjuladevi.V*, Raj Kumar Gupta, National Conference on Condensed Matter Physics-2012, International Journal of Physics and Mathematical Sciences, Vol 2, Issue S1, Pages 27-29.
9. "Atomic force microscopy of langmuir-blodgett films of disk-shaped molecules", C. Karthik, Raj Kumar Gupta*, Manjuladevi V., Sandeep Kumar, National Conference on Condensed Matter Physics-2012, International Journal of Physics and Mathematical Sciences, Vol 2, Issue S1, Pages 14-18.
10. "Surface plasmon resonance study of langmuir-blodgett films of stearic acid", Devanarayanan.V.P., Raj Kumar Gupta, V. Manjuladevi, Monika Poonia, Sanjeev Gupta and Jamil Akthar, National Conference on Condensed Matter Physics-2012, International Journal of Physics and Mathematical Sciences, Vol 2, Issue S1, Pages 19-21.
11. "Effect of cadmium ions on ultrathin films of octadecanethiol molecules", Sartaj S. Manhas, C. Karthik, *Raj K. Gupta and Manjuladevi V., National Conference on Condensed Matter Physics-2012, International Journal of Physics and Mathematical Sciences, Vol 2, Issue S1, Pages 127-132.

12. "Interaction of Octadecanoic Acid Monolayer with a divalent Cd^{2+} ion at an air-water interface", Monika Poonia, Keerti Choudhary, *Raj Kumar Gupta, Manjuladevi V, National Conference on Condensed Matter Physics-2012, International Journal of Physics and Mathematical Sciences, Vol 2, Issue S1, Pages 36-40.
13. "Stabilization of dsDNA molecule with salt concentration of solution", Amar Singh and Navin Singh, International Journal of Physics and Mathematical Sciences, v2, pp62, (2012).
14. "Force Induced unzipping of dsDNA: The solvent effect", Amar Singh, Bhaskar Mittal and Navin Singh, Physics Express, v3, pp18, (2012).
15. Rasmita Shao, and R.R. Mishra, "Modeling of Carbon nanotube Field Effect Transistor", International Conference on Nano Science and Technology (ICONSAT) – 2012, Hyderabad, India, January 20-23, 2012.
16. Rasmita Sahoo, and R.R. Mishra, "Graphical Modeling of Carbon nanotube Field Effect Transistors", International Conference on Material Science and Technology (ICMST) – 2012, St. Thomas College, Pala, Kottayam, India, June 10-14, 2012.

DISCIPLINE ASSOCIATION WORK HIGHLIGHTS

Under the valuable guidance of the faculty-in-charge, Dr. Champak Baran Das, the year 2011-12 saw a great leap in the faculty-student interaction and number of events by Physics Association. A documentary on "**Parallel Universes**" was screened and Phy-Tac-Toe, an innovative combination of the popular game of tic-tac-toe and the conventional quiz was organized during Scionsation, an event organized by all the science associations during **Science Week** from 11th-18th November.

Astro Quiz and a lecture by Dr. Chander Devgun on Wonders of Night Skies were organized during **World Space Week** (Oct 4-10, 2012) in collaboration with the Astronomy Club and Embryo Club. The Physics Association also celebrated **Science Day** on 28th February in collaboration with other Science associations during which various Quizzes were organized for student of BITS and students of schools of Pilani. A treasure Hunt was also organized which saw participation from more than 100 Bitsians.

The association also organized a series of lectures by well-known physicists **Dr. HC Verma** and **David J Griffith** for engineering and science students.

In an effort to increase informal interaction and to bridge the gap in the student-teacher relationship, two **cricket matches** were organized between the faculty and students. A **field trip** for the CDC students was organized on 14th February to **Inter-University Accelerator Centre**; Delhi which provides front ranking accelerator based research facilities to create possibilities for internationally competitive research within the university system.

During APOGEE-12, the association organized **Cryptography Workshop** by **Donald Costello**, fellow British Computing Society. Other events included **Physics Challenge**, a quizzing event testing the participants' knowledge of physics; **Lab Quiz**, in which students were required to perform certain experiments in laboratory and **Physics of the Impossible**, a brain teaser.

Astronomy Club

The Astronomy Club BITS Pilani was active throughout the year with its myriad of lecture sessions and workshops. During the APOGEE 2012, the Astronomy Club organized a telescope making workshop. The opportunity to build a telescope from scratch under the able guidance of the club seniors drew large crowds from BITS as well as from the outstation candidates. The workshop drew more than 50 candidates who were divided into a team of four for better working purposes. In spite of being the first workshop of this type to be held under the aegis of this club, every aspect of the workshop worked out well thanks to the minute detailing worked out by the club seniors and the help provided by the professors. Besides the telescope making workshop, sky watching sessions were held every night. These hugely popular sessions drew a crowd of more than 300 every night. From Saturn's rings to the sighting of Jupiter, the Christmas tree constellation and a special session on Astrophotography, these sessions turned out to be the major highlight of APOGEE.

Besides the Astro Club following its tradition to popularize Astronomy throughout BITS also held two quizzes. One quiz the Messier Marathon was held in APOGEE and it drew large crowds. The final of this quiz culminated on the Astro terrace where participants had to point out things to win. The other quiz **Astronut** was held in the month of October on account of the World Space Week. Both the quiz drew large crowds in appreciative numbers.

With the help of the Physics professors the Astro Club also organized a series of lectures under the name of the lecture series 'Syzygy'. Meant to deal with the more popular topics and notions in the field of Astronomy like antimatter and Big Bang these lectures meant to popularize the science of Astronomy and answer the

long lasting questions about the universe received a positive response from the Bitsian crowd as well as the Physics department and its professors.

In addition, the astronomy club held a number of intra-club discussion sessions on a variety of topics related to astronomy and astrophysics, including the latest developments in the field.

At the end, the club wants to duly acknowledge the guidance and support it has received from the faculty-in-charge Dr. Biswanth Layek and all the faculty members of the department for all its activities.

AWARDS AND RECOGNITIONS WON BY FACULTY AND STUDENTS

1. Dr. Rakesh Choubisa was elected as an executive member of Indian Society of Atomic and Molecular Physics (ISAMP) for two years (2011-2012).

Students who have opted for higher studies

Mr. Anil Alagiya has got admission in Texas A & M University, Texas, USA for MS.

FACULTY DEVELOPMENT, INTERNATIONAL COLLABORATION & INDUSTRY IMMERSION

International Collaborations

1. Dr. D. D. Pant has initiated collaboration with Prof. Hubert H. Girault, Swiss Federal Institute of Technology (EPFL), Switzerland in the field of Spectroscopy at the Surfaces of nanoparticles and at liquid-liquid Interfaces. The outcome of collaborative work has recently been published in "Journal of Nanoparticle Research".
2. Through International Network "European FP7-People-IRSES MsNano", Dr. Choubisa has established an international collaborative network with 8 institutes (2 from France, one each from Italy, Germany, Czech Republic, Russia, Japan and China) in which around 35 Researchers are participating for the span of 4 years starting from September 2012.

Papers Published in refereed journals

1. "Theoretical estimate of five-fold differential cross sections and spin asymmetry for K-Shell ($e,3e$) processes with transversely spin-polarized relativistic electrons", by R. Choubisa and Munendra Jain, Phys. Rev. A 86, 022702 (2012).
2. "Mono- and multi-layer adsorption of an ionic liquid on Au(110)", R. Foulston, S. Gangopadhyay, C. Chiutu, P. Moriarty, and R. G. Jones, Phys. Chem. Chem. Phys. 14, 6054 (2012).
3. "Imaging and manipulation of the Si(100) surface by small-amplitude NC-AFM at zero and very low applied bias", A. Sweetman, R. Danza, S. Gangopadhyay, and P. Moriarty, J. Phys. Condens. Matter 24, 084009 (2012).
4. "Solvatochromic shift and estimation of dipole moment of quinine sulphate", Sunita Joshi and D. D. Pant, Journal of Molecular Liquids 166 (2012) 49-52.
5. "Solvatochromic shift and estimation of dipole moment of quinine sulfate dication", Sunita Joshi and D.D. Pant, International Journal of Chemical and Biological Engineering.6 (2012) 225.
6. "Ground and excited state dipole moments of quinine sulfate dication: Solvatochromic shift of absorption and fluorescence spectra", Sunita Joshi and D. D. Pant, Journal of Molecular Liquids 172 (2012) 125.
7. "Landing together: how flocks arrive at a coherent action in time and space in the presence of perturbations", B. Ferdinandy, K. Bhattacharya, D. Abel and T. Vicsek, Physica A 391 (2012) 1207.
8. "Electronic structure and stabilities of Ni-doped germanium nanoclusters: A density functional modeling", Kapil Dhaka, Rvi Trivedi and Debashis Bandyopadhyay, J. Molecular Modeling, (2012) (16pp), DOI: 10.1007/s00894-012-1690-y.
9. "Architectures, electronic structures, and stabilities of Cu-doped Ge_n clusters: density functional modeling", Debashis Bandyopadhyay, J. Molecular Modeling,18(2012) 3887-3902 (15pp) DOI: 10.1007/s00894-012-1374-7.
10. "Architecture, electronic structure and stability of $TM@Ge_n$ ($TM=Ti,Zr$ and Hf ; $n=1-20$) clusters: a density functional modeling", Manish Kumar, Nilanjana Bhattacharyya and Debashis Bandyopadhyay, J. Molecular Modeling, 18 (2012) 405-418 (14pp) (DOI: 10.1007/s00894-011-1122-4).

11. "Chemisorptions Effect of Oxygen on the Geometries, Electronic and Magnetic properties of small size Nin (n =1-6) Clusters", Debashis Bandyopadhyay, J. Molecular Modeling 18 (2012) 737-749 (13pp) (DOI: 10.1007/s00894-011-1090-8).
12. "Primordial Non-Gaussianity in the Forest: 3D Bispectrum of Ly-alpha Flux Spectra Along Multiple Lines of Sight", Dhiraj Kumar Hazra and Tapomoy Guha Sarkar, Phys. Rev. Lett. 109, 121301 (2012).
13. Rasmita Sahoo and R.R. Mishra, "Phonon Dispersion of Graphene Revisited", JETP, Vol. 141, No. 5, pp 924-929, 2012.

B1.11 DIVISION / UNIT / CENTER-WISE ACTIVITY HIGHLIGHTS

Faculty Affairs Division (FAD)

Faculty Affairs Division (FAD) with its office in Pilani Campus had been constituted to look into all faculty related issues, programmes, and activities of all the three campuses (Pilani, Goa and Hyderabad). Presently it is actively engaged in "faculty recruitment" drive for all three campuses. In the recruitment process, screening of applicants and all recruitment related logistics are carried out by leading HR outsourcing company PeopleStrong. Apart from attracting and selecting, talented and competent people, it is also intensely focussed on retaining the talent. Moreover, it has successfully evolved and executed an efficient faculty performance appraisal system (performance management system) for all the faculties in different academic departments across all three campuses. In the course of time, the division is seriously going to look into other faculty related issues and activities.

Practice School Division

University-Industry Linkages

An important aspect of education at BITS is its institutionalized linkages with the world of work. The Institute attaches great importance to the University-Industry Linkages and gives mutually reinforcing thrust to it through various avenues like Practice School (PS), Work Integrated Learning Programmes (WILP), Technology Innovation Centre (TIC) and off-campus Ph.D.

Practice School Programme

All integrated first degree and higher degree programmes of the Institute provide for a Practice School option. The past statistics show that almost all the students admitted, opt for this programme. During the calendar year 2012 the Practice School programme was operated at 490 stations, with 33 stations hosting both Practice School-I (PS-I) and Practice School-II (PS-II), accommodating 4313 students and 160 faculty members. Categorization of PS stations is given below:

S.No.	Categories of Organizations	No. of Organization in	
		PS-II & PS for Higher Degree	PS-I
1.	Banks and other Financial Institutions	18 (8)	3 (3)
2.	Design, Development, Consultancy and Software Organization.	219 (210)	24 (39)
3.	National Research Laboratories and other Research centers	42 (46)	28 (34)
4.	Production, Manufacturing and Public Work Units	53 (67)	124 (122)
5.	Publishing Houses, News Agencies and Museums	8 (0)	4 (5)
	Total	340 (331)	183 (203)

In 2012, an integrated practice school allotment for 4313 students was carried out across Pilani, Goa and Hyderabad campuses. The statistical details of the centre-wise distribution of students and faculty at PS-I stations are given in *Annexure '7'* followed by the details of the Operational Statistics of PS-II and PS for higher degree in *Annexure '8'*. Growth statistics of PS-I, PS-II and PS for higher degree are given in *Annexure '9'*, while facilities available at various PS-II stations are given in *Annexure '10'*.

Following is the break up of students who were registered in PS-I, PS-II & PS for Higher Degree:

PS-I	Summer Term 2011-2012	(2065)	2036
PS-II	II Semester 2011-2012	(693)	857
	I Semester 2012-2013	(1007)	1118
PS for Higher Degree			
	II Semester 2010-2011	(181)	230
	I Semester 2011-2012	(78)	72
Total		(4024)	4313

Note: The figures shown in brackets relate to the year 2011.

PS-II Assignments: Institute's Contribution to Industrial Development

Apart from developing skills in professional judgement, data-handling, documentation, decision making ability, etc., in students, the PS-II assignments also relate to real-life problems of the host organisations. PS-II assignments listed in *Annexure '11'* were completed by the final year students at their respective PS-II stations during the year 2012. These assignments directly contribute to the requirements of industrial R & D by fulfilling the ongoing production, modernization, design, development and research needs of the participating industries.

During the year under review 2036 students of Pilani (832), Goa (605) and Hyderabad (599) campuses accompanied by 105 faculty members attended Practice School-I and 2277 students attended Practice School-II. The entire Practice School-II operations were supervised by 64 faculty members residing at the respective locations. For the year 2012, 70 dual degree students have exercised their option of Practice School for both the degrees.

In appreciation of the contribution made by our students towards the professional well-being of the organizations, a stipend/out-of-pocket allowance is paid to them by the organizations. The amount of stipend/out-of-pocket allowance has over the years increased, and today the maximum amount paid is Rs. 35,000/- p.m. at Cisco Systems (I) Pvt. Ltd. and Zynga Game Networks India Pvt. Ltd., Bangalore. The average stipend is around Rs.12,000/- p.m. per student. In addition, other facilities like accommodation, subsidised lunch, to and fro travel, etc. are also provided by some of the organizations. Students are paid TA and DA as per the rules of the organization. All overseas organizations pay for to and fro air travel and health insurance in addition to stipend.

During the year under review, the PS activities grew further with the introduction of 106 new PS-II stations (Table 1) and out of pocket allowance was increased at 34 PS-II stations (Table 2).

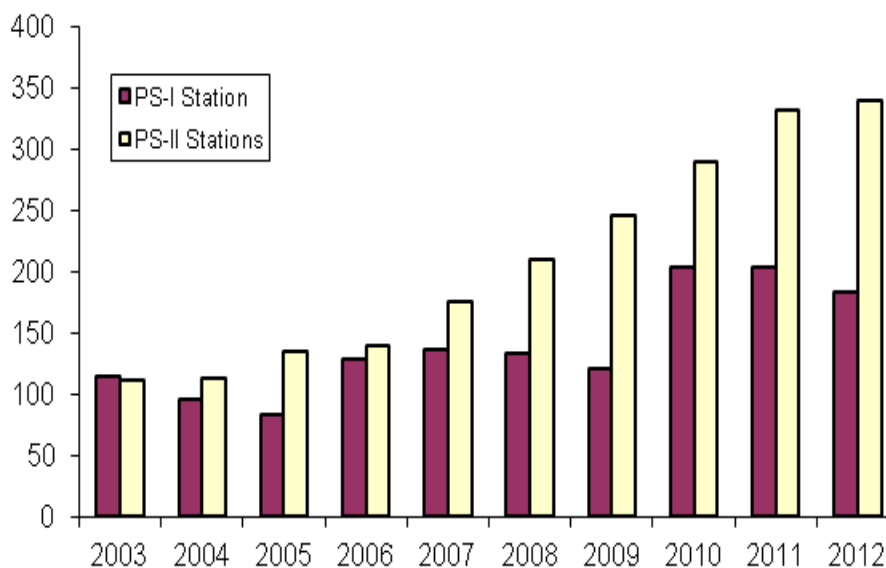


Table 1
PS-II Stations Added during the Year 2012

S.No.	PS-II Station	Out of pocket Allowance (Rs. Per Month)
ABU ROAD (MT. ABU)		
1.	Modern Insulators Ltd.	Rs. 6,000/- p.m.
AHMEDABAD		
2.	Anaya Labs	Rs. 10,000/- p.m.
BANGALORE		
3.	Adormi Technologies	Rs. 12,000/- p.m.
4.	Aura Semiconductor Pvt. Ltd.	Rs. 10,000/- p.m.
5.	BasicNeeds UK	Ts. 15,000/ p.m.
6.	Cymbio Pharma Pvt. Ltd.	Rs. 7,500/- p.m.
7.	eBay India Development Centre	Rs. 20,000/- p.m.
8.	Exotel Techcom Pvt. Ltd.	Rs. 20,000/- p.m.
9.	Fiber Link	Rs. 27,000/ p.m.
10.	Goonj	Rs. 10,000/- p.m.
11.	Intuit Technology Services Pvt. Ltd.	Rs. 30,000/- p.m.
12.	MoveableCode India Pvt. Ltd	Rs. 15,000/- p.m.
13.	Milaap	Rs. 15,000/- p.m.
14.	Nagravision India Pvt. Ltd.	Rs. 20,000/- p.m.
15.	Novozymes South Asia Pvt. Ltd.	Rs. 8,000/- p.m.
16.	O3 Capital	Rs. 20,000/- p.m.
17.	Philips Research Asia	Rs. 15,000/- p.m.
18.	Probe Equity Research Pvt. Ltd.	Rs. 15,000/- p.m.
19.	SAP Labs	Rs. 25,000/- p.m.
20.	Siemens Corporate Research & Tech.	Rs. 20,000/- p.m.
21.	Synopsis	Rs. 25,000/- p.m.
22.	Time Analytics Services	Rs. 12,000/- p.m.
23.	Total Environment Building Systems	Rs. 7,000/- p.m.
24.	Unilever	Rs. 8,000/- p.m.
25.	Weir Engineering Services (I) Ltd.	Rs. 7,000/- p.m.
26.	Work Monk Solutions	Rs. 10,000/- p.m.
27.	YourStory.in	Rs. 15,000/- p.m.
28.	Zinnov Management Consulting Pvt. Ltd.	Rs. 18,000/- p.m.
BARODA		
29.	Elmex Controls Pvt. Ltd.	Rs. 12,000/- p.m.
30.	KEC International	Rs. 6000/- p.m.
BHUBNESHWAR		
31.	Lea Associate South Asia	Rs. 5,000/- p.m.
CHENNAI		
32.	Apex Laboratories Pvt. Ltd.	Rs. 4,000/- p.m.

S.No.	PS-II Station	Out of pocket Allowance (Rs. Per Month)
33.	Aura Mira Energy Company Pvt. Ltd.	Rs. 10,000/- p.m.
34.	Goonj	Rs. 10,000/- p.m.
35.	Idea Cellular Ltd.	Rs. 10,000/- p.m.
36.	Karya Technologies	Rs.12,000/- p.m.
37.	LatentView Analytics Pvt. Ltd.	Rs.15,000/- p.m.
38.	Nadhi Information Technologies Pvt. Ltd.	Rs. 8,000/- p.m.
39.	Precision Tech Enterprises	Rs.13,000/- p.m.
40.	Ramco Systems	Rs. 20,000/- p.m.
41.	Sankar Nethralaya	Rs. 5,000/- p.m.
42.	Venture Intelligence	Rs. 10,000/- p.m.
COIMBATORE		
43.	Janatics Pneumatic	Rs.8,000/- p.m.
DELHI		
44.	Central Road Research Institute	NIL
45.	Development Consultants Pvt. Ltd.	Rs. 9,000/- p.m.
46.	Urban Mass Transit Company Ltd.	Rs. 5,000/- p.m.
GOA		
47.	Lupin Ltd.	Rs. 6,000/- p.m.
48.	Starflex Sealing India Pvt. Ltd.	Rs. 5000/- p.m.
GURGAON (Delhi)		
49.	HT Mobile Solutions Ltd.	Rs. 12,000/- p.m.
50.	Reckitt Benckiser	Rs. 25,000/- p.m.
GUWAHATI		
51.	Idea Cellular Ltd.	Rs.10,000/-p.m.
HYDERABAD		
52.	Analinear Technologies	Rs. 8,000/- p.m.
53.	Andhra Pradesh State Financial Corp.	Rs. 5,000/- p.m.
54.	Edutor Technologies Pvt. Ltd.	Rs. 10,000/- p.m.
55.	Electronics Arts Games India Pvt. Ltd.	Rs. 16,000/- p.m.
56.	Embedded Infotech Pvt. Ltd.	Rs. 12,000/- p.m.
57.	GBI Research	Rs. 5,000/- p.m.
58.	Genpact Analytics	Rs. 12,000/- p.m.
59.	Gharpay	Rs. 8,000/- p.m.
60.	Hitachi Consulting	Rs. 9,000/- p.m.
61.	K.N. Biosciences	Rs. 5,000/- p.m.
62.	Polmon Instruments India Pvt. Ltd.	Rs. 10,000/- p.m.
63.	Polycom Tech. (R&D) Centre Pvt. Ltd.	Rs. 15,000/- p.m.
64.	Sew Infrastructure	Rs. 6,000/- p.m.
65.	Slave Technologies Pvt. Ltd.	Rs. 12,000/- p.m.
66.	Thomas & Betts India Pvt. Ltd.	Rs. 8,000/- p.m.
JAIPUR		
67.	Sharp Edge Learning Pvt. Ltd.	Rs. 10,000/- p.m.

S.No.	PS-II Station	Out of pocket Allowance (Rs. Per Month)
KOLKATA		
68.	Goonj	Rs. 10,000/- p.m.
69.	Idea Cellular Ltd.	Rs. 10,000/- p.m.
70.	Tega Industries Ltd.	Rs. 15,000/- p.m.
MUMBAI		
71.	Aviva Investors	Rs. 20,000/- p.m.
72.	Ecoedencity	Rs. 8,000/- p.m.
73.	Enterpriseforce	Rs. 15,000/- p.m.
74.	FutureBazaar	Rs. 30,000/- p.m.
75.	Geometric Ltd.	Rs. 12,000/- p.m.
76.	Hindustan Construction Co. Ltd.	Rs. 5,000/- p.m.
77.	Hourglass Research	Rs. 15,000/- p.m.
78.	J.P. Morgan Investment Bank	Rs. 20,000/- p.m.
79.	KEC International	Rs. 6,000/- p.m.
80.	Mindshare	Rs. 15,000/- p.m.
81.	MSCI Institutional Shareholder Services	Rs. 30,000/- p.m.
82.	MSCI - CPD	Rs. 30,000/- p.m.
83.	MSCI Bara Client Services	Rs. 30,000/- p.m.
84.	Nokia – Location & Commerce	Rs. 20,000/- p.m.
85.	Religare Technologies Ltd.	Rs. 20,000/- p.m.
86.	Sargur Powercon Systems	Rs. 12,000/- p.m.
87.	Ultratech Cement Ltd.	Rs. 15,000/- p.m.
NAGPUR		
88.	Skyline Consulting Engineers Pvt. Ltd.	Rs. 5,000/- p.m.
NASHIK		
89.	Fox Controls Pvt. Ltd.	Rs. 20,000/- p.m.
NOIDA(Delhi)		
90.	Adobe	Rs. 32,000/- p.m.
91.	GEIPER Consulting Ltd.	Rs. 5,000/- p.m.
92.	Navyug Infosolutions Pvt. Ltd.	Rs. 15,000/- p.m.
93.	SocialAppsHQ	Rs. 15,000/- p.m.
94.	Spicer Digital Ltd.	Rs. 25,000/- p.m.
PATANCHERU		
95.	ITW	Rs. 10,000/- p.m.
PUNE		
96.	Kalyani Global Engineering Pvt. Ltd.	Rs. 3,500/- p.m.
97.	Knorr-Bremse Systems for Commercial Vehicles India Pvt. Ltd.	Rs. 8,000/- p.m.
98.	Oracle Financial Services Software Ltd.	Rs. 25,000/- p.m.
99.	Persistent Systems Ltd.	Rs.8,000/- p.m.
100.	Tata Quality Management Services	Rs. 10,000/- p.m.
SIMLA		

S.No.	PS-II Station	Out of pocket Allowance (Rs. Per Month)
101.	HISP	Rs. 10,000/- p.m.
TRIVANDRUM		
102.	HLL Lifecare Ltd.	Rs. 6,500/- p.m.
103.	Oracle India Ltd.	Rs. 25,000/- p.m.
TUNI		
104.	Deccan Fine Chemicals (I) Pvt. Ltd.	Rs. 4,000/- p.m.
U.S.A.		
105.	Pocket Gems	USD 3000/- p.m.
VALSAD		
106.	Atul Ltd.	Rs. 5,000/- p.m.

Table 2
Increase in Monthly Stipend at PS-II Stations during the Year 2012

S.No	PS-II Stations	Monthly Stipend / out of pocket allowance	
		During 2011	During 2012
1	Amazon Development Center, Hyderabad	Rs. 20,000/- p.m.	Rs. 30,000/- p.m.
2	Anaya Labs, Delhi	Rs. 5,000/- p.m.	Rs. 10,000/- p.m.
3	APIGEE, Bangalore	Rs.15,000/- p.m.	Rs.16850/- p.m.
4	Broadcom India Pvt. Ltd., Bangalore	Rs. 18,000/- p.m.	Rs. 22,000/- p.m.
5	CMC Ltd., Hyderabad	Rs. 7,000/- p.m.	Rs. 8,000/- p.m.
6	CSR India Pvt. Ltd., Bangalore	Rs. 18,000/- p.m.	Rs. 22,000/- p.m.
7	Dow Chemical International Pvt. Ltd., Mumbai	Rs. 10,000/- p.m.	Rs. 15, 000/- p.m.
8	eBay India Development Centre, Chennai	Rs. 15,000/- p.m.	Rs. 20,000/- p.m.
9	EMC, Bangalore	Rs. 16,000/- p.m.	Rs. 25,000/- p.m.
10	Ernst & Young Pvt. Ltd., Chennai	Rs. 15,000/- p.m.	Rs. 15,100/- p.m.
11	Frost & Sullivan, Bangalore	Rs. 7,000/- p.m.	Rs. 8,000/- p.m.
12	Frost & Sullivan, Chennai	Rs. 7,000/- p.m.	Rs. 8,000/- p.m.
13	GE-India Technology, Bangalore	Rs. 15,000/- p.m.	Rs. 20,,000/- p.m.
14	Grasim Chemical Division, Nagda	Rs. 3,500/- p.m.	Rs. 5,000/- p.m.
15	GRASIM Industries Ltd., Nagda	Rs. 3,500/- p.m.	Rs. 5,000/- p.m.
16	Histogenetics, Chennai	Rs. 6,000/- p.m.	Rs. 10,000/- p.m.
17	Infinera, Bangalore	Rs. 22,000/- p.m.	Rs. 30,000/- p.m.
18	Juniper Networks India Pvt. Ltd., Bangalore	Rs. 20,000/- p.m.	Rs. 25,000/- p.m.
19	Kemin Industries South Asia Pvt. Ltd., Chennai	Rs.12,000/- p.m.	Rs.15,000/- p.m.
20	LSI Research & Development Pvt. Ltd., Bangalore	Rs. 15,000/- p.m.	Rs. 16000/- p.m.
21	Mahindra & Mahindra Ltd., Mumbai	Rs. 10,500/- p.m.	Rs. 11,000/- p.m.
22	Mediology Software, Gurgaon	Rs. 14,000/- p.m.	Rs. 20,000/- p.m.
23	National Council of Applied Economics Research, Delhi	Rs. 4,000/- p.m.	Rs. 6,500/- p.m.
24	Nvidia Graphics India Pvt. Ltd., Bangalore	Rs. 20,000/- p.m.	Rs. 25,000/- p.m.
25	Nvidia Graphics India Pvt. Ltd., Hyderabad	Rs. 20,000/- p.m.	Rs. 25,000/- p.m.
26	ST Ericsson, Bangalore	Rs. 13,000/- p.m.	Rs. 16,000/- p.m.
27	ST Ericsson, Noida	Rs. 13,000/- p.m.	Rs. 16,000/- p.m.

28	ST Microelectronics (I) Pvt. Ltd., Noida	Rs. 16,000/- p.m.	Rs. 18,000/- p.m.
29	ST Microelectronics (I) Pvt. Ltd., Pilani	Rs. 16,000/- p.m.	Rs. 18,000/- p.m.
30	TESCO, Bangalore	Rs. 15,000/- p.m.	Rs. 20,000/- p.m.
31	Texas Instruments (I) Pvt. Ltd., Bangalore	Rs. 20,000/- p.m.	Rs. 23,850/- p.m.
32	TEXMACO, Kolkata	Rs. 2,500/- p.m.	Rs. 3,000/- p.m.
33	Torrent Research Centre, Ahmedabad	Rs. 4,000/- p.m.	Rs. 8,000/- p.m.
34	Travel Boutique Online, Gurgaon	Rs. 14,000/- p.m.	Rs. 20,000/- p.m.

PS Planning

The preparation for running Practice School courses starts almost one year in advance at the PS Division. The process of preparation of student profile, analysis of student preferences and the student allotment for Practice School courses is completely computerized.

PS Instruction Monitoring

After successfully working with COPSIMS for a number of years, PS Instruction Monitoring has now introduced WEPSIMS (Web Enabled Practice School Instruction Monitoring System). It is an online web enabled tool for an efficient and quick data entry, data retrieval and data management. It is efficiently used for automatic letter generation, evaluation and grading for PS I and PS II and student feedback. PS Division makes constant efforts to maintain and increase the efficiency of instruction monitoring.

Students' Involvement in PS Division-based Projects

The PS Division of the Institute has continued to involve students in analysis, documentation, and educational research-based activities of the Division through projects based on Organizational Aspects, Computer Project, First Degree Thesis and Higher Degree Dissertation. In this regard PS Division has involved students in the following Division-based projects:

1. Development of software related to students and faculty allotment; maintenance of zonal and data analysis related to allotment of students at various stations; modification of the already developed allotment modules.
2. Computerization of PS accounts processing.
3. Development and maintenance of web based tools for instruction to PS II faculty; development and modification of software modules for grade and feedback analysis.
4. BITS Pilani offers scholarship of Rs. 44,000/- (for the entire duration of PS-II) to selected PS-II students with CGPA 7.00 and above at various research organizations.

Research & Consultancy

First Degree Thesis

During the year, 295 First-Degree thesis projects have been completed. The list of completed First-Degree thesis during Second Semester 2011-2012 and First Semester 2012-2013 is given in *Annexure 'B1-10'*.

Higher Degree Dissertation

During the year, 128 Higher Degree dissertation projects have been completed. The list of completed Higher Degree dissertations during Second Semester 2011-2012 and First Semester 2012-2013 is given in *Annexure 'B1-11'*.

Ph.D. Programme

(a) Award of Ph.D. Degree

S.No.	Name	Title
1.	Balla Murali Mohan Sagar	Characterization of Cancer Stem Cells in Retinoblastoma
2.	Rashmita Sahoo	Investigations into Thermal, Electrical and Transport Properties of Carbon Nanotubes (CNT) and Carbon Nanotubes Field Effect Transistors (CNTFET)
3.	Giri Raj	Impact of Human Resource Management Systems on Organizational Performance- A Study of ONGC

S.No.	Name	Title
4.	Pankaj Kumar Jain	Characterization of Novel Plasmid and Proteome Analysis of a Natural Isolate <i>Bacillus cereus</i> GC Subgroup A
5.	M Sudershan Rao	Synthesis of Selected Biologically Important Organic Compounds Employing Multicomponent Reactions, ortho-Quinonemethide Intermediates and Metal Triflate Catalysts
6.	R. Gayathri	Molecular Technique in the identification of MDR-TB and Diagnosis of Tuberculosis
7.	Gajendra Katara	Studies on Host Immuno-determinants Modulated During Active Disease in Kala-Azar and Post Kala-Azar Dermal Leishmaniasis
8.	Saritha Katta	Molecular Genetic Study on Age-Related Macular Degeneration (AMD) in Indian Patients
9.	L.Pradeep Kumar	Nitrate Assimilation and Signaling in Cyanobacterium – <i>Spirulina platensis</i> PCC 7345
10.	R. Ashwin Kumar	Characterization and Pharmacological Evaluation of Microcystin Variants from <i>Anabaena doliolum</i> and <i>Nostoc spongiaeforme</i> Isolated from Shekhawati Region of Rajasthan
11.	Naik Bhanudas	Development of Chemical Methodology for Preparation of Ag, TiO ₂ Nanoparticle Loaded Mesoporous Silica and Alumina Based Catalysts
12.	Gunjan Soni	An Empirical Investigation of Supply Chain Management Practices in Indian Manufacturing Industry
13.	Maruthi Kumar N.	Synthesis and Anticancer Activity Studies of Some Novel Indolyl Heterocycles
14.	S.Kalidhasan	Extractive Separation and Removal of Toxic Chromium from Industrial Effluents Using Long Chain Amines and Customized Polymeric Sorbents
15.	Prema V. Deshpande	Assessment of Impact of the Urban Microfinance Programmes on Empowerment of Women in Maharashtra
16.	Apurb Rashmi Bhengraj	Antichlamydial Drugs Sensitivity and Emergence of Resistance in <i>Chlamydia trachomatis</i> Isolated from Clinical Treatment Failures
17.	Shashank Garg	Integrated Service Operations Management in the E-Governance Paradigm : A Case of the Cooperative Sugar Sector
18.	E. Ravi Shankar	Mergers and Acquisitions in Indian Cement Industry – A Diagnostic Analysis
19.	Mangesh V.Bedekar	Making Web Applications Intelligent Using Web Data Mining
20.	Shalu Agrawal	Evaluation of Antioxidant and Related Activities of <i>Acacia nilotica</i> , <i>Terminalia paniculata</i> , <i>Madhuca longifolia</i> and <i>Berberis chitria</i>
21.	Jagadheeswaran S.	Investigations on Particles Dispersed Latent Heat Thermal Energy Storage System for Solar Water Heaters
22.	Arpita Kulshrestha	Studies on Drug Sensitivity in <i>Leishmania donovani</i> Field Isolates and Differential Gene Expression Analysis in Miltefosine Resistant Parasites
23.	Kavita Kapoor	Interpretation of Weather Forecasts for Tornado and Cloudburst using Data Mining Techniques
24.	Smita Kashiramka	An Empirical Analysis of Mergers & Acquisitions in Indian Information Technology Sector and its impact on Shareholders Wealth
25.	Narayan Kumar	Characterization of Plasmids from Natural Isolates of Lactic Acid Bacteria: Analysis, Identification and Screening for Novel

S.No.	Name	Title
		Promoters
26.	Madappa Vigneasuva Raja S	Response and Micromechanics Based Design of Engineered Cementitious Composite Structures
27.	Pradeep Singh Chauhan	Genetic Alteration and Multidrug Resistant Gene Expression Profile of Acute Leukemia
28.	P Haridas	Development and Validation of Quality Management Constructs for Software Industries
29.	Ruppal Walia	An Analysis of Variation in Attitude Towards Brand Across Different Age Groups and Implications for Marketing Communication
30.	T.Devadoss	Novel Quinoxaline Carboxamides: Design, Synthesis and Neuropharmacological Evaluation as Potential Anti-depressants, Anxiolytics and in the Management of Cancer Chemotherapy-Induced Nausea and Vomiting
31.	Sachi Singh	Phytochemical Analysis and Localization of Bioactive Compounds in <i>Prosopis juliflora</i>
32.	Ankit Chaudhary	Computer Vision based Intelligent Techniques for Hand Gesture Recognition
33.	C. Phaneendra Kiran	Experimental Investigation for Quality Evaluation and Concurrent Design Principles Applied to CNC Turning
34.	Manish Kumar	A DFT-based Study of Electronic Structures and Properties of Cage Like Transition Metal Doped Ge and Si Nanoclusters
35.	K. Haribabu	Methods for Efficient and Secure Service Availability in Peer-to-Peer Overlay Network
36.	Pritesh Bhatt	Design of Various New Enzyme Inhibitors as Anti-Mycobacterial Agents Using <i>In-silico</i> High Throughput Screening
37.	Neha Gupta	Thermal Stability Investigation on Ag ⁺ ion Conducting Superionic Glass and Glass Ceramic Nanocomposites

(a) Ph.D. Thesis Submitted and Under Process of Evaluation

S.No.	Name	Title
1.	C. Maheshwar	Post Harvest Management of Horticultural Products in Andhra Pradesh – An Evaluation
2.	Anand K	Exploring the Relationship between Organizational Identification, Leadership Orientation and Management's Peripheral Vision: A Study of Knowledge Workers' Perceptions
3.	Raj V N N Ponalluri	Traffic Management, Road Safety, and Public Transport Issues in Urban India
4.	Pritesh Bhatt	Design of Various New Enzyme Inhibitors as Anti-Mycobacterial Agents Using <i>In-silico</i> High Throughput Screening
5.	Manoj Kumar	Design Strategies for Multiplayer Gaming on Embedded Platforms Using Wireless Networks
6.	K. Jeyalatha	Design, Analysis and Implementation of Web Mining Algorithms for Academic Search Application
7.	Oberoi Ajay Omprakash	'OASIS' : A Comprehensive Approach to Performance Management with Focus on Knowledge Workers – A Case Study
8.	Aparajita Sharma	Development of Training Modules to Build Requisite Managerial Competencies of Middle-level Managers in the General Insurance Sector
9.	Anurup Mitra	Exploratory Studies in Parameter Determination for High Quality Hindi Speech Generation using the Klatt Synthesiser

S.No.	Name	Title
10.	Susheela Venkataraman	Going Global Successfully : In Search of Strategies for Emerging Indian Multinational Companies
11.	Vikas Vats	Modulation of Immune Response by Epithelial Cells During Chlamydia trachomatis Infection
12.	Anindita Banerjee	Relationship between Preparation and Performance Across Emerging and Traditional Contexts of Intercultural Work Assignments : An Empirical Study
13.	Nitin Upadhyay	Concurrent Modeling, Analysis and Design of Component Based Software System
14.	Praveen Ranjan Srivastava	Quantitative and Qualitative Analysis of Software Testing
15.	Virendra Singh Shekhawat	Design and Development of Performance Enhancement Techniques in Optical WDM Networks
16.	Neha Gupta	Thermal Stability Investigation on Ag ⁺ ion Conducting Superionic Glass and Glass Ceramic Nanocomposites
17.	K. Nageswara Rao	Molecular Genetic Analysis of Intraocular Pressure (IOP)-Related Glaucomas in Indian Population
18.	Dhirendra Singh	Gene Expression Profiling and Genetic Variations in Oral Cancer Associated with Tobacco Consumption
19.	Thoudem Regina Devi	Genetic Analysis and Gene Expression Profile in Gastric Cancer in High-risk Northeast Region of India
20.	Nihita Goel	Synthesis and Runtime Monitoring of Business Process Workflows
21.	Diploy Dutta	Experimental and Theoretical Studies on Reactive Extraction of Carboxylic Acids
22.	A.V. Ramani	Thiazine Derivatives Synthesis, Anti Tubercular Activities and Basic Pharmacokinetic Evaluation
23.	Biju Benjamin	Novel Methodology Integrating Experimental ADME and Physicochemical Data for Rational Lead Optimization Using Selected Clinical Compounds
24.	Monika Sharma	Design and Synthesis of Leads based on Pharmacophore Hybrid Integration Approach for the treatment of Neuropathic Pain
25.	Selvi R.	<i>In vitro</i> Studies on the Mechanism of Glucose Lowering Effect of Amino Acids in CHO-K1 and Adipocytes and <i>In Vivo</i> Studies on the Amelioration of Molecular Changes in Retina of Streptozotocin Induced Diabetic Sprague Dawley Rats
26.	Deepak Pakalpati	Studies on Molecular Detection of Malarial Parasites
27.	Manoj Kumar Dutta	Design and Performance Analysis of Contention Resolution Techniques in Optical WDM Network
28.	Y. Samson Moses	Detection of Novel Mutations in UL23 Gene of Herpes Simplex Virus and UL97 Gene of Human Cytomegalovirus Conferring Drug Resistance and Evaluation of pp ⁶⁵ Antigenemia Assay
29.	Sowmiya M.	Nucleic Acid Based Techniques for the Detection and Identification of Drug Resistance Among Ocular Bacterial Pathogens
30.	Nitin Sharma	Resource Allocation in Downlink OFDMA Systems : An Evolutionary Approach
31.	Dilip Kumar Mohanty	Estimation and Predictin of Fouling Behaviour in a Shell and Tube Heat Exchanger
32.	Mohd. Raeesh Shekh	Studies on Biochemical and Genetic Aspects of the Anti Mycotic Principle Produced by Selected Wild Type Enterococcus faecalis

S.No.	Name	Title
33.	Raghavendra Datta Naik	Effect of Delay Parameters on Nonlinear Dynamic Behaviour of a Quarter-Car System
34.	Satyanandra Kumar Sharma	An Empirical Investigation of Supply Chain Risk Management Practices in Indian Automobile Industry and Development of a Normative Framework
35.	Nitin Sharma	Resource Allocation in Downlink OFDMA Systems: An Evolutionary Approach
36.	C Phaneendra Kiran	Experimental Investigation for Quality Evaluation and Concurrent Engineering Principles Applied to CNC Turning
37.	Dilip Kumar Mohanty	Estimation and Prediction of Fouling Behaviour in a Shell-and-Tube Heat Exchanger
38.	Raghavendra Datta Naik	Effect of Delay Parameters on the Nonlinear Dynamic Behavior of Quarter Car System
39.	Mohd. Raees Shekh	Studies on Biochemical and Genetic Aspects of the Antimycotic Principle Produced by a Selected Wild Type Enterococcus Faecalis
40.	Rupesh Kumar Mishra	Development of Novel Biosensing Micro Techniques for Analysis of Pesticide Residues and Heavy Metals in Water and Milk
41.	Monika Sharma	Design and synthesis of leads based on pharmacophore hybrid Integration approach for the treatment of neuropathic pain
42.	A V Ramani	Thiazine Derivatives: Synthesis, anti-tubercular activities and basic pharmacokinetic evaluation

Ph.D. Aspirant's Scheme

This scheme has attracted candidates from industry, R&D, education and entrepreneurial sectors towards the Ph.D. programme of the Institute. A number of aspirants have been permitted in this year to appear in the Ph.D. qualifying examination (details in *Annexure 'B1-12'*). Topics of research identified by these candidates are of relevance to the organization and the society as a whole. Association of many such candidates and their supervisors has given the academic benefits to the on going students through many special lectures delivered by them.

A number of Ph.D. candidates of aspirants, faculty development scheme and students category numbering 88 were permitted to appear in the Ph.D. qualifying examination in the year 2012.

Sponsored Research Projects

A total of eighty two (126) research projects sponsored by agencies such as UGC, CSIR, DST, DBT, ICMR, DRDO, ICAR and such other sponsoring agencies are in operation. A list of on-going research projects is given below:

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. in Lakh)
1.	Twisted Intramolecular Charge Transfer (TICT) Fluorescence Probing Studies of Micropolarity and Microviscosity of Different Types of Gemini Micelles	Dr.Subit K Saha	CSIR	12.13
2.	Synthesis of novel ionic liquid supported reagents and their applications in organic transformations	Dr. Anil Kumar	CSIR	15.76
3.	Synthesis and catalytic applications of environmentally benign ionic liquid tagged Schiff base metal complexes"	Dr.BhartiKhungar	DST	19.47
4.	Conceptual Density Functional Theory Based Modeling of Biological Systems	Dr. Ram K. Roy	DST	24.52

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. in Lakh)
5.	Synthesis and detailed characterization of 'ship-in-a-Bottle' complexes inside the microporous and mesoporous material	Dr.Saumi Ray	DST	20.00
6.	Syntheses of efficient and pure blue triplet emitting materials for fabrication of white organic light emitting diodes (WOLEDs)"	Dr Inamur R Laskar	DST	22.17
7.	Design and Synthesis of Novel Bioactive Heterocycles as Anticancer	Dr Dalip Kumar	CSIR	13.58
8.	Novel Synthetic Methodologies for Biologically Important Compounds using Lanthanide Triflates as Lewis Acids in Ionic Liquids	Dr. Anil Kumar	UGC	08.77
9.	Development of a novel synthetic route for an anti-HIV drug	Dr. Dalip Kumar Dr. Anil Kumar	Ranbaxy	11.50
10.	Design, Synthesis And Biological Evaluation of Indole-based Heterocycles as Anticancer Agents	Dr Dalip Kumar	UGC	07.50
11.	Guest Exchange Dynamics of Porous Metal-organic Frameworks	Dr.Madhushree Sarkar	BITS	14.65
12.	Crystal Engineering of Metal-Organic Frameworks using Organic Linkers Derived from Template-Controlled Solid-State Reactions	Dr.Madhushree Sarkar	DST	23.40
13.	An Extensive Computational Development of Multi-reference Coupled-cluster Methods for Electronic Structure Investigations of Big Molecules	Dr.PrashantU. Manohar	DST	22.40
14.	Study on physicochemical and interfacial properties of some mixed micellar systems of novel Gemini and conventional surfactants in water and water-organic solvent mixed media	Dr.Subit K. Saha	A B Group	10.00
15.	A Modeling and Design Framework for Social Networking Infrastructure on Mobile Devices using P2P overlays	Shan Balasubramaniam	Aditya Birla Group - Science & Technology Center	10.00
16.	Development of Framework for Multi-agent Robotic Systems	Sudeep Mohan	CAIR (DRDO)	9.50
17.	Study of electrical Behaviour of Nanocrystalline Silicon Thin-Film Transistor (nc-TFT)	Dr.Navneet Gupta	UGC	0.8
18.	Developing Teaching Modules For English Learning Through Multimedia Technology For Rural Children From Class V –VIII	Sangeeta Sharma	UGC major research project	Got five months extension. Total Project for 4.56 lacs
19.	"Novel QuinoxalineCarboxamides: Design, Synthesis and	Prof. R. Mahesh	UGC Major Research Project	8.83

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. in Lakh)
	Neuropharmacological Evaluation as Antidepressants, Anxiolytics, and in the Management of Cancer Chemotherapy-Induced Nausea and Vomiting”			
20.	Novel neuropharmacological agents for the treatment of depression, anxiety, cognitive dysfunction, and cancer chemotherapy induced emesis: Design, synthesis and screening of potential serotonergic modulators.	Prof. R. Mahesh	ICMR	31.93
21.	Design and synthesis of novel anti malarial agents	Prof. R. Mahesh	DBT	36.60
22.	Design, Synthesis and Pharmacological Evaluation of Novel Phosphodiesterases-IV Inhibitors for their Anti-depressant and Anxiolytic Potential	Prof. R. Mahesh	DBT	51.69
23.	Development of analytical and bioanalytical methods for racemic drugs by HPLC and HPTLC for pharmacokinetic studies.	Mr. Sunil K Dubey	UGC Minor Research Project	1.80
24.	Design and Synthesis of Novel Agents for the Management of Rheumatoid Arthritis	Dr. HemantJadhav	UGC Major Research Project	8.35
25.	Design and Synthesis of Novel Agents for the Treatment of Rheumatoid Arthritis	Dr. HemantJadhav	DST Under FAST Track Scheme	19.03
26.	Design of Modified Release Multi-Unit Particulate Delivery Systems for Fixed-Dose Combination of Artesunate and Amodiaquine for Pediatrics	Dr. Shrikant Y Charde	UGC Major Research Project	10.25
27.	Evaluation of Anti-Diabetic Foot Cream	Dr. R. P. Pareek	TTK LIG Ltd., Chennai	1.00
28.	Pharmaceutical Application Studies of Polymers Manufactured by BASF	Dr. ShrikantCharde	BASF, Mumbai	2.00
29.	Design of novel nasal delivery systems for selected drugs	Prof. R. N. Saha	Torrent Research Centre, Ahmedabad	20.00
30.	Studies on newer use of Carbopols as pharmaceutical excipients	Prof. R. N. Saha	Lubrizol, USA	12.00
31.	Design, Synthesis and Study of Novel Benzopiperidine analogs as HIV-1 Reverse Transcriptase Inhibitors	Dr. S. Murugesan	BITS, Pilani Research Initiation Grant	2.00
32.	Aakash Ganga – A Social Enterprise Model for RWH and Agriculture of low water demanding economically important plant	Rajiv Gupta	Department of Science and Technology, New Delhi	61.96
33.	Design and development of Static Sunshade for thermal comfort inside	Rajiv Gupta	University Grants Commission,	9.86

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. in Lakh)
	the building		New Delhi	
34.	Development and Usage of Innovative Ductile Composite Materials for Repair and Retrofitting of Masonry Structures	S. B. Singh	Aditya Birla Group (ABG)	10.00
35.	Response and micromechanics Based Design of Engineered Cementitious Composite Structures	S. B. Singh	DST, New Delhi,	17.70
36.	Experimental Investigation of Failure and Stability of Laminated Composite Plates with Cutouts	S. B. Singh	CSIR, New Delhi,	6.00
37.	Failure and Stability of Laminated Composite Plates with Cutouts	S. B. Singh	K.K. Birla Academy Projects, BITS, Pilani	4.50
38.	Sustainable High Performance Concrete Infrastructures	S. B. Singh (India) and RavindraDhir (UK)	UKIERI Collaborative Research Award (UK and India)	£337003/-
39.	Flexural Strengthening of Concrete Structures using Near Surface Mounted (NSM) Fiber Reinforcements	S. B. Singh	UGC, New Delhi, under Category of Major Research Project	9.30
40.	Strengthening of Local Soil Using Fly Ash	Kamalesh Kumar	UGC	2.00
41.	A Study on Sludge Minimization during The Treatment of Pickling Effluent and Utilization of Sludge	AnupamSinghal	ABG	10.00
42.	GIS based Characterization of Ground water in Shekhawati Region of Rajasthan	AnupamSinghal	DST	18.00
43.	Investigation into the Behavior of Coupling	DipenduBhunia	BITS Faculty Research Initiation Grant	2.00
44.	Mobilization of Metals from Copper Mine Tailings of Khetri Copper Mine, Rajasthan and their Attenuation by Soil: Groundwater Pollution Implications	Sanghamitra Kundu	DST	11.27
45.	Effect of Grain Size Distribution on the Shear Strength Parameter of Pilani Soil	P. Chakraborty	BITS Faculty Research Initiation Grant	2.00
46.	Geospatial Based Groundwater Quality and Vulnerability Modelling in a part Chirawa Block of JhunjhunuDist in Rajasthan	RaajRamsankaran	INCGW, Ministry of Water Resources	22.98
47.	Distributed Modelling of Luni River Basin	RaajRamsankaran	BITS Faculty Research Initiation Grant	2.00
48.	Dynamic Buckling Responses of Composite Structures	S. N. Patel	BITS Faculty Research Initiation Grant	2.00
49.	Establishment of National MEMS	Prof. N.N. Sharma	National	

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. in Lakh)
	Design Center		Program on Micro and Smart Systems (HR PARC)	87.6
50.	Indigenization of Lab-on-Chip for UTI Pathogen Detection	Prof. N.N. Sharma (CO- PI)	National Program on Micro and Smart Systems (Bio PARC)	64
51.	Development, Design and Engineering of 28-DOF Humanoid to avoid obstacles and handle specified objects in the environment	Dr. B.K. Ruot	Ministry of Information and Technology, (MIT)	45
52.	Flow in Closed Microfluidic Channel	Prof. N.N. Sharma	INUP, IIT, Powai	Equipment usage, and contingency
53.	Design and development of OptofluidicMicropumps	Prof. N.N. Sharma	CEERI-BITS	Equipment usage & Chemicals
54.	Carbon Nanotube from Carbon Black:	Prof. N.N. Sharma	Aditya Birla Group	10
55.	Subproject of Project OSCAR being carried out in IIT Bombay	Dr. SaiJagan Mohan	MHRD	3
56.	Computational Investigation of Vortex Shedding and Heat Transfer Enhancement from a Heated Square Cylinder in Presence of Eddy-Promoting Rectangular Cylinder Near a Wall	Dr. Dilip K. Maiti	DST	10.81
57.	Cardiovascular Disease in Human Population: Mathematical Modeling and Analysis of its Incidence, Risk Factors and Preventive Strategies	Dr. Padma Murali	UGC	8.44
58.	Reactive Extraction of Nicotinic and Isonicotinic Acids from Aqueous Solution	Dr. Sushil Kumar	DST	11.10
59.	Modeling and Simulation of Viscose Flow through JetPack Assembly	Dr. Pratik N. Sheth Dr. Suresh Gupta (Co-Invstigator)	Birla Cellulosic Kharach	5.52
60.	Characterization of Bio-oil produced via Pyrolysis of Jatropha Cake Residue	Dr. Pratik N. Sheth	BITS, Pilani	2.00
61.	Experimental studies of Bio-mitigation of CO ₂	Dr. Smita Raghuvanshi Mr. Subhajit Majumder(CI)	BITS, Pilani	2.00
62.	Determination of Foaming Properties of Aqueous Ethanol Solution Using Industrial Surfactant Sodium Lauryl Sulfate	Dr. Pradipta Chattopadhyay	BITS, Pilani	2.00
63.	Experimental and Theoretical Studies	Dr. Sushil Kumar	BITS, Pilani	2.00

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. in Lakh)
	on Liquid – Liquid Equilibrium of Aromatics + Aliphatics + Ionic Liquids			
64.	Optimization of Complex Chemical Processes Using Evolutionary Algorithms	Dr. Ashish M. Gujarathi	BITS, Pilani	2.00
65.	Cloning and characterization of protein phosphatase 2C like promoter from <i>Arabidopsis thaliana</i> .	Rajesh Mehrotra	DST	12.57
66.	Natural and Engineered Lipases for Biodiesel Production	Rajesh Mehrotra	Aditya Birla Group of companies	10
67.	Cloning and Characterization of major regions of plastid DNA of <i>Plasmodium vivax</i> from Indian isolates	Vishal Saxena	Department of Science & Technology, New Delhi	10.17
68.	Characterization of immune signaling pathway in <i>Anopheles</i> mosquitoes for arresting plasmodium development	Lalita Gupta	Aditya Birla Groups (ABG)	10
69.	Nano technology for enhanced utilization of native-phosphorous by plants and higher moisture retention in arid soils	JitendraPanwar	Indian Council of Agricultural Research (ICAR), Govt. of India, New Delhi.	3.726 Crores (28.22500 Lakhs for BITS Pilani Centre)
70.	Molecular characterization of diazotrophic plant growth-promoting endophytic bacteria isolated from arid desert of Rajasthan	PrabhatNathJha	Department of Science and Technology, Ministry of Scientific Affairs, India	14.53
71.	Characterization and pharmacological evaluation of bioactive compounds from cyanobacterial isolates from Shekhawati region of Rajasthan	S K Verma	UGC	6.26
72.	Biodiesel production from Microalgae	S K Verma	CSIR	19.69
73.	Development of recombinant DNA based biosensor device for detection of arsenic in water sample	S K Verma	DST, India	26.22
74.	Molecular characterization of ACC (1-aminocyclopropane-1-carboxylate) deaminase activity of associative bacteria isolated from plants of desert of Rajasthan	PrabhatNathJha	DBT	40.90
75.	Molecular characterization of <i>Anopheles stephensi</i> gut epithelial peroxidases and their role in modulating immunity against bacterial and fungal antigens	Sanjeev Kumar	DST	50
76.	Characterization of immune signaling pathway in <i>Anopheles</i> mosquitoes	Lalita Gupta	DST	Fast tract scheme
77.	Analyzing structural and functional	Sandhya Mehrotra	DST	Fast track

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. in Lakh)
	evolutionary links between RubisCO and carbon concentration mechanism proteins			project
78.	Multiobjective Reservoir Optimization Using Swarm Intelligence Algorithms	Dr. A.Vasan	CSIR	11,18,000
79.	Numerical Investigations on Sandwiched Modular Multilayer Self Compacted Cement Concrete Pavements	Mr. MVN Sivakumar, Dr. A.Vasan	ABGST	10.0Lakhs
80.	Evaluation of Piezo Sensors for effective use in Health Monitoring of Engineering Structures	Annamdas V G M	DST-Fast	20 Lakhs
81.	Development of surface Plasmon resonance instrument with a novel optical design	Dr Raj kumar Gupta	DST	25.66
82.	Synthesis of Platinum (II) based pure blue emitting triplet harvesting materials and their applications in white organic light emitting diodes as single emissive dopants	Dr Inamur Rehman lashkar	CSIR	20.20
83.	Design and characterization of electrochromic rear view mirrors using conducting polymers	Dr S Sindhu	DST	24.35
84.	Developing a smart crop management system using data analytics	Dr Navneet Goel	IBM	6.75
85.	Modeling and simulation of viscose through jet pack assembly	Dr Pratik Seth	Birla Cellulose kharach	5.52
86.	Studies on cell lines as model for predicting in vitro buccal permeation of various classes of drugs and its correlation with n vivo data	Dr S Y Charde	DST	23.58
87.	Design, synthesis and evaluation of novel tetrahydroisoquinoline analogs as anti-HIV agents	Dr S Murugesan	DST	24.75
88.	Endophytic bacteria mediated phytoremediation of organic pollutants	Dr Parmeela	DST-WoS	25.10
89.	Organo catalysis as green approach for synthesis of pyrrolidine/fused pyrrolidines:towards the synthesis of related alkaloids	Dr Indresh kumar	DST	21.90
90.	Transition metal-catalysed coupling/reductive coupling of saturated alkyl halides with electron withdrawing alkenes	Dr Indresh Kumar	UGC	11.95
91.	Removal of heavy metals from industrial wastewater using biofiltration	Dr Smita Raghuvanshi	UGC	5.50
92.	Dynamics of Biological Species: Some Mathematical Models	Ms Atasi Patra	DST	10.86
93.	An agent-based tool for prediction, analysis, reporting and dispensing of	Dr Yash Sharma	UGC	8.85

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. in Lakh)
	Climate data			
94.	Design and development of test rig to understand dynamics of nanorobots	Dr N N Sharma	UGC	9.37
95.	Investigation of the effect of carbonation on the properties of concrete	Dr Dipendu Bhunia	DST	34
96.	Steady state measurements of fluorescent in restricted environments	Dr D D Pant	UGC	11.63
97.	Reactive Extraction of Nicotinic and Isonicotinic Acids from Aqueous solutions	Dr Sushil Kumar	DST	11.11
98.	Investigations on quark-gluon plasma through quarkonia suppression in QCD matter	Dr Madhukar Mishra	DST	11.40
99.	Bio Membrane Device for separation of bioparticles	Dr N N Sharma	DBT	4.95
100.	Design Synthesis and evaluation of novel beta secretase inhibitors for the treatment Alzheimer's Disease	Dr Priti Jain	UGC	2.00
101.	Design and Characterization of novel buccal drug delivery system of felodipine	Dr Murali Manohar Pandey	UGC	1.70
102.	A New Distributed Computing Framework for Data Mining	Dr Navneet Goel	DIT	95.00
103.	Transition Metal-Catalysed coupling/reductive coupling of saturated alkyl halide with electron withdrawn alkenes	Dr Paritosh Shukla	UGC	11.95
104.	A Normative Analysis of Selflessness as the Inner Perspectives of Good Life	Dr K N Sachdeva	ICPR	2.00
105.	Study of the indus valley scripts through linguistic and Markov Chain Methods	Dr Niladri Sarkar	INSA	1.75
106.	Removal of volatile organic compounds from waste streams using biofiltration	Dr Smita Raghuvanshi	DST	14.18
107.	Synthesis of Novel NOS Containing Heterocycles and evaluation of their anticancer activities	Dr Dalip Kumar	DBT	18.80
108.	Phytochemical and metabolic characterization of Prosopis cineraria pods(Sangri) as potential nutraceuticals	Dr Pankaj Sharma	DST	21.30
109.	Identify management principles and best practices from NSU(National Singapore University) and IIT that would help BITS Management	Dr Anil Bhat	ABG	10.00
110.	Enzymatic kinetic resolution of racemic amidoalkyl naphthols and their derivatives	Dr Santosh Padhi	BITS	2.00
111.	Possible mechanism of attenuation of the cardioprotective and neuroprotective	Dr Rajeev Taliyan	BITS Faculty Research	2.00

S.No.	Project Title	Principal Investigator	Agency	Sanction (Rs. in Lakh)
	effect of Ischemic preconditioning		Initiation Grant	
112.	Organocatalytic cascade towards substituted Pyrrole 3-carboxyaldehydes: A variation in Paal Knorr Pyrrole synthesis	Dr Indresh Kumar	BITS Faculty Research Initiation Grant	2.00
113.	Space time coupled least squares spectral element methods for parabolic problems using parallel computers	Dr Pankaj Biswas	BITS Faculty Research Initiation Grant	2.00
114.	Synthesis and characterization of metal oxide dendrimer encapsulated nanoparticles and electrocatalysis	Dr Surojit Pande	BITS Faculty Research Initiation Grant	2.00
115.	Design and Synthesis of Bile acid nucleosides conjugates linked via amino acids as potential anticancer agents	Dr Rajeev Sakhuja	BITS Faculty Research Initiation Grant	2.00
116.	Design and spectroscopic characterization of novel donor acceptor systems to be used in light energy conversion	Dr Shamik	BITS Faculty Research Initiation Grant	2.00
117.	Analysis of genetic diversity of malaria parasite using genetic and microsatellite markers from Bikaner	Shilpi Garg	BITS Faculty Research Initiation Grant	2.00
118.	Characterisation of genes regulation the polarity of sensory organs of Drosophila	Dr Monalisa Mishra	BITS Faculty Research Initiation Grant	2.00
119.	Awareness, Use and Implication of Web 2.0 for supplementing classroom teaching at graduate level	Dr Virendra Nirban	BITS Faculty Research Initiation Grant	2.00
120.	Cinematic Arts: A critical study of Multidisciplinary aspects of cinema	Dr Sushila Shekhawat	BITS Faculty Research Initiation Grant	2.00
121.	Modelling Modal Shift to Bus Rapid Transit System(BRTS) from other modes of travel in Jaipur	Dr Shriniwas Arkatkar	BITS Faculty Research Initiation Grant	2.00
122.	Inter-area oscillation control using embedded energy storage in interconnected power system with distributed generation	Dr Hitesh Mathur	BITS Seed Grant	11.15
123.	Development of silicon prototype of low power and low noise	Dr Anu Gupta	BITS Seed Grant	8.3
124.	Carbon nanotube reinforced copper composite	Dr N N Sharma	BITS Seed Grant	18.15
125.	Design and development of robotic exoskeleton for upperlimb rehabilitation and assistance	Dr B K Rout	BITS Seed Grant	15.10
126.	Condition Monitoring of Dynamic System by Vibration Response Analysis	Dr Arun Jalan	BITS Faculty Research Initiation Grant	2.00

The details of these projects are given in individual department write-ups (B1.10.1 to B1.10.13).

Entrepreneurship Development and IPR Unit

Entrepreneurship Development and IPR Unit was formed in the year 2007 to give a momentum to activities related to entrepreneurship development and intellectual property rights. The main function envisaged for the unit are education and research, organization of conferences, workshops and programmes, student led activities, and network activities for inculcating entrepreneurial mindset and spirit amongst students. Unit is also promoting entrepreneurial efforts through technology business incubator at BITS Pilani funded by Department of Science and Technology and Alumni's as also efforts are being made to inculcate the culture amongst faculty and students to protect their intellectual property developed.

During 2012 following major activities were undertaken to promote entrepreneurship development programmes on campus:

Tech Bazaar 2012

Promoting Innovations through Tech Bazaar – 2012

Tech Bazaar 2012 was held on 19th August 2012 at Sri Sathya Sai International Centre, New Delhi. ED&IPR Unit at BITS Pilani - Pilani Campus has been conducting Tech Bazaar, since 2006 which is a national level annual convention with an aim to create an eco-system conducive for entrepreneurship. It provides a rare opportunity to students, professionals; scientists and members of the academic world to show case their innovative ideas. This year a total of 196 teams registered for the event from India and abroad out of which 11 teams competed in the final round. Select teams were given mentorship also prior to the event. Tech Bazaar 2012 was sponsored by Technology Development Board, Government of India as a Gold sponsor. Other sponsors were CEERI, Pilani and CSIR, New Delhi, Government of India. The event provided an ideal platform for budding entrepreneurs to roll out concrete plans for transforming their innovative ideas into viable business ventures and networking with experts and venture capitalists.

Workshop on Intellectual Property Rights Management at Bhiwadi Industrial Estate Rajasthan

IPR Management workshop for the benefit of small and medium enterprises was organized on 3-4 February, 2012 at Bhiwadi Manufacturing Association, RIICO Industrial Area, Ghatal. The workshop was supported by Ministry of MSME (GOI). Experts invited for talks included Mr. Kanav Hasija, Chief Research and Strategy Officer and Head of IP, INNOVACCER; Mr. K Pradeep, Managing Director, PRODYOVIDHI, Ms. Kavita Gupta of GEIPER, Noida, and Mr. Satya Pal Arora, Patent and Trademark Attorney, Global IPR Law Consultant. The topics covered in the workshop are top 12 things SMEs must know about patents, patent filing process, Weaving Business, Technology and Intellectual Property For SMEs and Start ups, drafting and filing a patent application and Commercial Exploitation of Patents in Indian Context

Patent Filing

ED & IPR unit facilitated filing of six patents during the year. The details are as under:

1	Dr. A. K. Das and Mr. Deepak Pakalapati	Department of Biological Sciences	Oligonucleotides for the detection of Plasmodial sp and an assay thereof
2	Mr. Vijay Kumar and Dr. Niti Nipun Sharma	Mechanical Engineering Department	Surface Modification for Hafnium Oxide (HfO ₂) for Micro-fluidics Applications
3	Dr. Sachin Ulhasrao Belgamwar and Dr. Niti Nipun Sharma	Mechanical Engineering Department	Method of producing uniform mixture of copper and carbon nano-tube in bulk for copper metal nano-composite
4	Dr. A. K. Das and Mr. Narayan Jalan	Department of Biological Sciences	Temperature inducible promoter derived and modified from Enterococcus faecium DJ1 plasmid, and its use in E. coli for production of desired protein
5	Dr. Dalip Kumar and Mr. Gautam Patel	Department of Chemistry	Sulfoximine Derivatives as Anticancer Agents
6	Prof. S. K. Verma	Department of Biological Sciences	Rapid Non-Enzymatic process for the reduction of Chromium (III) by the NOSTOC CALCICOLA immobilized on Silica Gel

New Courses Introduced

- Third time the course titled "New Venture Creation" was offered during first semester of 2012-13 across three campuses with a support from Alumni and four faculty members were actively involved across campuses for delivery of the course. The purpose of this course is to not only study entrepreneurship but practice it. Student teams are expected to create a technology/product based startup and write a business plan including all the building blocks of creating an enterprise. There were more than 25

teams constituting around around 100 students who worked on specific ideas during the course. Each team was provided with mentoring by an entrepreneur (BITSian) and more than 16 online sessions for 2 hours each were organized with the help of entrepreneurs across the globe on various aspects of entrepreneurship which can help teams to fine tune their ideas to take it incubation stage or launching a venture. Associated Alumni Directors in the course were Mr. Abhinav Khushraj, Mr. Sanjeev Kakkar and Mr. Rachit and associated faculty members were Prof Arya Kumar, Prof Mridular Goel, Dr Laitha and Dr Jyoti. Ten teams with 31 students took advantage of online sessions by leading entrepreneurs and venture capitalists across the globe. There was an active contribution by BITSians by way mentoring sessions to the teams and by engaging online sessions for the benefit of the students. The outcome of course is visible by way achievement of three teams from the previous batch who have raised first round of funding. Top five teams of the course across campuses were extended Manoj Saxena seed funding support.

- One unit course that was introduced last year has been again offered during the first semester of 2012-13. Students are taking interest in going through such courses to take advantage of patenting their technologies and other developments. These courses are being well received by students as evident from students' response.

Other Important Activities

The Saxena Foundation in association with BITSAA International and CEL has initiated the Saxena Pre-Seed Fund from last year. This unique initiative aims to encourage the spirit of entrepreneurship among the students of BITS Pilani by offering them the necessary resources in the form of a pre-seed fund and mentorship from experts in this field. This year 5 teams from the New Venture creation course across three campuses were selected for seed funding support under the scheme.

Prof Arya Kumar and Prof Anil Bhat presented a paper and participated in the REE 12 Asia -Round Table on Entrepreneurship Education by Stanford Technology Venture Program, Stanford University organised by Thammasat University, Bangkok, Thailand National Science and Technology Development Agency Thailand Management Association between 1 - 3 rd February 2012 in Bangkok. Participation in the conference included more than 70 participants from more than 15 countries.

Faculty members contributed as key note speakers to number of international conferences in the area of entrepreneurship organized by institutions in India.

Faculty member contributed as member of selection committee of STIDE for investment proposal in the area of ICT and member of Governing Body of STIDE of Central University of Rajasthan.

More than 8 students undertook special project studies in the area of Entrepreneurship as a part of Special Study Oriented Course during 2012. Faculty members contributed more than 3 research articles in the area of entrepreneurship and intellectual property rights in national journals/conferences.

Faculty member contributed as Faculty Advisor to the National Entrepreneurship Network (NEN) in chalking out plans and strategies to give a further momentum to spreading entrepreneurship culture and build an eco-system conducive for promotion of entrepreneurship.

Faculty member joined on Faculty Advisory Board of E-Cell IIT Kanpur which is a non-profit organization to inculcate and unveil the spirit of entrepreneurship amongst the students.

Software Development and Educational Technology Unit

The **Software Development & Educational Technology Unit** (SDET Unit) incorporates the **Centre for Software Development (CSD)** as well as the **Centre for Educational Technology (CET)**. The Unit has a mandate to include identification, establishment, deployment and evolution of appropriate educational technology in order to support effective resource utilization of expertise (teaching / mentoring / collaboration) available at various campuses (both existing and upcoming) as well as enable students and faculty involved in various off-campus work-integrated learning programs of the Institute. Research, development and consultancy in those areas of computing where it has expertise and interest amongst its nucleus members remain the other important areas of the work for the SDET Unit.

The SDET Unit has four specific sets of activities handled by its two wings: CSD and CET. These wings focus on multimedia, internetworking, E-learning, operating systems, wearable computing, web-services, live and stored video streaming as current thrust areas. Its CET wing has its mandate to identify suitable educational technology solutions for on as well as off-campus operations of the Institute and helping in their deployment.

The SDET UNIT is involved in the Open-source Moodle LMS based *deployment for on and off-campus requirements of the Institute* in form of the *Nalanda and Taxila portals* on a regular basis, apart from focusing

on the design / development / deployment of the Internet-based distributed learning architecture and synchronous as well as asynchronous-delivery-based content development. In addition, it has complementary features of Digital Video delivery over the Internet. Three phases of this project have already been completed. For quite some time now, it has added the live interactive (bi-directional audio/video/text-based) classroom feature to value add its off-campus student population.

The SDET Unit has played the leading role in co-designing and establishing (along with alumni of the Institute) a University-wide, Integrated immersive Telepresence Infrastructure with seamless support for very high-quality eye-to-eye contact based meetings between people present in three telepresence rooms in three campuses along with integrated multi-campus interactive lecture delivery and recording support for three class rooms spread over all Indian campuses of the Institute which would be further integrated gradually with the interactive-web-conferencing system capable of involving numerous live interactions amongst faculty and off-campus students along with recording and view-on-Demand capabilities. This has been done as part of the BITS-connect 2.0 initiative and has benefitted from significant contributions from BITS Pilani and BITS Alumni spread over the Globe. This facility was inaugurated in a distributed way across all Indian sites on January 9, 2013.

In the past, the Unit had been involved in the Journal Server Project which is a freeware international virtual digital library project, being led by Oxford University and BITS, involves over fifteen major universities in UK, India, USA, Norway, Italy, South Africa, Germany, Pakistan, Taiwan and Bangladesh, BITS had contributed to the overall architecture and Search Engine aspects of this project..

The SDETU has played a major role nationally and internationally in several areas including the research, development and deployment specific to the next-generation internetworking technologies like IPv6. It has brought several firsts to BITS and has contributed to funded international research projects in this area.

Members of the team have also presented, the research and development work being done at BITS at several international fora apart from being actively involved in IEEE and IETF activities in the area of networking research and standardization. In addition, the SDET Unit is the official enabler for the BITS-BITSAA joint venture known as Project Embryo (<http://www.embryo.org>) that is aimed at joint efforts by current students, alumni and faculty for delivery of live lectures by specialist alums as well as joint collaborative research guidance by alums and faculty to on-campus students.

In addition to large number of first degree and master's level students, at present, two full-time doctoral scholars students are working towards their Ph.D. at the SDET UNIT in the area of wearable computing both of whom have won the TCS Doctoral Research Fellowships after joining BITS Pilani.

Center for Biotechnology

The Centre has in-house facilities of Recombinant-DNA Technology. The objectives of the Centre are to take up research and development projects from various sponsoring organizations, establishments of University-Industry linkage through various R&D contract projects and conduct periodic Workshops and hands on training for faculty members, industry personnel and students in the area of advanced molecular biology/biotechnology and bioinformatics. The facilities available are: Victor-3 Multichannel counter, Gel Documentation System, PCR Machines, Inverted microscope with camera attachment, Hybridization oven, Gel electrophoresis equipments, UV-Cross linker, – 80°C Deep Freezer, Temperature Controlled Water Bath Shaker, Refrigerated Centrifuge, Cold Room, Tissue Culture Room, Plant Biotechnology facility, Semi-automated Green House, Radioisotope handling facilities, Liquid Nitrogen Plant etc. We developed insectary to facilitate research on mosquito borne diseases.

In the year 2012 approximately 75 students were trained in molecular biology techniques through various laboratory courses. Over 40 students completed their projects in the area of modern biology.

Centre for Desert Development Technologies (CDDT)

The Centre for Desert Development Technologies (CDDT) was established in April 2005 as an Alumni initiative at BITS-Pilani in collaboration with Jacob Blaustein Institutes for Desert Research (BIDR) of Ben Gurion University (BGU) – the acknowledged global leaders in making the desert bloom through their demonstrable success in the Negev Desert [www.bgu.ac.il/bidr]. The C-DDT mission is to make the desert areas of Rajasthan bloom through demonstration, extension, and development of world class desert development technologies-water and energy conservation in irrigation systems, rain water harvesting and ground water management, conservation and propagation of plants suited for the desert environment, and optimizing human existence in the desert ecosystem. The C-DDT vision is to develop a multi-disciplinary center of excellence to demonstrate the role that various technologies play in desert development and to assess their socio-economic impact on the inhabitants. The key disciplines involved are Civil, Chemical,

Electronics and Electrical Engineering; Plant Biotechnology, Solar Energy, and Humanistic studies. A water management system consisting of rainwater harvesting pipelines, tank, solar pump, drip irrigation system etc. has been constructed and a plantation area that uses water from this system developed. A biotechnology complex consisting of a plant tissue culture lab and a greenhouse has been constructed. Rare desert plants like Guggul, Jatropa, etc. being propagated and exploration of new crops like Olive is being explored. Certain other projects which have been initiated are recycling and desalination of gray water for irrigation purpose, assessment of groundwater resource in the Shekhawati area using remote sensing data and geographical information system, development of aloe vera processing, impact of desertification on nomadic population and vice versa. Several exchange visits of BITS alumni and faculty and BGU/BIDR faculty have taken place. A MoU between the two institutions has been signed. In addition to exchange of ideas and expertise, joint projects are being undertaken. A four rooms complex has been created to study the use of solar energy in passive architecture with support of UGC. The different studies are being carried out related to energy saving techniques. It implements the new energy efficient static sun-shade, cavity walls, wall with brick projections, roof with stonewares and vents to show case the energy efficient house to reduce the active load for comfort conditions. A good number of publication is made and a Ph.D. is about to be completed along with number of projects completed by students.

Centre for Educational Technology (CET)

The Centre for Educational Technology (CET) is the second of the two major centres run by the Software Development and Educational Technology Unit (SDET Unit) at BITS-Pilani. IT comprises of modern digital video studio and is equipped with the Satellite (EDUSAT)-based as well as Leased Line based high-quality Video-conferencing facilities meant for use of the University for Delivery of live interactive lectures to its various campuses in India as well as cater to select student groups of work-Integrated off-campus learning programmes.

This is further complemented by the Internet-based, highly scalable distributed desktop video-conferencing facility allowing medium-quality but more interactive live classroom sessions where all students cannot come to on or off-campus classrooms and may be resident in different parts of country / world. The Centre is equipped with the IP-based Video-on-Demand and Scheduled Video Multicast facilities which can allow reuse / review / streaming of lectures delivered earlier for the benefit of students. Incidentally, the above referred Project Embryo makes effective use of this technology already and allows ALL campuses of BITS-Pilani to be benefitted simultaneously whenever an Alumnus expert delivers a scheduled lecture from elsewhere in the world.

Its focus is on E-learning delivery systems, related web-services, live and stored video streaming as current thrust areas. Its mandate is to identify suitable educational technology solutions for on as well as off-campus operations of the Institute and helping in their deployment.

The CET has played the leading role in co-designing and establishing (along with alumni of the Institute) a University-wide, Integrated immersive Telepresence Infrastructure with seamless support for very high-quality eye-to-eye contact based meetings between people present in three telepresence rooms in three campuses along with integrated multi-campus interactive lecture delivery and recording support for three class rooms spread over all Indian campuses of the Institute which would be further integrated gradually with the interactive-web-conferencing system capable of involving numerous live interactions amongst faculty and off-campus students along with recording and view-on-Demand capabilities. This has been done as part of the BITS-connect 2.0 initiative and has benefitted from significant contributions from BITS Pilani and BITS Alumni spread over the Globe.

Currently, the CET is in the process of evolving a long-term and near-term blueprint and strategic plan of sustainable dual-purpose large-scale open or partly-closed global instruction delivery for BITS Pilani with an eye to either partner with or complement the edX and Coursera initiatives led by MIT and Stanford respectively.

Centre for Entrepreneurial Leadership

The center for Entrepreneurial leadership was set-up by the institute as eighth center of excellence during latter part of 2002-03. The journey that started in 2002 has achieved many milestones to come out with impact driven entrepreneurship programmes and events that are driven by the creative and innovative energies of students under the guidance and support of faculty and alumnus. It is one of the most vibrant, dynamic and sought after platform for students to join as core team members and take up leading responsibilities to learn and contribute for the promotion of entrepreneurship on campus.

Some of the key achievements of the CEL for the year 2012 are as under:

The major projects running under CEL at BITS Pilani - Pilani Campus are Conquest, Epsilon, E-connect, Saksham and Summer in a Startup (SIS). The entire CEL team has been working with their full zeal and has been taking all their projects to next level.

The brief descriptions of the activities done under the major projects by CEL team during 2011-2012 are as:

Conquest 2012

Grand finale of the 9th edition of the business plan competition, Conquest was organized by the Center for Entrepreneurial Leadership (CEL) of BITS Pilani on Sunday, 19th August 2012. It was held at the Sathya Sai International Center, Lodhi Road, New Delhi. Ten finalists presented their start up ideas in the presence of over 300 audiences which included students from various colleges across the country besides BITSians. The start-up, Enerture Technology Pvt. Ltd. was adjudged as the best amongst the ten and was awarded prize money of Rs. 1.5 Lakhs along with an all-expenses paid trip to Thailand for the All Asia Business Plan competition. Solar Town Energy Solutions Pvt. Ltd. was adjudged as the runner-up. All the ten finalists were given a Blackberry Playbook and a Blackberry Smartphone.

Welcoming the judges and participants in the inaugural session, Director of BITS Pilani, Prof. G. Raghurama said, today, it is the norm for people to think out of the box and in a bolder fashion. Prof. Arya Kumar, Professor in-Charge, CEL spoke of Conquests evolution over the last seven years, right from when it began in 2004 as a fledgling student initiative, to its present status as one the most prestigious student-run business-competitions in the country. Conquest co-ordinator, Rohan Manchanda said the focus is on creating more start-ups out of the competition and providing them adequate resources to scale up their ventures.

This year's Finale also included a Panel Discussion by six experienced Venture Capitalists, namely, Rajesh Sawhney (Former President, Reliance Entertainment), Sandeep Singhal (MD, Nexus Ventures), Vivek Mohan (Freemont Partners), Mukund Mohan (Co-Founder, HeyMaya), Ankur Warikoo (CEO, Groupon India), Ravi Kiran (Co-founder, Venture Nursery). They provided an in-depth analysis into the pertinent issue about when it would be correct time to raise money for a start-up. The auditorium being jam packed with budding entrepreneurs, the panel discussion surely gave out a lot of useful advice to all those present.

Partners for this year's Conquest include: Freemont Partners, CNBC TV 18 Young Turks, Blackberry, Technology Development Board (Government of India) and KAE Capital besides others. Top five winning teams of Conquest 2012 are - Enerture Technology Pvt. Ltd. ; Solar Town Energy Solutions Pvt. Ltd.; Tag N' Pin; Poster Gully ; and Myriads Digital

Epsilon 2012

Epsilon is the Intra-BITS Business Challenge organized by the Center for Entrepreneurial Leadership, BITS-Pilani. In the spirit of encouraging the atmosphere of entrepreneurship and celebrating entrepreneurial acumen in BITS, Epsilon aims to provide an engaging platform to transform high potential ideas into fully fledged startups. Epsilon 2012, an received about 100 entries from all three campuses, out of which 41 were selected on the basis of the preliminary questionnaire, 25 being from The Pilani, 11 from Goa and 5 from Hyderabad campus. Two workshops were conducted for these teams by Mr. Abhishek Nayak, Co-founder and CEO of GharPay and Mr. Rohit Agarwal, Co-Founder and COO of Framebench to look into important aspects as "Idea to Opportunity" and "Financial assessment and market valuation". The top three teams were Scholar-assist, EDLABS and Valonia.

E-Connect

E-connect, a new initiative to promote the culture of startups on campus were undertaken by CEL, BITS Pilani last year. In its nascent stage, the project aims to bridge the gap between various aspects of setting up a new venture. It aims to provide a networking platform for entrepreneurs, designers and web developers on campus to meet, discuss and start up eventually. It aims to bring together talented and dedicated students with different skill sets to start new ventures. Being a 300acre campus with over 3500 students it is often difficult to find students with complementary skill sets. The ideation of the project started in March 2012, when a lot of students applying for the course New Venture Creation, went through a lot of trouble in finding the right and dedicated team for their venture. Being an entrepreneurial community, we know the importance of team work in a startup, and thus came up with E-Connect, to bridge this gap.

E Week2011 – Centre for Entrepreneurial Leadership in association with the National Entrepreneurship Network (NEN) organized an Entrepreneurship Week which began on 11th February, 2011. The theme of E Week 2012 was 'Invent the future' with a focus on delving into local issues and fundamental challenges of water scarcity, garbage, traffic problems, power, pollution, etc. The purpose was to organize various events spread over a week with a focus on solutions that address these issues?

Prof. G Raghurama, Director, BITS Pilani and Prof. Arya Kumar, Dean (SWD) shared their thoughts on entrepreneurship and innovation in the inaugural ceremony. Prof. G Raghurama expressed his satisfaction at the idea of increasing number of BITSians choosing to create jobs, rather than take up jobs.

Project Saksham

Brainchild of the Rural Entrepreneurship Division of CEL, BITS Pilani '**Saksham**' aims at creating an independent and sustainable enterprise involving rural households (chiefly women). Meaning '**capable**', Saksham aims to create a framework that identifies and conceives effective procedures for collection of leftover excesses and then utilizes commonly available resources for bringing out products that are economic and competitive in the market. All the while, it fundamentally focuses on making a successful enterprise out of a rural location and making those involved in it 'Saksham'.

By looking at the quantity of waste paper generated in the institute and the way it was dumped as useless garbage, it was realized that this paper can be made much more useful. Hence, with collaboration with **NSS, BITS Pilani** volunteers, RED collected waste paper from the students. This paper was segregated on the basis of the used and the unused ones. The unused ones were cut and made into sheets. Now this paper was sent to the girls. They made notebooks out of them. For covers, certificates used during the festivals were used.

These notebooks have now been sold twice. Once in March 2012 and other time during Oasis 2012. In the oasis stall, around 80 notebooks were put up. All were sold in the first two days.

Summer in a Startup (SiS)

The Summer in a Startup programme seeks to promote startups and encourage entrepreneurial acumen amongst undergraduates. An initiative of The Center for Entrepreneurial Leadership, BITS Pilani and powered by BITSAA, SiS aims to give the students at BITS Pilani the opportunity to intern at a startup over the summer. In 2013, CEL is proud to present the 5th edition of SiS. This time we have 17 startups.

Apart from these projects some of our CEL member students have received awards for their outstanding contribution, which are as:

- **Mantra Awards 2012:** The Mantra awards were instituted by CEL, in 2009, to recognize and reward outstanding students who have demonstrated extraordinary leadership potential and/or entrepreneurial initiative. Anupendra Sharma, co-founder of CEL, Investment Partner at Siemens Venture Capital in Boston, and CEL Alumni Advisor had initiated the creation of the Four '**Mantra Awards**'. The Mantra Awards 2012 is received by:
 - Vemuri V.L. Ambarish - *Mantra Award for Social Leadership*
 - Aaksha Meghawati - *Mantra Award for Outstanding Leadership*
 - Suvonil Chatterjee - *Mantra Award for Innovation*
- **BITSAA Global 30 Under 30 – 2012:** At the end of 2005, BITSAA instituted the 30 under 30 awards, to be given every three years, to recognize and honor outstanding BITSians under the age of 30 who have demonstrated excellence in one or more of many areas. These awards are dedicated to all those young BITSians who thought and acted differently, who challenged the status quo, rewrote the rules, and created their own paths, to the best examples of what it means to be a BITSian. In 2012, one of these awards was received by:
 - Suvonil Chatterjee (CEL member student) – *Invention and Innovation*

Students Achievements

- **Rishabh Gupta** (2009C6PS312) and **Rohan Manchanda** (2009A4PS460) have been selected amongst 300 students all over the world to attend the prestigious World Business Dialogue to be held on March 14-15, 2012 in Cologne, Germany.
- **Anubhav Tyagi** represented a team PhotoWalkr at New York to attend the 4th annual Kairos Global Summit about entrepreneurial innovation and its implication in solving the problems of tomorrow in the month of Feb 2012.

Technology Innovation Centre (TIC)

Technology Innovation Centre was instituted as a facility by which engineer/scientist entrepreneur could spend desired period at the campus and investigate problems brought by him along with a team of BITS facilities and students. These people are given associate faculty status so that they can use all the infrastructural facilities of the Institute and participate in the academic process. Moreover, these entrepreneurs are able to work for their Ph.D. degree of BITS and participate in teaching certain state of the

art courses during their visits to the campus.

Past-experience shows that this facility mostly attracts knowledge – intensive small-scale entrepreneurs, who cannot afford the high cost of R & D in their establishment. The institute, in turn, has been able to train its students on entrepreneurial skills and has provided the rewarding experience of investigating real – life problems brought from the industry.

In the past year 3 companies have applied under this scheme and selected students for their projects with stipend.

Company 24-7xS Technologies, Barcelona selected 7 students to work on their projects in the Mechanical engineering and computer science fields

Company Bravolucy Technologies Pvt.Ltd Hyderabad has given 1 project in II semester 2011-12. 1 student worked on them

A company Opera Solutions, Noida 201 301 gave one project II semester 2011-12. 1 student worked on the projects.

In first semester 2012-13, 24-7xS Technologies, Barcelona selected 7 students to work on their projects in the EEE and computer science fields

Currently 1 company has given projects to students of BITS Pilani under this scheme.

Centre for Materials Science and Technology

The objective of the Centre for Materials Science and Technology is to develop and implement projects related to modern materials such as smart materials, biomaterials, fibre-reinforced plastic composites and also related to conventional materials such as metals, ceramics and polymers. The Centre undertakes mechanical and non-destructive testing of various engineering materials and products for evaluating their mechanical properties and for evaluating defects such as cracks, voids, delamination, inclusions etc. Other activities include providing consultancy related to materials aspects and testing/ development and analysis in the field of materials science and technology in general. The testing facilities available at the Centre include a conventional Universal Testing Machine of 50 Tons capacity, as well as, a fully computerized microprocessor based Electronic Universal Testing Machine of 100 kN capacity, Hounsfield Tensometer, various hardness testing machines such as Brinell, Rockwell, and Vickers Hardness Testers, Rotating Bending Fatigue Testing Machine, Combined Bending and Torsion Fatigue Testing Machine, Circular Polariscope, Strain-gauge testing facility, Izod Impact Testing Machines, Digital impact testing machine, Double disk polisher, Erichsen cupping tester, Ultrasonic Flaw Detectors, Liquid Penetrant Test kit, Magnetic Crack Detector, Eddy Current Tester, Acoustic Emission Testing equipments, Acousto-ultrasonic pocket hand-held AU scanner etc.

Centre for Robotics and Intelligent System

The objective of the Centre for Robotics and Intelligent Systems (CRIS) is to develop prototypes that provide greater intelligence and higher versatility for robotic tasks under ever-changing constraints of the environment. This objective is set forth to make Indian industry competitive by developing indigenous technical skills, manpower and innovative spirit. Each prototype is developed in four different stages viz. (i) Conceptualization, (ii) Algorithmic development and verification in simulated environment, (iii) Real-time testing and (iv) Integration of automated system. The Centre is well equipped with excellent computational facilities; advanced software packages for circuit design, image processing and mechanical design; micro controller and DSP based driver card for real-time experimentation; experimental bed, Pendubot (inverted pendulum), CRS-Plus robot manipulator, 4-DOF SCARA manipulator, 5-DOF articulated manipulator, Hydra mobile base, Labmate, mobile base and many other facilities. The center is geared to provide research facilities in areas such as intelligent robotics and system design, intelligent control, neural and fuzzy neural based system modeling and control, evolutionary computation, robotic vision and virtual reality. Earlier BITSUMO, which is an autonomous assistant robot, was developed to work in restaurant/ library. In addition to these, an autonomous glider, an autonomous hovercraft, a 14-DOF robotic arm, an intelligent mechatronics ball, a micro-mouse platform and a micro-mouse testing base were developed at CRIS. The center is engaged with the development of humanoid. The first breakthrough is in terms of Acyut-1 and Acyut-2 (humanoid). Acyut-1 is a dancing robot and which has won several laurels even at international competitive events (Robogames 2008 held at San Francisco, USA and INDEEN Expo, Germany etc.), Acyut-2 is much larger and far more capable. It has far better control and using remote command by way of hand movements etc, it can be moved synchronously. These models were demonstrated for their capabilities at Korea, USA, Germany and Japan. The students are currently working on further developments related to

Acyut-2 robot with added features Acyut-3 had participated in FIRA-2010, Bangalore and created a world record in weight lifting (2.4Kg.) in year 2010. In same year a mobile Robot (named SHAURYA) participated in Annual student contest organized by DRDO, India and received recognition. Team Acyut have showcased their technologies at in the Tech fest of BITS Pilani Dubai campus and IIT Kanpur, Robotics symposium of RDE Pune (DRDO) and Tech test of NIT Calicut. For their effort the team has been appreciated by scientists of BARC Mumbai and DIT New Delhi.

During the year under review, the students working at CRIS has developed a number of models and working robots. Namely, humanoid Acyut -4 had been invited to participate in ROBOCUP-2013. Based on the progress in the area of humanoid robotics, Department of Information Technology (2012-2014) has sponsored a project worth 45 Lacs to develop a humanoid which is capable of stable walking and navigate in a structured environment.

Centre for Renewable Energy & Environment Development (CREED)

CREED is an interdisciplinary Centre that co-ordinates educational and research activities in the active areas of renewable energy and environment. The objectives of the Centre are (i) to conceive, develop and implement renewable energy applications and environment protection projects, (ii) to develop courses and organize awareness programmes, and (iii) to collaborate with external organizations in the areas of renewable energy education, training and technology development. Some of the existing facilities at CREED include an experimental set up for solar water heating, solar air-heating system, solar stills, and solar photovoltaic power pack with storage battery bank, SPV lighting systems, and portable energy audit instruments.

Currently, active research areas of CREED include concentrated solar power and photovoltaic power based policy analysis, emissions and environmental impact of thermal power plants, planning and economics of renewable energy systems, real time operation and control of renewable systems, industrial cogeneration, integrated renewable systems, demand side management, clean development management integrated resource planning, and CO₂ based refrigeration.

The Renewable Energy Club is an exclusively a student managed body that operates under CREED. The Club has undertaken active work in organizing competitions, quizzes, carbon footprint analysis and carbon credits. Commercial organizations in these areas have evolved out of this club, and are currently owned and operated by BITS alumni.

Centre for Software Development (CSD)

The Centre for Software Development (CSD) is first of the two major centres that comprise the newly formed Software Development and Educational Technology Unit (SDET Unit) at BITS-Pilani.

The CSD has three wings namely *Media Laboratory*, the *BITS-IBM Laboratory for Open Source Computing* and *BITS-Microsoft Laboratory for Mobile Computing*.

Its focus is on Web-media, E-learning Support, Networking (wireline and wireless: sensor, mobile and ad-hoc variants), wearable computing, Web-services as current thrust areas. It is involved in the Open-source Moodle LMS based *deployment for on and off-campus requirements of the Institute* in form of the *Nalanda and Taxila portals* on a regular basis.

In the past, the CSD had been involved in the Journal Server Project which is a freeware international virtual digital library project, being led by Oxford University and BITS, involves over fifteen major universities in UK, India, USA, Norway, Italy, South Africa, Germany, Pakistan, Taiwan and Bangladesh, BITS had contributed to the overall architecture and Search Engine aspects of this project..

The CSD has played a major role nationally and internationally in several areas including the research, development and deployment specific to the next-generation internetworking technologies like IPv6. It has brought several firsts to BITS and has contributed to funded international research projects in this area.

Members of the team have also presented, the research and development work being done at BITS at several international fora apart from being actively involved in IEEE and IETF activities in the area of networking research and standardization. In addition to large number of first degree and master's level students, at present, two full-time doctoral scholars students are working towards their Ph.D. at the SDET UNIT in the area of wearable computing both of whom have won the TCS Doctoral Research Fellowships after joining BITS Pilani.

Centre for Women Studies

The UGC sponsored Centre for Women Studies has been established at BITS, Pilani during March 2005. UGC has sanctioned Rs.50 Lakhs under the 10th Plan for this Centre. The objective of the Centre is to work towards upliftment of women and their families in the fields of social, economic and health through technological interventions. Centre has initiated various new activities during 2012.

Seminars/Workshop /Training Programme

Workshop on “Obesity Management”

UGC Centre for Women Studies conducted a workshop on “**Obesity Management**” on November 17, 2012 at BITS, Pilani. The objectives of the Workshop were:

- To make people aware about the causes of obesity and the diseases caused by it
- To help them for the real assessment of obesity
- To make them aware about its management

Women and girls from BITS campus participated in this Workshop. Prof. Sangeeta Sharma, Coordinator, UGC Centre for Women Studies coordinated the event along with Madhusmita Das. Madam Madhu Jain was also present in this workshop. After the introductory speech by the coordinator, the resource person for the Workshop, Dr. R. P. Pareek, Medical Superintendent, Medical Centre, BITS, explained how Obesity is commonly caused by giving several examples of the nutritional value of different kinds of food and how it increases the likelihood of various diseases. He also explained how to measure the body mass index (BMI) of a person, how to have the real assessment of obesity and finally how to manage it.

Workshop on “Common Errors in English”

UGC Center for Women Studies organized a Workshop on “*Common Errors in English*” on April 27th, 2012 at BITS, Pilani. The objectives of the workshop were:

- To make people aware about the types of errors committed
- To make them find the reasons for the errors
- To help them overcome the errors

65-70 participants from different schools of Pilani, participated in this Workshop. The resource person for the Workshop was Dr. Devika, from the Department of languages, BITS, Pilani. Prof. Sangeeta Sharma, Coordinator, UGC Centre for Women Studies coordinated the event along with team member Ms. Madhusmita. Dr. Devika the resource person first defined what the common errors in English are, then explained the types of errors people usually commit. She also explained the reasons why these errors happen and how to overcome these errors easily.

Celebration of International Women’s Day by the centre

UGC Centre for Women Studies, BITS, Pilani celebrated the *International Women’s Day* on March 16, 2012 in LTC Lawns, BITS, Pilani with the following objectives:

Objectives:

- To pay respect and understand the importance of women in our life’s.
- To provide a space with opportunities for women to discuss issues, be informed and participate in range of activities as part of a one day event. The benefits to be realized include: raised awareness, increased confidence to facilitate activity in community and civic life

In this event around 80 women from BITS and CEERI campus participated. Prof. Sangeeta Sharma, Coordinator, UGC Centre for Women Studies welcomed the participants and described the importance of Women’s Day. Dr. Devika from the Department of Languages and Ms. Madhusmita from the Centre for Women Studies coordinated the events. Lots of games like- Song and dance competition, balloon bursting, free dance were organized and prizes were distributed to the winners.

Training Programme on “Computer Awareness -II”

UGC Center for Women Studies, BITS, Pilani in continuation to its last *Computer Awareness Programme* (13 November, 2010), organized another programme on *Computer Awareness - II* at BITS, Pilani on 21st January, 2012. Objectives of the Workshop were:

- To promote awareness regarding the use of computer
- To learn how to work with MS Office, Words, PowerPoint, Excel and Internet

25-30 women and girls from BITS, CERRI campus and nearby villages were participated in this Workshop. The resource person for the Workshop was Dr. Virender Singh Nirban, Faculty Languages Department, BITS Pilani. Prof. Sangeeta Sharma, Coordinator, UGC Centre for Women Studies coordinated the event, introduced the resource person and welcomed the participants. Various topics like working with MS office, MS Word, MS Excel, uses of keys etc. were covered during the programme by the resource person.

Training Programme on “Effective Handling of Electrical Appliances”

UGC Center for Women Studies, BITS, Pilani organized a training programme on “Effective Handling of Electrical Appliances on 30th September 2012. Objectives of the training programme were:

- To make people aware about the handling, home - maintenance and easy repair of domestic electrical appliance
- To promote awareness about saving electricity

25-30 participants from BITS and outside campus participated in this Workshop. The resource person for the Workshop was Prof. Surekha Bhanot, Department of Electrical and Electronics Engg./ Instrumentation. After the welcome address by Prof. Sangeeta Sharma, Prof. Bhanot explained the definition, the source, the type of electricity, how electricity generated and how we should handle it safely. Her team member consisted of Mr. Tuls Ram Sharma, Mr. Ravinder Yadav, Mr. Mahesh Kumar Saini, Asok Kumar Saini explained through activity about the connection of extension board, replacement of fuse, switch and three pin top, operation of induction cooker, tube light, iron, micro wave oven, basic operation of computer, use of multi meter, how to measure electric power, current, voltage of tube light, CFL, bulb etc. Everything was explained through learning by doing method. Queries of the participants were clarified and discussed in detail.

Research (Empirical Studies)

Besides these activities, a research study on “The portrayal of Women in T.V. Advertisements and its Impact on the Society” is going on by the Centre. The objectives of the study were:

- To explore the type of role played by women in Indian T.V. ads
- To trace the changes that occurred in the portrayal of women through ages
- To know the hope and perception of people about the future role portrayal of women

Now-a day’s data collection is going on from the areas in and around Pilani.

Lectures / Academic Forum

- Sangeeta Sharma and Madhusmita Das “ UGC Sponsored Centre for Women Studies at Pilani : A Report on its Crusade for Development ” University News Vol.50 No. 19, May 7-13, 2012
- Sangeeta Sharma and Madhusmita Das “Women in Advertising: Metamorphosis from docile to dynamic” International Journal of Business management, Vol. 2. No.1 (January-June 2012) pp.27
- Madhusmita Das and Sangeeta Sharma “ Women and Politics : The Game of Power” Asian Academic Research Journal of Social Science and Humanities, Vol.1, Issue 3, (September,2012) pp.164 – 181
- Madhusmita Das Reviewed a Manuscript ID SO-12-0295 entitled "Chinese TV Drama in a Regional Market--- aspiring to be a leading cultural actor?", submitted to SAGE Open from SAGE Publication, Nov.6, 2012
- A paper presented by Prof. Sangeeta Sharma, the Coordinator UGC Centre for Women Studies titled “*Are Women Aware of their Rights: An Empirical Study*” by Madhusmita Das and Sangeeta Sharma at the National Seminar by Nehru Studies Centre and the Department of Political Science, University of Rajasthan, Jaipur in collaboration with the National Commission for Women, New Delhi on “*Female Foeticide and Gender Violence: The Human Rights Perspective*” on 11th and 12th August 2012, abstract book, pp. 20
- A paper presented by Prof. Sangeeta Sharma, titled “*Driving Force of Advertisements Behind Women’s Health and Beauty*” by Madhusmita Das and Sangeeta Sharma at the Tenth Conference of Indian Association for Social Sciences and Health organized by Centre of Social medicine and Community Health School of Social Sciences, Jawaharlal Nehru University, on “*Health, Regional Disparities and Social Development*”, on 21-23, November 2012, abstract book, pp. 31

Centres Established with Strong Industrial Support

Embedded Controller Application Centre

Prof. Surekha Bhanot (Coordinator), Prof. S Gurunaryanan, Mr. Rajiv Ranjan Singh, Ms. Swati Keskar, Mr. Ashish Mishra.

Embedded Controller Application Centre

This Centre was set up in Collaboration with Motorola India Ltd. The objective of the Centre is to impart detailed understanding of important features of embedded controller architectures and familiarization of advanced concepts in the field of embedded controllers through

- Students projects/Industrial projects
- Imparting training to the industry professionals and running short term courses in the field of Embedded System design
- Developing course modules

The infrastructure of the centre includes Pentium machines, Microcontroller Modular Evaluation Systems, Microcontroller Development Systems, Emulators, Assemblers and Cross compilers for various microcontroller families (ARM, ATMEL, Microchip, Cypress, ST Microelectronics, Motorola, etc.) DSP processors, logic analyser and other bench equipments.

Faculty members of the group are involved in research work in areas of Embedded System, Wearable Computing. Faculty has published research work, attended National and International seminars, conferences and invited talks.

Centre has established a PSoC Lab with support from Cypress Semiconductor Corporation.

Technology Business Incubator (TBI)

Birla Institute of technology and Science (BITS), Pilani in association with Department of Science and Technology (DST), Government of India has established a Technology Business incubator in the area of Embedded Systems and VLSI Design to promote entrepreneurial leadership across all disciplines; facilitate entrepreneurial activity on campus and off-campus and commercialization of R&D efforts at BITS. VLSI Design Laboratory with the state of the art design facilities is created. Embedded System Development platforms are also augmented. Secured and independent office facilities with computers and round the clock Internet access and email facility are also created. A Team of students from BITS have registered a company; Bridle IT, Mobile Medics, Next gen PMS, Steps Ahead, Vita Peracta, Grey Orange Robotics, Innovese, Anaya Media have already graduated out of TBI.

Currently under the TBI, nine incubates are working-

1. A company Sharp Edge Pvt Ltd. is providing a technology platform for engineering students which seamlessly integrates the traditional chalk and talk method with smart classrooms based on cognitive learning. It enables Professors to use digital resources such as educational animations, assessments and diagrams to make classroom more interactive creating multi-sensory learning for students and help improve their academic performance. Institute's classrooms are converted into i-classrooms with a projector, CPU, keyboard and pointing device. The Institute has the flexibility to decide its infrastructure without any burden on its financial resources. The solution is flexible to work with the basic CPU+ moveable projector solution to the use of Smart Boards, Pen Tablets, i-pads and other gadgets as per the institute's discretion.
2. A company TUNE PATROL is a social music discovery platform to promote independent music artists. With Tune Patrol artists will be able to upload their songs onto the site and let listeners explore and buy their songs in an engaging game like experience!
3. A company SMARTEC aims to change the manual identification system prevalent in the education sector today with a digitalized system. The service would be making the attendance system prevalent right now completely electronic by the use of smart cards and rfid technology. This will ensure that the time utilized for attendance would be used for other value-added services. Being digital the data retrieval would also be easy.
4. A company KNOWLEDGE ASHRAM aims to develop an adaptive learning environment for all where authors, teachers, students and learners can interact, socialize, collaborate to create, share, publish, learn and explore. The team aims to develop interactive digital textbooks with integrated social media having features like dynamic, low cost, high quality, easy access, interactivity, self explanatory, engaging, adaptive and personalized.

5. PhotoWalkr company provides one-stop solution bridging the existing gaps by the means of its website, phone app and offline models. We are developing technology that will help people in all the 3 stages of photography – pre, during and post. The website lets users plan their clicking sessions, it also generates and offers the users with the content they can read up and photos they can get inspired from based on what the users are going to click at their clicking session. The app provides information on the go. It has innovative photo sensing algorithm that suggests users with photos they can click at that particular moment. Finally, when the clicking session ends, the users can share photos with their photography friends and can get critical reviews on their photos, but with greater emphasis on sharing the knowledge and learning experience.
6. Another company Mi-Ti introduces an innovative sleek design with close to natural approach for typing and writing on a tablet or on paper. Recent success of Samsung Galaxy Note emphasizes this point. We plan to take this as an opportunity for market and provide a productivity centric tablet creating a new market called "utility tablet market".
7. A company TEEVRA CYCLES provides the customized human powered vehicle to cater to the need of eco-friendly and efficient mode of private transportation is what the team is going to deliver at the initial phase and later getting into the mass scale production of this efficient vehicle and battery operated stylish mode of transportation.
8. A company CDS Solutions is involved in developing e-solutions content delivery model. CDS Solutions aims at providing customized, cost-effective and highly efficient content delivery systems (CDS) to academia and corporate for Live and web-based content.
9. A company named Phod Phad aims at bringing the college experience online with much more freedom and choice, To makes premium quality education accessible to everyone, free of cost using modern technologies of the web and provides them great opportunities through projects, events and internships, to enable its users to connect with like- minded people and share their knowledge and resources in the field of their interest through clubs, departments and professional networking, thus helping them pursue their passion, to give its users the freedom and choice to learn anything at any time at anyplace and at their own pace.

The brief details on TBI, BITS were covered amongst the prominent TBI's in the country by various leading economic dailies during the year.

Further Ministry of Communications and Information Technology Department of Electronics and Information Technology New Delhi has sanctioned a grant of 155 Lakhs to TBI-BITS PILANI under Technology Incubation & Development of Entrepreneurs (TIDE) in the areas of Electronics and ICT as seed capital assistance to technology startup incubates. A TBI incubate Sharp Edge Pvt. Ltd. has been sanctioned a grant of Rs 10 L under this scheme.

TBI team has been making efforts to identify students and working professionals who would be in a position to take up dedicated entrepreneurial activities across all disciplines.

B1.12 CENTRAL FACILITIES REPORT

Central Library

During the year, 1677 new volumes were added to the existing collection in various disciplines of Science, Engineering, Technology, Pharmacy, Management, Humanities and general reading materials. Library collection reached 2,33,794 volumes. Library added new e-journals such as *Synlett*, *Structural Engineering and Mechanics*, *IJORIS*, *Nature – Biotechnology*, *Science Online* and *Science Direct* (212 engineering journals). Also, UGC Infonet provided access to an additional database, *JSTOR*, during the year. *Books 24x7*, an online books portal with over 22000 e-books was continued and it was made accessible for all the on campus, off campus and users in Goa and Hyderabad campus as well.

190 print journals were discontinued since the same are available in the campus online. We received 3084 reports and theses submitted by the students under various study programmes like First Degree, Higher Work Integrated Learning Programme, Practice School, Special Projects and PhD Degree.

Library organized a book festival namely, Basant Book Festival on 8-19 February 2012 at Supermarket (Akshay) for the benefit of faculty and students in order to buy books of their interest from various publishers.

With the shifting of BITSAT center to IPC, the same hall is being used for library purposes from this year. As a result, library readers have now got airconditioned environment and internet connectivity with seating capacity of 50 and this facility is appreciated by the readers.

Four library staff members completed One Year Work Integrated Skill Development Program in Library Operations during the year 2011-12.

Library is equipped with a new high speed Scrubber Drier for cleaning the floor.

During the year, three halls of the library were temporarily vacated in order to accommodate faculty whose cubicles are getting renovated as a part of 'Parivartan' project. The stock was re-shelved in three other halls of the library.

Facts about the library

The statistics indicate that the Library collection has grown steadily. Some of the significant statistical data about the Library are as follows.

1	Current library holdings	2,33, 794
2	Average number of books issued per day	563
3	Average number of readers visiting the library per day	541
4	Books added during the year	1677
5	Project Reports, PS Reports and Theses added during the year	3,084
6	Number of print Journals subscribed	339
7	E journals made available on library site	6,000
8	CD-ROM collection (including VCDs)	2,330
9	Educational Video Cassettes collection	148
10	Total number of reading seats in the library	750
11	Total library area	65,000 sq.ft
12	Library membership	4380

Medical Centre

The medical center is providing good services and facilities with the dedicated services of Medical Superintendent and Physician Dr. R. P. Pareek and his team. There is a Gynecologist and Obstetrician, Dr. Sanjana R. Bhat working fulltime at the Centre. A General Duty Medical Officer from Birla Sarvajanic Hospital is there to assist in the evening hours. Dr. Sanjay Katewa, the dentist is available on every Saturday evening while the ENT specialist, Dr. H. S. Sankhla is available on every Monday and Thursday evening for expert opinion. Services of an Ayurvedic Specialist, Dr Ramesh P. Jajoo are available on every Sunday morning.

The center has a well-equipped clinical laboratory with a semi-auto-analyzer for Biochemical tests, computerized ECG machine for the diagnosis of heart ailment and an ELISA Reader for the diagnoses of other diseases. The laboratory has upgraded facilities to test glycosylated hemoglobin, which is one of the most important tests for diabetes. A Dental X-ray unit and a basic Physiotherapy unit are located in the centre. The center has a computerized Spirometer, to help in the diagnosis of respiratory problem of the students and staff of the Institute. A fully automated biochemistry analyzer has been installed recently and it has increased the efficiency of the laboratory.

During the year around 33000 persons were treated at the Medical Centre and about 4000 persons were tested in the laboratory for various hematological and biochemical tests. Patients utilized the physiotherapy facility and about 650 patients were tested by ECG, Spiro meter and Elisa Reader instruments.

Five camps were held to make people aware of osteoporosis. Bone Mineral Density (BMD) was measured by ultrasonography unit and computerized analysis was done. Reports with comments were given to all the persons attending the camps. Around 100 people were examined in each camp. These camps were sponsored by pharmaceutical companies.

The new record keeping system is working well after its introduction in the centre in May 2007. All the faculty and staff members with a PSRN have been given ID cards for all members of their family and separate files are maintained to keep the records. The Medical shop in the centre provides the medicines prescribed by the doctors on credit on production of the ID card and this has reduced the cash transaction and paper work.

Same process is followed for the Clinical investigations also. Most of the medical center operation is computerized so as to make all the reports and records in digital form.

A new observation room has been provided for short term treatment. It has a multipara monitor and facilities for emergency treatment.

A new ambulance was procured last year by the institute with all modern equipment and facilities.

BITS Coop

The BITS Consumers Cooperative Stores Ltd. Continued to extend its services to the staff and students of the Institute. Its total membership as on 31st December 2012 was 928 consisting of 653 staff members and 275 students. They were holding 654 major and 656 minor shares of the stores. The scope of its activities covers the following:

1. Supply of groceries and vegetables to the students messes;
2. Sale of groceries and vegetables to the staff members;
3. Supply of stationery and general merchandise;
4. Supply of consumables, stationery, equipment and other materials to the Institute and Books to Library;
5. Supply of books to the students;
6. Running a bookshop and organization of a permanent book exhibition;
7. Providing computer and mobile repair services; and
8. Running a Medical Store in the Medical Centre of the Institute.

Infant Care Centre

The Infant Care Centre (ICC) is run by the voluntary effort of faculty wives and it and takes care of the pre-school training and education of the children in the age group of three to five years. The Centre is primarily caters to the needs of staff children belonging to BITS and other sister organizations. During the year 2012, the Centre had 95 students. During this period the center had organized various activities such as sports competition, drawing competition, fancy dress competition etc. The Annual day program of the center was held on 30th November 2012 and Prof Madhu Jain was invited as chief guest of the function. The children of the centre also participated in the program held on Gandhi Jayanti, organized by BITS.

Institute festivals

A new administrative role for taking care of 4 major functions sponsored by BITS Pilani, Pilani campus as Institute was formed in September 2012. A faculty-in-charge, Institute Functions was created under Director's controlling domain for the same. 15th August celebrations were organized successfully by then Community Welfare Office where students and staff participated in offering their homage to national flag and all who contributed to India's freedom fight. Institute Functions, supported by other service providers organized celebrations for Gandhi Jayanti on 2nd October 2012 where Infant Care Centre (ICC) kids presented a colorful program reflecting essence of Gandhi Ji's ideas. A set of favourite songs of Gandhi Ji were also performed by BITS students.

BITS House Allotment Committee (BITSHAC)

Faculty Affairs Division also looks at house allotments to staff members of BITS Pilani (BITS House Allotment committee (BITSHAC). The Primary aim of the BITSHAC is to streamline regulatory guidelines for the allocation of accommodations to Staff members and implement a transparent and a fair policy in a consistent manner so that all applicants with similar eligibility characteristics are treated alike with openness while maintaining individual confidentiality to requesting Staff members, following 'Best Practices and Framework of Guidelines', keeping in mind the circumstantial variability and complexities.

BITSHAC acts in a manner to encourage equal opportunities and will seek to ensure that information on the Allocations Policy gets disseminated in a consistent manner. The BITSHAC invites applications against a circular / notice from Staff members on a monthly basis in a prescribed format or as and when vacancy arises and does the allotment as per guidelines framed. The document on guidelines has been framed and the same implemented in all campuses with slight variations based on local environment.

BITS Staff Housing Group

The BITS Staff Housing Group constituted in the year 1989-90 by the Institute. For helping the BITS Staff members for having personal houses in the new campus, "Gyan Vihar". The Institute has provided Rs. One lac Fifty Thousand as soft loan to staff members for the construction of the houses. Forty staff members have constructed their houses and many other staff members are planning to start the construction work soon. Both the sectors have been provided with urban electric supply. Two new-cemented road of 300 feet long has been added in sector number one. Streetlight has also been provided. All activates of the Gyan Vihar are under Public Relations Unit

Recreation Activities Forum (RAF)

The Executive Committee of RAF selected and screened many good Hindi and English movies, which were enjoyed by the members and their guests during the year. During the two semesters RAF membership for both Hindi and English sections together was:

Second Semester 2011-2012:	1242
First Semester 2012-2013:	1774

During the year, RAF executives had also helped to organize cultural events involving students of the Institute in the succeeding year.

Loan facilities for Staff members

(i) Staff Furniture Loan

Under this scheme the staff members get interest free loan re-payable in twenty four monthly installments. Institute provided Rs. 12,00,000/- loan to 120 staff members for the purchase of various furniture items.

(ii) Computer Loan

This facility was started in the year 1999 for the purchase of computer for personal use by staff members with a simple interest of 6% per annum. It is being utilized effectively by faculty. This year Rs. 4,47,000/- has been given to 14 staff members for this facility.

(iii) Housing Loan

The Institute provides the housing loan up to Rs 1.50 lacs to staff members.

Publications and Media Relations

Publications and Media Relations Unit brought out the following publications during the year: (i) Annual Report (ii) Annual Report – a quick glance (iii) BITS in the News (iv) Bulletin (v) BITSCAN magazine. Besides, the unit gave effective support for coverage of Institute events in the media which is evident from the large amount of media coverage BITS received (both in national and local press) during the year. PMRU regularly sent latest news to the web team of the Institute for updating on the Institute website. Also the PMRU team provided support to various departments and student bodies in branding matters while bringing out their publications, posters, brochures, invitations, etc. Student volunteers who worked as reporters in the Unit found the work experience very useful.

(i) Reprography

The Reprography Section takes care of all the in-house printing, binding and photocopying work, (e.g. printing of institute bulletin, application forms, annual report, various information brochures, time table, academic regulation, educational development division notes, answer booklets and project reports for submission to various Government and other funding agencies). The printing and binding sections have been fully equipped with facilities like desktop printing, computer type setting, drafting, off-set printing, laser printer, cutting, laminating, stitching, spiral binding, etc. Reprography has separate question paper printing/copying facility where the scripts related to assignments, tutorials, quizzes, test and comprehensive examination for all courses offered in on-campus or off-campus programmes are printed.

Apart from Institute work, the reprography section also caters to the printing and publishing needs of staff and students. Services like, photocopying of journal articles, laser printing, binding and lamination of project reports are available round the clock. Reprography also support printing requirements of various student activities like, OASIS, APOGEE, BOSM and other activities undertaken by various clubs and associations. The printing and publication requirement of conferences and workshops organized in the Institute is also supported by reprography. The day-to-day maintenance and repair of all the reprography related machines/ equipments are also done by the

staff of the Institute.

(ii) Communication and allied facilities

The following facilities are available for the benefit of students and staff.

1. *Telephones*

Two STD phones are available at Public Call Office in the Institute building for use by students and staff. Each hostel has been provided with a receiving telephone facility placed near the common room.

2. *FAX*

One FAX machine each has been placed for use by students and staff at STD PCO in the Institute building and Meera Bhawan on charge basis.

3. *Dispatch facility*

All the Institute dispatch requirements are catered through reprography either through ordinary/speed post facility available at the Vidya Vihar Post Office, Pilani or through private courier and cargo carriers for both domestic and international destinations as per needs.

4. *Color Photography Lab.*

The lab has following facilities: Camera: Olympus Digital SLR Camera E 300, Cannon EOS 500N, Durst Color Enlarger (Model M-670), processing timer, temperature controlled paper processing tank, 35 mm SLR Camera (Pentax K 1000) with flash gun (mega 988 twin), temperature controlled film processing tank with 6 developer tanks, Cannon Zoom Lens EF 75-300 mm Pentax wide Zoom lens 35-80 mm and enlarger timer.

6. *Photocopying and allied facilities*

Photocopying, printing, word processing, binding and laminating facilities are available for students and staff on charge basis at Reprography section. Photocopying service is also available at the BITS Library.

Central Workshop

The Central Workshop of the Institute imparts training to the students and caters to the maintenance and fabrication needs of the Institute. Students' training consists of training all integrated first degree students through the course 'Workshop Practice' by imparting skills in various manufacturing processes like machining, fitting, turning, carpentry, smithy, sheet metal, electroplating, welding, etc. In addition, students are imparted training for other courses like 'Production Techniques', 'Metal Forming and Machining', 'Casting and Welding', 'Computer Aided Manufacturing', and 'Flexible Manufacturing Systems'. Apart from routine maintenance, fabrication and training, the workshop also accepts jobs on precision fabrication of project work of students, staff and research scholars.

The workshop comprises the following sections: Machining, Welding, Electroplating, Fitting, Smithy and Sheet Metal, Carpentry, Foundry and Patterns, Tool Room, Metrology, Painting, Metal Processing and Metallurgy, Electrical, Automobile, CNC Training Centre and Store. The major equipments include industrial vertical machining center (LMW KODI 40 Klein), five CNC trainers (three turning centers and two vertical machining centers), industrial robot (pick and place), five universal milling machine tools, universal cylindrical, centreless, surface (hydraulic), and tool and cutter grinders, gear hobbing machine tool, NC machine tool (retrofitted at workshop), thirty one lathes (centre, turret, capstan, precision and dc supply heavy duty), seven shapers, planner, slotter, twelve drilling machines, ten wood working lathes, two wood working planers, band, circular and universal wood saws, TIG, gas and arc welding equipment, power press, pneumatic hammer, etc.

Instrumentation

Instrumentation unit undertakes regular and annual maintenance of laboratory instruments across the Institute.

Instrumentation unit provides LCD projection facility for regular class-work, workshops, conferences, symposiums and other academic and cultural activities across the institute. The centre also performs preventive maintenance for these projectors. Over-head projectors and slide projectors are also made available for academic/cultural activities.

The centre facilitates institute programs with high quality Public Address Systems, Digital Mixers and Hi-Fi loud speakers and Lighting equipment to make the events more effective and lively.

The centre maintains the 256+256 Port C-DOT EPABX of the Institute and 128 Port C-DOT EPABX of VFAST Hostel.

The center has been providing and maintaining cable TV system with Seventy plus channels for BITS and BET staff members. Through this network important educational and cultural programs of the Institute are shown over the BITS channel. Fiber link has been placed from service provider to control room and from control room to Meera Bhawan. Tata Sky dishes have been installed in all hostels's common rooms.

All classes have been equipped with projection facility supported by UPS. Unit has procured some state of art equipment like Kramer switch, Logitech presentation remote, 4 Unit x LED par 64 LED stage par cans light 36x3W RGB DMX RGB Infinite color mixing with Control mode: Work Auto, Sound active, master/Slave, DMX512, LED control panel, Irradiant SRC-146 Lighting Controller , 24 Channel Lighting Controller and Panasonic memory card camera-recorder

In-house training for technical staff across the institute in maintenance of lab equipment, PA system, EPABX, projection system, cable network, lighting systems and computer hardware was organized in summer of 2012 (may 28 to June 15, 2012), 20 nonteaching staff attended the program.

Faculty members of the group are involved in research work in areas of Fiber Optic Sensors, Intelligent Instrumentation and Control, Signal Processing, VLSI design. Faculty has published research work, attended National and International seminars, conferences and invited talks.

Information Processing Center

Information Processing Centre (IPC) provides computing facility for students and staff of the Institute. The Centre is responsible for planning, need forecasting and maintenance of computing resources across the Institute. During the year under consideration, the Internet bandwidth has been increased from 90 Mbps to 200 Mbps. The Center has signed campus agreement and MSDN Academic Alliance with Microsoft for licensing Microsoft software tools. Under this agreement Microsoft provides its server products and application development tools at highly discounted rate. With a view to upgrade the computing resources, across the Institute, 175 Pentium machines (125 laptops and 150 desktops), and a few printers & peripherals were purchased. During the year, Centre has been involved in setting up of 450 node network for newly constructed student hostel and placement office.

With the augmentation of existing facilities, the Centre has been able to support conduct of online examinations, structured and unstructured labs for more than 30 courses offered by Computer Science and other departments. The center has also been involved in supporting the number of workshops and training programmes conducted in the Institute.

The IPC is open on all days throughout the academic session from 08:00 A.M. to midnight and it is closed only for 3 days in every semester. The details of existing facilities in the IPC are given below.

The Center has a Blade Server with 6 blades and 10 numbers of Intel based SMP servers, supporting variety of operating systems and development tools. These systems operate under UNIX and Windows environment and support variety of compilers database and software tools such as C, C++, Lisp, Microsoft Visual tools, Matlab, PSPICE, Rational Rose etc. The Centre has 350 numbers of Pentium machines, with Windows XP/Windows 7/ Linux and variety of software tools. The central computing facility specifically takes care of the bulk computing needs of students in their courses, which needs acquiring and use of computer programming skills. It also caters to large number of computer projects of First Degree, Higher Degree and Ph.D. Students.

Apart from the above mentioned centralized computing facility, the Institute has workstations and Pentium machines distributed at various other locations. These Centers are placed near to the locations requiring Computer Aided Modeling & Design, computer-based instrumentation and experiments as well as other

activities. In addition to this the various departments have their own computing facility supporting specialized tools.

The BITS Intranet

IntraBITS is a collaboration-category intranet portal deployed and supported by the Software Development and Educational Technology Unit (through its Centre for Software Development) since 1999. Its principal objective has been to enable the faculty and students to leverage appropriate software technologies in the On-Campus educational (teaching, learning, sharing) process. The followings are some of the highlights of the BITS Intranet. This portal has gradually expanded to multiple independent sites linked to it.

- Several learning materials, prepared by faculty members over a period, have been deployed on the Intranet. The courseware spans from simple lessons on HTML pages, online presentations, to fully interactive learning applets. 'Intrabits', in this sense, also acts as a Test-Bed for the BITS-VU project.
- In addition, faculty members can upload lecture slides, assignments, notices, lecture notes etc. through the in-house developed Course Management Tool. This tool allows them to carry out grading (Mid-Sem and End-Sem) for their courses. This facility is open only to the Instructor-in-charge of each course. Students can log into the IntraBITS portal and see the material, notices and grading information as published by the faculty member for their benefit.
- In addition, an On-line Learning Management System (Nalanda) built in 2010, atop LAMP and Moodle platforms provides a complementary globally accessible service that aims to serve the entire community, both on-campus and off-campus.
- Recently, an online Notice-Management System developed by the CSD has been integrated with this portal.

The BITS Intranet is serving as a vibrant medium for exchange of academic and other ideas among students and faculty.

Computer Assisted Housekeeping

The Computer Assisted Housekeeping Unit (CAHU) is a central facility of the Institute, which provides centralized information management and processing for Computerized University Administration to all the sections of BITS. CAHU continuously endeavors into new areas in order to introduce and enhance the use of computers in the University Administration to minimize manual work and to bring in the efficiency and accuracy in the administration. Students, through academic projects, and the faculty members, have developed the entire software in-house. The academic and technical staff members at CAHU have expertise in software maintenance, management, development, and computer operations, to meet the wide-ranging computerized housekeeping needs of the Institute. The computing resources include HP9000 E35 system, HP rp3440 system with SAN array, HP Proliant DL360G4 and HP ML-350 servers, IBM servers, Pentium/Core2-Duo PC nodes, HP LaserJet8150 and 9050dn, HP Color Laserjet 5550dn printers and other peripherals.

CAHU has successfully developed software packages for the following administrative activities and these are fully operational:

(A) Student Related

- Student records initialization after electronic transfer of new admissions data from Admission Division;
- Providing inputs to Instruction Division for computer-aided timetable preparation and uploading of timetable data from electronics files for on-line registration;
- Eligibility Sheet, Registration Card and other pre-registration aids to ARC Division; Online Registration; Registration Validation, Timetable clash checks; Online Registration Amendments processing;
- Course lists for the instructors; Faculty timetable and course details at ARCD website. Grades processing and Grade sheets production;
- PS/TS Eligibility, Graduation Eligibility, Results and Medal Awards Processing; Results for EC/Senate/BOG for Pilani, Dubai, K. K. Birla Goa and Hyderabad campuses;
- Transcript for continuing students; Transcripts and Provisional Certificates for graduating students of Pilani, Dubai, K. K. Birla Goa and Hyderabad campuses; Medal Awards Processing;

- Degree/Diploma writing for Pilani, Dubai, K. K. Birla Goa and Hyderabad Campuses programs; address labels and other dispatch aids;
- Electronic and web transfer of registered student data to Student Welfare, Practice School, and Instruction Divisions, Library, Publication and Media Relations and other units and BITS website.
- Alumni database development and maintenance; Alumni Directory and Alumni Website maintenance; Maintenance of websites for computer projects courses etc.

(B) Staff Related

- Staff information base for all administrative requirements such as term expiry, superannuation, review etc.;
- Payrolls and monthly Income Tax processing;
- Provident fund and Employee Pension Scheme processing and web display.

(C) Accounts Related

- Complete on-line maintenance of BITS accounts including Government fund accounts;
- Preparation and online processing of payment vouchers and receipts;
- Preparation and printing of daily cash book, ledger, journal and other reports as and when required;
- Trial balance (talpat) preparations; Bank account reconciliation statements;
- Monitoring of advances and loan accounts;
- Preparation of financial year trial balance and balance sheet;
- Budget preparation and monitoring; Preparation of reports for auditors;

For the following cases software packages were modified / enhanced during the year:

- As the move over to ERP system is being planned in near future, in this calendar year the main work was providing data to ERP systems and explaining the current processes to ERP implementers. Not much development work was taken up except for the following essential activities.
- Students' academic package to accommodate changes in Academic Regulations and other Senate decisions. Specifically new academic curriculum related corrections and new grading policy related modifications.
- Development of various aids/software packages for on-line registration. Because of these enhancements, the registration errors by students are further reduced. The online registration software modules are now running successfully for the last twenty-three semesters in real time and are found to function without any error, each time registering more than 3500 students in less than four hours.
- Pay revision work based on new compensation package is completed for all non-teaching staff and all arrears calculated and disbursed;
- Degree printing: 264 degrees (Pilani-152, Goa-53, Dubai-47, Hyderabad-12) for 70th award and 2821 degrees (Pilani-1193, Goa-720, Dubai-495, Hyderabad-413) for the 71st award were printed using the enhanced software. The degrees were made available on time for the convocation held on August 2012.

Central Analytical Laboratory Facility

This laboratory houses many sophisticated analytical instruments, which are used for training and teaching of students and research work. The instruments in the laboratory include UV-Visible Scanning Spectrophotometers, IR Spectrophotometer, Atomic Absorption Spectrophotometer, Scanning Spectrofluorimeter, High Voltage Electrophoresis, Manually operable and digital Polarimeters, Gas Chromatography, Binary Gradient High Pressure Liquid Chromatography, Amino acid station and Double beam UV-Vis-NIR Spectrophotometer, Flame Photometer, High Speed Vacuum Concentrator cum Lyophilizer, Gel Drying instrument with fluorescence detector, data station for HPLC, FT-IR Spectrophotometer, Digital Fluorimeter, Paper Electrophoresis, Environmental Cabinets, etc. Recently zeta

sizer, millipore waster purification system and Elemental Analyzer has been added to further strengthen the facility. Apart from using the Central Analytical Laboratory facilities for teaching and training of the First Degree and Higher Degree students, it is extensively used for dissertation and doctoral research, faculty research and consultancy work. It is also used by scientists/faculty from other nearby organizations.

Central Animal Facility

Central Animal Facility at BITS Pilani, Pilani campus is a CPCSEA approved facility with total floor area of 5330 sq. ft. The facility maintains the animal species like Rats, Mice, Guinea Pigs, Rabbits and Hamsters. The facility was build up in accordance with guidelines issued by CPCSEA and other regulatory bodies. It is also equipped with Incinerator (electrically operated) facility for disposal of the biological and other biomedical waste. The air conditioned facility is maintained by well trained personnel, with a full time veterinarian to take care of the various requirements of the animals. Central Animal Facility caters to the needs of the various research departments like Pharmacy, Biological Sciences and Chemistry, etc. The facility also incorporates pharmacokinetics and pharmacology research laboratory for carrying out advanced research in the areas of pre-clinical pharmacokinetics, bioavailability studies, pharmacological screening of various synthetic/natural origin drugs. The laboratory has sophisticated instruments such as electroconvulsimeter, actophotometer, analgesiometer, light dark apparatus, rotarod etc. Equipments such as surgical anaesthesia machine, electrical cautery, and spare air-conditioners are also utilized. The laboratory is upgraded with video documentation system for various animal behavioural studies. Facility is geared to take up various industrial or governmental funded projects in various pre-clinical areas.

B1.13 MAJOR MAINTENANCE, RENOVATIONS OR NEW CONSTRUCTION REPORTS

Maintenance, Renovation and Construction

Apart from carrying out routine maintenance of the institute and campus buildings the following works were taken up during the year either as new construction or as renovation:

Works Completed

1. Renovation of B type quarters: door and window, flooring, toilets, electrical fitting and inner and outer painting.
2. Painting work in Hostels, Messes.
3. Pavers fixing at different pavements.
4. Renovation of labs.
5. Renovation of VFAST rooms: flooring, painting, bathroom fitting and electrical fitting.
6. Construction of Placement office (prefabricated structure).
7. Development WILPD Lecture rooms and Pan African Lab.
8. Development of Tele-presence room
9. Renovation of LTC Room No.5103 (Tele-presence room)
10. Renovation and Augmentation of 'D' type quarters: Doors and window, flooring, toilets, courtyard and electrical fitting, inner and outer painting.
11. Development of Media Lab (2240)
12. Construction of Lift Shaft.
13. Renovation of All Night Canteen
14. Renovation of Food King Café.
15. Renovation of Malviya and Meera Bhawan Mess
16. Renovation of Room No.1217 for Examination Hall
17. Renovation of ID office
18. Renovation of MEMS Lab (Room No.2111)
19. Renovation of old Animal house (Pharmacy Lab)
20. Construction New Wash Rooms in Gym Ground

Works in progress

1. Renovation of houses (C type).
2. Road repair work.

Annual maintenance and repairs of Hostels, Messes, Laboratory equipments and class rooms were carried out during summer and winter vacation.

B1.14 MAJOR EQUIPMENTS ACQUIRED DURING THE YEAR**Centralised Purchase**

Educational hardware division processes and monitors purchase of equipments and consumables of the institute and also looks after the repair requirements of the equipments. The purchase process includes request of quotations, preparation of comparative statements, indents, bill checking and status reports of purchase. The entire process is managed by computer database containing more than 3700 types of consumable, 800 equipments, and 1700 suppliers. The whole process being computerized ensures efficient monitoring, timely acquisition of materials, keeping track of delayed or deferred supply and concurrent remedial action.

Purchase of consumables: The annual purchase list for consumables are finalized by considering the institute requirements and existing stock. The consumables are computer stationery, chemical and glassware, electrical and electronic spares, workshop items, reprography items and sports items. The category in-charges process the requirements of individual groups, units, and divisions, and compile them into a consolidated list. The consolidated list of consumables, along with the estimated budget, is presented before the purchase committee. The purchase committee gives approval to this list after scrutinizing it and suggesting necessary modifications.

Purchase of equipment: The equipment purchase of the institute is normally done under various government sponsored grants like AICTE, UGC, DST, DOE, BRNS/DAE, CSIR, DIT etc. and also through the BITS non-recurring grant. The purchase of equipment essentially involves interaction with the user and approval from the purchase committee with regard to the type of equipment, cost, budget head, terms and conditions of purchase, import components etc. On approval, the normal process of purchase is undertaken and in cases of imported items, the required protocol is followed.

New equipments acquired: New equipments purchased in this calendar year include more than 800 in various engineering and science disciplines for BITS-Pilani. Some of the equipments are also purchased for BITS-Pilani, Goa Campus and BITS, Pilani-Hyderabad Campus. Computational facilities have been substantially strengthened by addition of computer systems and networking hardware. The list of major equipment added during this year for various courses are included in the 'Annexure B1-13'.

Equipments and Accessories for BITS Admission Test (BITSAT)

BITSAT is for admission to integrated admission program for all the three campuses of BITS-Pilani at Pilani, Goa and Hyderabad through a computer based online test conducted by BITS. EHD Procured items like servers, cables, firewalls, laptops, printers, scanners, etc. for this purpose. The list of major equipment included in the 'Annexure B1-13'.

B1. 15 STUDENTS ACTIVITIES, ACHIEVEMENTS, SCHOLARSHIPS, CULTURAL AND ACADEMIC FESTIVALS**Students Union**

The Students' Union elected the following executives for 2012-2013:

President	-	Uppalapati Venkata Rama Lohi
General Secretary	-	Nayan M Goyal

Hostel Representatives

Bhawan		Name
<i>Ashok Bhawan</i>	-	Shauvik Agrawal
<i>Bhagirath Bhawan</i>	-	Aakash Umesh Chandra
<i>Budh Bhawan</i>	-	Chandeesh Gurajala
<i>Dayscholar</i>	-	Atul Kumar Saini
<i>Gandhi Bhawan</i>	-	Bandi Sai Sharan Reddy
<i>Krishna Bhawan</i>	-	Shaleen Manocha
<i>Malaviya Bhawan (A & B)</i>	-	D. Prithvi Reddy
<i>Malaviya Bhawan (D)</i>	-	Tanpreet Singh Makkad
<i>Meera Bhawan 12378 and OLD</i>	-	Labdhi Kothari
<i>Meera Bhawan</i>	-	Reena Jain
<i>Ram Bhawan</i>	-	Himanshu Poonia
<i>Ranapratap Bhawan</i>	-	Prankur Sharma
<i>Shankar Bhawan</i>	-	Vishal Singh Chandawat
<i>Vishwakarma Bhawan</i>	-	Aditya Bhatt
<i>Vyas Bhawan</i>	-	Shubham Gupta

Secretaries of Clubs

The following were elected Secretaries for various Clubs and Societies:

Club/Society		Name
Creative Activities Club	-	Rima Rana
English Drama Club	-	Aqib Ahmed
English Languages Activities Society	-	JayantYadav
English Press Club	-	PranitaKhandelwal
Hindi Activities Society	-	Aayush Aggarwal
Hindi Press Club	-	NeetiPokhrana
Music Club	-	EshanVerma
ARBITS	-	KarthikManickam
Dance Club	-	PrayashAdiya
Jhankar	-	AmanKhurana
Photography club	-	Kanav
Firewallz	-	Pavan Kumar Gadde
Poetry Club	-	AbhijitKurve
Mime Club	-	Ritesh Bhatia

The Students' Union organized a host of events throughout the year.

Sports Club

The office bearers of the Sports Club constituting the sports committee for the year 2012 were

Secretary	-	Syed Ain Ahmad
Joint Secretaries	-	1. Neeraj Agarwal
	-	2. Yashraj Tripathy
	-	3. Anubha Kaushik

The names of the captains for various games/sports are given below:

S.No.	Games/Sports	Name
1.	Athletics - Boys	Naushad Ismail Dhamani
2.	Athletics - Girls	Mehak Banger
3.	Badminton-Boys	Ashvin Agarwal
4.	Badminton-Girls	Niharika Gudiseva
5.	Basketball-Boys	Sahil Shah
6.	Basketball-Girls	Devanshi Mittal
7.	Cricket	Mohammad Shakir
8.	Football	Ravi Shekhar
9.	Hockey	Vishal Singh Chundawat
10.	Swimming - Boys	Hari Prasad
11.	Swimming - Girls	Arushi Prakash
12.	Table Tennis-Boys	Anand Systla
13.	Table Tennis-Girls	Aditi Chaudhary
14.	Volleyball-Boys	B. Narsimha Reddy
15.	Volleyball-Girls	Nidhi Gandhi
16.	Weight-Lifting	Vipul Khullar
17.	Chess	Sai Sasank
18.	Tennis-Boys	Saumya Vij
19.	Tennis-Girls	Divyanshi Srivastava
20.	Carrom	Amit Sharma
21.	Squash	Prankur Sharma

Sports Events organized during 2011-2012

BITS Open Sports Meet

The BITS Open Sports Meet (BOSM) was conducted successfully from 13th to 17th September 2012. As in the past, the Institute organized an intensive coaching camp from 3rd to 17th September 2012. SAI coaches were invited to prepare Institute's teams in various events. More than 900 outstation students from all over the country participated in the meet. The meet was characterized as always by excellent sportsmanship and enthusiasm.

The results were as follows:

1.	Badminton (Boys)	Winner – TITS, Runner-up – BITS, Pilani
2.	Badminton (Girls)	Winner – BITS, Pilani(A) Runner-up – BITS, Pilani(B)
3.	Football (Boys)	Winner - St.Xavier, Kolkata Runner-up – RAIT
4.	Power-lifting	Winner – BKBIET Runner-up – SKIT
5.	Hockey (Boys)	Winner – SRCC, Delhi Runner-up – JNVU
6.	Swimming (Boys)	Winner – BITS, Pilani Runner-up – SRCC, Delhi
7.	Swimming (Girls)	Winner – BITS, Pilani Runner-up – SRCC, Delhi
8.	Table Tennis (Boys)	Winner – IIT, Delhi Runner-up – KDU, Srilanka
9.	Table Tennis (Girls)	Winner – Maharani, Jaipur Runner-up – JMC, Delhi
10.	Volleyball (Boys)	Winner – SKIT, Jaipur Runner-up – BITS, Pilani

11.	Volleyball (Girls)	Winner – JMC, Delhi Runner-up – IPS, Indore
12.	Basketball (Boys)	Winner – KHALSA Runner-up –LNUPE
13.	Basketball (Girls)	Winner – LNUPE Runner-up – JMC, Delhi
14.	Cricket	Winner – BITS, Pilani Runner-up – Guru Govind Singh
15.	Chess	Winner – BITS, Pilani(A) Runner-up – BITS, Pilani(B)
16.	Tennis (Boys)	Winner – IPS Academy Runner-up – BITS, Pilani(A)
17.	Tennis (Girls)	Winner – KMC, Delhi Runner-up – BITS, Pilani(A)
18.	Body Building	Winner – BITS, Pilani Runner-up – BKBIET, Pilani
19.	Carrom	Winner – KPB Hinduja Runner-up – BITS, Pilani(A)
20.	Squash	Winner – MMEC Runner-up – BITS, Pilani

The **Intra-BITS Sports Meet** was conducted during Second Semester 2011-2012 (5th to 8th April 2012) and the valedictory function was conducted on 13th April 2012, with enthusiastic participation from more than 600 students. The **Inter-Bhawan Championships** were conducted during Institute holidays in the II Semester 2011-2012, and around 700 students took part in various events. The winners were awarded with trophies and certificates.

Outstation Participation

Various sports teams consisting 119 students were sent to participate in Sportech'12 a Sports Meet held at IIT, Delhi during 2nd to 5th March 2012. Volleyball boys' team and Basketball girls' team secured first position.

Institute Badminton Teams (consisting of 5 students each) both boys and girls participated in all India Inter-University (West Zone) Badminton Tournament held from 10th to 13th January 2012 at Mohanlal Sukhadia University.

Institute Hockey Team (Men) (consisting of 18 students) participated in West Zone Hockey Inter-University Tournament held from 19th October 2012 to 3rd November 2012 at Rajasthan University, Jaipur.

Institute Taekwon-do Men Team (consisting of 4 students) participated in Taekwon-do Championship held from 26th October to 28th October 2012 at Sikar. The Team won 3 gold and one silver.

Swimming Club

The total membership of the Club consisting of Swimmers, Advanced Beginners, Beginners and Staff was 685. The break up is given below:

S.No.	Category	II Semester 2011-2012	I Semester 2012-2013
1.	Boys (Swimmers, Advanced Beginners and Beginners)	189	371
2.	Girls (Swimmers, Advanced Beginners and Beginners)	30	50
3.	Staff (Swimmers, Advanced Beginners and Beginners)	25	20
Total membership		244	441

Swimming tests for members were held on every Saturday.

The number of members who passed Swimming Tests is given below:

Semester	No. of Members Passed
II Semester 2011-2012	219
I Semester 2012-2013	421
Total	640

The Swimming team distinguished itself by its performance in BOSM 2012 winning 6 Gold, 19 Silver, and 16 Bronze Medals.

Health Club

The Health Club is equipped with various advanced machines for aerobic and anaerobic exercises. During II Semester 2011-2012 the Health Club had a membership of 1000 while in I Semester 2012-2013 it was 946.

Fitness Test was conducted from 23rd to 24th November 2012 in which 60 students participated.

A Fitness Certificate with personal profile sheet was issued to all participants.

Martial Arts

Martial Arts classes were regularly conducted for students at Students Activities Center. Around 50 students including 10 Girls attended the classes regularly. Out of these, 10 students have learned the competitive skills of Martial Arts.

Summer Swimming Camp

The Summer Fitness Camp in swimming was successfully conducted for children of staff members of BITS from 19 - 21 July 2012 in which 95 children participated. All participants were issued participation certificates during closing ceremony on the last day of the camp.

Yoga Training Programme

Yoga Training programme is conducted every year for students aiming towards physical and mental development of health with self-realization.

A Yoga Training programme was conducted from 17th February 2012 to 04th April 2012 in which 10 students were registered. Around 06 students attended the programme and 05 students participated in the test conducted on 03rd and 04th April 2012. The certificate-giving Ceremony was held at the end of the semester.

Pranayama and Meditation Camp

A week long Pranayama and Meditation Camp focusing on various types of pranayama and meditation techniques including relaxation was conducted from 26th March 2012 to 03rd April 2012 in which a total of 30 students were registered and 18 students attended the same. The certificate-giving Ceremony was held at the end of the semester.

Hockey Camp

A camp on learning basic skills of Field Hockey was conducted by Sports Club from 26th March 2012 to 03rd April 2012 in which a total of 93 students were registered and 68 students including 08 girls attended the same. The certificate-giving Ceremony was held at the end of the semester.

League Competition (Football):

Football League Competition was conducted in the month of March and April 2012. Around 160 students participated and the prizes including a Rolling Trophy were distributed at the end of competition.

Hockey Tournament (All India Inter University West Zone)

BITS Hockey team of 15 students participated in the All India Inter University West Zone Competition, which was conducted from 29th October 2012 to 03rd November 2012 at Rajasthan University, Jaipur.

National Service Scheme

Introduction

BITS Pilani has a long tradition of community services record and therefore with the goal to work for the betterment of society and instill the spirit of social service among the young students, National Service Scheme (NSS) was introduced in 1969 by the Institute. The NSS volunteers work for the campus community

and in surrounding villages and help the villagers in many ways. NSS aims at developing amongst students a sense of participation in nation building through social work.

Faculty Body Structure

NSS Faculty Coordinator:	Dr. Hitesh Dutt Mathur	
NSS Program Officers:	Dr. Umesh Dhyani	Dr. Neeraj Kumar Sachdev
	Dr. Anupam Singhal	Dr. Sanjiv Kumar Chaudhary
	Dr. R.P. Pareek	Dr. Hari Om Bansal
	Dr. Sanajana Bhat	

Activities

The following is the brief overview of the NSS BITS Pilani activities in the year 2012:-

1. Literacy Program

The Schooling program of NSS is run in quarter no. 405 beside C'not. Being one of the regular activities, it utilizes the workforce of NSS in quite an innovative way in teaching kids who generally belong to non-teaching staffs of BITS, mess-workers, sweepers etc. Almost 60 regular volunteers are involved in teaching 80 regular students, who are distributed in two shifts on the basis of their classes.

1.1) January –April 2012

Evening and night classes were conducted in NSS school of BITS Pilani to help needy children. The classes started from 3rd week of January 2012 and continued till the end of April 2012. Apart from regular academics children were involved in extracurricular activities. Functions were organized on the occasion of Republic day and Holi.

1.2) August-November 2012

This semester students were fixed for the 65 school volunteers in each of the two slots i.e. M,W,F n T,T,S. All the volunteers were slot wise distributed amongst the mentors, whose main responsibility was to look after their volunteer's regularity. Volunteers effectively coordinated with their slot partners and mentors. NSS FAMILY and candidates for TEACH FOR INDIA celebrated Independence Day with kids, wherein different activities like quizzes, games, art and crafts were planned for the kids. School health camp was organized in the school on 16th September and 10th October with the help of Medical staff and M.pharma students of BITS Pilani. General check up and health awareness was done for the kids. Common classes for English, basic maths and Hindi were also taken. Continuous evaluations along with some extra-curricular activities were done on Sundays. School cultural event was organized on 20th October, where children performed different dances and skits. Certain meritorious kids who won different prizes at district level and in the Swami Vivekananda contest organized by NSS BITS Pilani with Nirmaan Organisation were awarded gifts. Through our regular efforts this semester, the school functioned systematically and efficiently.

2. Health Awareness Related Activities

2.1) Blood Donation Camp

NSS BITS Pilani in collaboration with INDIAN RED CROSS SOCIETY, New Delhi conducted their 31st Blood Donation Camp at the student activity centre of BITS Pilani from 11-12th February 2012. It was inaugurated by Prof. G. Raghurama, Director, BITS Pilani, Pilani Campus in the presence of Dr. H. D. Mathur (NSS Co-ordinator), NSS program officers and NSS volunteers. The total turn up was around 869 and the number of units collected was 725. For the successful conduction of this camp, Shri Ghulam Nabi Azad, honourable Chairman of Indian Red Cross Society and Minister of Health and Family Welfare (Govt. of India) had felicitated NSS BITS Pilani on 21st June, 2012.

2.2 Health Camps and Surveys

NSS organised a Health Camp at village Garinda on 1st April 2012 with the help of 50 dedicated student volunteers from BITS Pilani. In the camp 138 patients were provided free prescription and medicines. It was inaugurated by Prof. Arya Kumar, Dean SWD, BITS Pilani in the presence of Dr. H.D. Mathur and NSS Programme Officers.

A health survey with the MPH team was organised on 23rd August. We found that lack of oral hygiene is one of the biggest problems in village Garinda. An oral health camp was conducted at garinda on 21st of October with support from Dr. Basant Sharma from Mahadeo Singhi Eye

Hospital and Dr. Suchita Mathur, MPH student. Villagers' oral health was examined and were demonstrated how to use toothbrush and also to maintain good oral hygiene. Moreover those who were not using toothbrush were distributed free toothbrush and toothpaste so that they develop the habit. Those having a severe problem were asked to show up at hospital and they are to be given treatment at less price overall. Some cataract patients were also helped by NSS in getting treatment but could not avail operation because of medical issues. We also conducted School Health programme wherein health status of almost 80 NSS school children was checked.

3. Computer Literacy Program (CLP)

Today, technology is growing at an exponential rate and there is a great demand for people who know basic computing. Computer Literacy Programme or CLP is one such initiative of NSS, BITS Pilani to provide basic computer literacy to the school children of nearby villages, who don't have access to any computer education.

In the last year two villages, Garinda and Jherli were chosen under this programme and NSS volunteers worked to impart computer education to the students. Apart from this, CLP is also started in "Pilani Resource Center" in Pilani so that localities of Pilani are also benefitted with this project.

Garinda:

Two years ago, the Govt. of Rajasthan installed three new computers in Garinda's Upper Primary Govt. School. But, unfortunately, the school had no adequate faculty for the subject. So NSS started the CLP there. The school has classes from I to VIII with a total of 80 students. Out of which, 26 students of classes VI, VII and VIII were taught basics of computer. In Garinda the project was continued from January to April.

Jherli:

In Jherli, the school has around 200 students of classes 5th to 10th, out of which around 50 students of class 9th were taught basics of computer this year. Here, the students had no access to computers. So, our volunteers took their own laptops there to teach them. Their main aim was to give every child a chance to use the laptops and gain practical knowledge.

Pilani Resource Centre

This year in August 2012, the program has also been initiated at Pilani Resource Centre, built by BITSAA. A Computer lab with ten Computers has been provided to CLP at PRC by Pratham. Pratham, a national level NGO has been playing a key role in the development of CLP at this center. This semester, the volunteers of the program have undergone a training program, where the focus was on teaching by relating the work to real life examples. This enhanced the learning of the students.

4. Special Events

4.1 DHITI

During APOGEE 2012-technical fest of BITS-PILANI, NSS and NIRMAAN ORGANISATION organized an event called Dhiti. This event was organized with the purpose of finding technical solutions to some grass root level problems faced by our villagers.

Students were given a set of grass root problems and were asked to find a viable solution. Prof. H. C. Verma, famous physicist and Mr. Farhad Contractor of Sambhaav Trust gave their viewpoints on the use of technology and shared their work experience in the social sector.

4.2 JUNOON - a sports fest for the physically and disabled students

India has a population of over a billion people, with a staggering 20 million of them being differently and/or specially able. While numerous NGOs cater to their specific needs and fight for their right to live a normal life. September 2nd saw an amalgamation of NSS and the Sports Council of BITS Pilani pitch an effort to give them their right to equality and a sense of acceptance. Junoon, for the very first time at BITS Pilani, was a sporting extravaganza full of fun and frolic, sweat and toils and most importantly hope; A hope to prove that every human born on this earth bears the tag of being called "equal". It featured around a 100 participants from the NGOs: Umang, Muskaan, Amla Birla School, Akshay Pratishthan and Asha ka Jharna, all fighting for sporting glory, many already having made their names in Special Olympics as well.

Various sporting events were held throughout the day that ended with Akshay Pratishthan being declared the overall winner. The highlight of the day came in the evening when there was a

basketball match played amongst the BITS basketball team and their team which saw a turnout of a humongous number of people who had a big smile on their faces seeing the progression added with cheering on a basket being scored. There were colourful dance initiations that proved a dual agenda that not only our hands spread out to welcome each and every one born on this planet but we also love each and every one of you.

4.3 Swami Vivekananda Inter School Quiz and Speech Competition

Commemorating the 150th Birth Anniversary year of Swami Vivekananda, NSS BITS Pilani and Nirmaan Organisation in collaboration with Staff Association, BITS Pilani organised Swami Vivekananda Inter School Quiz and Speech Competitions. It involved around 75 participants from five different Schools of Pilani. The Director, Dr. G Raghurama was the chief guest and Deputy Director (Adm.) Dr. R.N.Saha was the Guest of Honour for the occasion.

4.4 OASIS Stall 2012

Continuing the tradition of BITS cultural festival, NSS BITS Pilani this year also organized a stall in OASIS REINVENTION, 2012. The stall was setup near Krishna Bhawan from 2nd to 6th November and was handled by more than 35 volunteers. It was inaugurated by Prof. Arya Kumar Dean, SWD, BITS Pilani. The NGO's participated in the stall are mentioned below –

- UMANG , Jaipur
- DISHA, Jaipur
- HUNUR , Jaipur
- WWF, Delhi
- KRITI, Delhi
- PARICHAY, Delhi
- MUSKAAN, Delhi
- GOONJ, Delhi
- AMLA BIRLA KENDRA, Pilani.

5. Public Awareness Programs

Public Awareness Camps

Public awareness is one of the relatively newer departments of NSS BITS Pilani. The year started with a health and awareness camp in Garinda on 21st and 22nd January, which was followed up by a week long (5 days) camp in Jherli. In this camp, information regarding source of drinking water, toilet, school, waste disposal system and drainage system, Ration Card, Labour Union Card etc. was collected and analysed.

Another camp was organized in Garinda village on 25th August 2012. The aim was to get an idea about the level of awareness of the villagers related to the public awareness schemes and rights.

Labour Union Card

Seeing the benefits of this card, NSS helped more than 35 villagers (labours) of Garinda and Jherli in making this card for them. Those having these cards get scholarship for their children, woman card bearers get money for their daughter's marriage and similar other benefits.

SAKSHAM

The public awareness team is presently working in collaboration with CEL BITS Pilani on their ongoing project Saksham. This year during the Oasis stall, nearly 70 handmade notebooks (made by villagers of 'Bhaas', a nearby village using the waste but reusable paper collected from the students of BITS Pilani) were sold and the profit thus generated was entirely given to the villagers. Next year we are aiming to venture into the field of recycling the waste paper and using it to prepare notebooks.

This semester NSS along with the AIESEC chapter of BITS started working on a scheme to ensure financial stability and safety to the villagers. The work in this field is ongoing and will be carried on in the next semester also.

OASIS 2012

BITS Pilani celebrated the 42nd edition of OASIS, its annual cultural festival from 2nd to 6th November 2012. This festival, managed entirely by the students, was chiefly sponsored by Vh1, WeChat, CoolAge, ONGC, Roctaves.com, SNICKERS, Monte Carlo, Mufti and 5-star. It attracted about 1500 outstation participants from about 85 colleges situated all over the country. The festival hosted as many as 65 events which were

based on music, art, dance, drama, literature, photography and every other cultural aspect of college life. The theme of the festival was “The Re-invention”.

The Music show by Bombay Vikings along with Mr. Neeraj Sridhar, a killer comedy show-N2O featuring Mr. Virdas were few of the several highlights of the festival. The festival also featured rock bands like TAAQ and The Shakey Rays. Dance, music and pottery workshops were held by professional artists and performers. Events like Rapwars, Desert duel, street plays, fashion parade, DJ night, Mr. and Mrs. OASIS ETC. caught the limelight as the students from all over the country were able to stage and showcase their talents.

The National service scheme and NIRMAAN along with several NGO's set up an exhibition for the sale of village potteries, garments and other handicrafts. In words of Mr. Lohi Uppalapati, the president of BITS Students' Union, 'OASIS is a 96 hours of unadulterated thrill, a ceaseless euphoria that overwhelms every being at hands to witness it.'

APOGEE 2012

APOGEE, is the annual international technical festival (ISO 9001:2008 certified) of BITS Pilani. The 30th edition of APOGEE, held from 16th to 20th March 2012, had an outstation participation of around 1000 students from more than 150 colleges across the country. This festival was chiefly sponsored by JK LAKSHMI cements, MINDLOGIX, Infosys, CA technologies, Microsoft, Indian Oil etc. This edition hosted 120 odd events in varied fields like Build and design, Code and design, Automation, economania and stock markets. Kernel events being FTGP, iStrike, Windows Phone Hackathon, SMS, Dhiti, several workshops like Astro workshop, Multi touch workshop etc. were also organized. IG Nobel Think Again conclave was the major attraction of the festival with keynote speakers like Gauri Nanda, Dr. Elena N Bodnar, and Dr. Richard Stephens etc. The exhibition by Indian Army was also organized. APOGEE 2012 kept up its tradition of innovation breaking unprecedented frontiers.

INTERFACE 2012

35th Annual Management Convention Interface 2012 was conducted during 10 – 12 February 2012 by the students of Department of Management of BITS Pilani. The theme of the event was “Aarambh”. Fifty students from various management schools viz. Symbiosis(Pune), NITIE (Mumbai), NarseeMonjee Institute(Mumbai), DOM – IIT Roorkee, SRCC (Delhi), MICA (Ahmadabad), IMT (Ghaziabad), S.P. Jain (Mumbai) etc participated in the event. An active participation was seen from the on – campus students of BITS Pilani as well. The Chief Guest for the inaugural function was Mr. Valmeekeanathan, Vice-President, Product Life Cycle Division, Infosys. The key note speaker was Mr. Sammer Hanchate, a reputed Bollywood director known for his contribution in making documentary films. On 10th of Feb, 2012, a workshop was conducted on Product Life Cycle Management by Mr. Valmeekeanathan, The events started from morning of 11th Feb, 2012 with the Flagship event B-Plan followed by Case study event. Simultaneously events such as Biz-Quiz and Barter King were conducted. A workshop on film making was conducted by Mr. Sameer Hanchate, which saw a participation of over 100 students. In the evening, several on- the- spot events were conducted. Fundoo – Manager was a finance based event to illustrate how well people can invest their money. The event which saw a huge attendance of around 300+ students, being conducted in three different slots was “York and Slog”, an IPL auctioning event. All the events were prepared and conducted by Marketing and Finance club of the Management Association. On 12th Feb, 2012, the final round for Barter King was conducted followed by a workshop on entrepreneurship by Mr. Sarath Babu, a famous BITSian entrepreneur (owner of Foodking- a food chain). The valedictory function was conducted in the evening of the same day. The winners of the each event were given prizes and certificates.

Ragamalika

Ragamalika, the classical music and dance club of BITS Pilani has performed the following events last year. *Thyagaraja Aradhana* on the Founder's Day which involved the rendition of the Pancha Ratna Kritis, the most elegant compositions of Sri Saint Thyagaraja. Every year Ragamalika train interested Bitsians who learn these songs and share the stage with other Ragamalika carnatic musicians on the Founder's Day. *Sangamam 2k12* was the biggest event of the second semester held on 6 March. It featured a classical depiction of the origin of Indian classical dance through the language of dance and music. The show that featured only two dancers, Kuheli Jati and Sushmita Inguva was titled *Nrityodaya*. Apart from this, Ragamalika presented two fresher's concerts – one featuring the Hindustani musicians of the club and the other showcasing the talents of their Carnatic counterparts. While the former, held on the 31 January enthralled the audience who were presented with detailed Hindustani renditions by both the vocalists and the instrumentalists, the latter titled *Ranjani 2012* was held on the auspicious day of Ramnavami on 1 April. One of the most sought after shows in the raag calendar, *Shaam-e- Ghazal* was held in the LTC-QT on 17th April and was welcomed by a packed audience consisting of Professors and BITSians. The musical festival treated the crowd with some memorable ghazals of Jagjit Singh, Ghulam Ali, Hariharan and others and kept up to the expectations of the pack of music enthusiasts who added hue to the wonderful evening. The last

event of the semester featured the lone Psenti- Semite Riddhidev Bannerjee who displayed his musical proficiency for one last time and had the audience lost in his music.

The first semester of the academic year 2012-13 started with their flagship event *Nrityaranjani* held on 26 September. The show started with three introductory pieces. Dancers Saumya and Rucha, trained in Bharatanatyam performed an 'Alarippu', an invocatory piece to seek blessings of the audience. Next was classical dance form Odissi by veteran third year student Kuheli, who sought to elaborate the raga Arabi through fluidic eye movements, followed by a Kathak piece by fresher Radhika. The show sought to showcase an evening of music and dance on 'Anuragita', a symphony on love; Love, the most fundamental of human emotions. Love, a source of surprise and confusion was depicted in its various forms namely maternal love, friendship, guru bhakti, adolescent love, marriage, patriotism and the ultimate love towards the God. The club also organized a freshers concert on 25 October where new recruits trained in the Carnatic and Hindustani disciplines were given an opportunity to prove their mettle.

SPIC MACAY

The hot desert sands of Pilani, on the 20th of September, were caressed by the cool and gentle breezes emanating from the tamed sitar that created melody with every pluck by the highly talented Pt. Nayan Ghosh, accompanied by Mr. Shankhachur Lahiri on the tabla and supported by Mr. Beat Aeschlimann on the tanpura, who weaved magic through his performance.

During the second semester of the academic year 2011-12 BITS witnessed some of the best musicians. It started with a Santoor concert during a cold winter evening and the hundred strings vibrated in unison to the maestro's conducting baton weaving warmth that radiated throughout the auditorium lifting the bitter-cold lifeless spell of winter and injecting life into the souls. The strings, each one unique, united with each other to create a memorable day with their waves reverberating inside one's self returning to them soothingly during their darkest times of solitude.

The second concert couldn't be more different speaking both in terms of the climate and the effect. While the Pandit. Tarun Bhattacharya's Santoor concert was calm flow of the raags, the Shaam-e-Ghazal was turbulent with energy flooding the auditorium with liveliness and cheer. Ustad Hasnain Nizami ji kept everyone on their toes with his sporadic shayeris of witty humour sending breezes of cool laughter on a warm summer night.

MATRIX

In the second semester of academic year 2011-2012, Matrix started off early with the review of the non-fiction book *Into the Wild* by Jon Krakauer on the real life experiences of Christopher McCandless. The panelists were Prof. Sudeep Mohan, BITS alumni Mr. Vineet Pandey and students Krishna Pramod and Saranya Vatti. The event saw a huge turnout and a high participation from the audience. The romantic and realistic takes on the life of the protagonist were debated very well by Saranya and Vineet respectively.

During BITS MUN 2012, held in February, Matrix in association with Oxford University Press organized a review of the critically acclaimed book *Women and Society—The Road to Change*.

This was followed by our pre Apogee event, namely, "How it Should Have Ended"? This was an online event in which people had to suggest alternate endings to the works of literature and cinema. The event had a decent number of takers.

During Apogee, Matrix had their trademark event Mytho Quiz. The Quiz was a crowd puller and conceptualized, conducted by Deepraj Sharma and Krishanu Batsya. Matrix also hosted a comic writing contest. It had a high participation in spite of being a first time event.

Our final review of the semester was the highly acclaimed novel 'My Name Is Red' by Orhan Pamuk, the Turkish writer. The panelists included Dr. Diksha Sharma, Bhavesh C Sagem, Camilia Debnath, Sukanya Mondal and Akitav Sharma.

Matrix has always been encouraging people to get back to the habit of reading. And it really had its effect as we saw increased student participation in these reviews. Even the first year students queued up for Matrix recruitments through their experiences from the book reviews.

In the first semester of the academic year 2012-13, MATRIX screened a movie with a sports theme—"Invictus", and conducted an event—"Shipwreck" for BITS Open Sports Meet (BOSM). Thereafter, MATRIX organized a book introduction session on the 22nd of September, in which four books were introduced by the four panelists. Dr. Kumar Bhattacharya gave a riveting introduction to J.G. Farrell's "The Siege of Krishnapur". Swapnil Haria brilliantly introduced the "Foundation Series" by Issac Asimov. Vivek Sharma

introduced "The Wheel of Time Series" by James Rigney. Our senior member Padmanabhan Anand introduced Haruki Murakami's "Norwegian Wood".

PARADOX, a quiz revolving around art, literature and movies was conducted as a pre-Oasis event. This quiz was efficiently managed by Prathamesh and Simha. In the Oasis, themed Reinvention, MATRIX conducted two events and three movie screenings. TRIATHLON had a huge participation of about 500 students. The 'Movie Quiz' that followed, was conducted by Trishanu Borah and Prem Parekh and had a good number of movie buffs as participants.

In mid-October, Matrix in collaboration with Management Association, conducted a book launch followed by the guest lecture on "101 Myths and Realities @ the Office" by Utkarsh Rai.

Post-Oasis, another book introduction session was conducted on 26th November, which consisted of five panelists introducing five books. Deepraj Sarmah introduced the classic animal book *My Family and Other Animals* by Gerald Durrell. Ravi Ranjan gave a thought provoking introduction to Richard Darwin's *The God Delusion*. Viknesh Nagarhinam gave an engrossing introduction to the series *Deadhouse Gates* by Steven Erikson. Shreyas Vatsa presented an insightful introduction to *Things Fall Apart* by Chinua Achebe. Tanayveer Singh introduced *1984* by George Orwell. Apart from these, Matrix also had internal movie screenings of "The Big Lebowski" and "Strangers on a Train" for the members.

NIRMAAN

Independence Day Celebrations

Nirmaan Pilani celebrated the 66th Independence Day with great fervour, involving all the communities it works with i.e. Khedla, Baas, Harinagar and Nattbasti.

As a part of the Independence Day celebrations, Nirmaan Pilani organised functions in the villages of Baas and Khedla. The National Flag was hoisted. A number of fun activities were conducted for the women and the kids.

In Harinagar, a tree plantation drive was held by the children along with several programmes like drama, poetry reading, patriotic dance and songs.

A visit to Dhindwa Government School was organised to celebrate the Day with the Nattbasti kids. The Flag hoisting was followed by a drawing competition and distribution of chocolates.

Joy of Giving Week

The Joy of Giving Week is India's national festival of 'giving'. It was celebrated from 11-18 October. A number of events were conducted as part of the weeklong celebration.

During this period 'Wish Tree' was decorated with the wishes of our beneficiaries. Anyone who wished to contribute could leave their contact details on the wish card, and drop it in the wish box. This concept generated considerable interest among the BITSians, and many people contributed, making it a success.

In the event 'Hour of Joy', all BITSians were invited to visit our projects and spend an hour with the beneficiaries. The faculty members also showed enthusiasm by getting involved with children.

A 'Day of Joy' was observed, for children from nearby villages, who were invited on campus to enjoy a fun filled day. Activities ranging from Yoga classes to drawing sessions were held in the first half of the day. Later, some of the clubs and departments had put up enthralling performances to entertain the children.

Some of the other events held were "Cycle of Joy"- an attempt to teach the kids of the Nattbasti how to ride a bicycle, "Kaun Kehlayega Genius (KKG)"- an event similar to KBC held for the kids of the Harinagar community in the PRC.

Oasis

Nirmaan conducted two events, Big Fight and Head On during Oasis 2012. While Head On was conducted as a pre Oasis online debating competition, Big Fight had two rounds, a quiz about India's social reformers followed by a debate on an ethical issue. Both the events were well received, with college students participation from all over India.

Like every year, Nirmaan Organization had set up its stall during Oasis 2012 too. A variety of products were sold including Kurtas, Wall Hangings, Wallets, Handbags, Cellulose Carry-bags, Pen Stands, Diyas etc. This year also saw the introduction of macramé products. Nai Disha, an NGO from Ajmer also participated in the stall.

Our Projects

Gyan Bodh

An evening school that aims to provide value based education to the under privileged students. The vision is to create penchant for studies, to build their character and also to inculcate the value of Nation building in them.

Milestones: The construction of Pilani Resource Center (PRC) was completed and classes were shifted from Gyan Vihar Park to PRC.

School Adoption Programme

The project aims to convert backward rural and urban Government schools into Model schools so that they are at par with the best run schools in terms of infrastructure and performance.

Milestones: A shelter was constructed as an alternative classroom.

Shiksha ki Ore

A non formal school that works in Nattbasti, aims to make quality education infrastructure accessible to those kids who have been deprived of the opportunity of a formal education or have dropped out due to financial constraints. Our aim is to motivate them to join school through our bridge program.

Milestones: 17 kids were admitted to a school and an informal school was constructed in the basti.

Utkarsh

The predecessor to 'Utkarsh' was Inter-Connectivity of Schools (ICS). Utkarsh scholarships were started as a part of ICS in 2010. Due to some operational problems, in 2012 the focus shifted completely to the scholarships and the project was rechristened as 'Utkarsh'. Utkarsh aims to decrease the dropout rate from schools and encourage financially distressed but meritorious students to continue their education through scholarship and mentoring.

Milestones: 41 scholarships have been awarded till now.

Self Help Group – Baas

SHG Creates a platform for rural women in Baas to earn a livelihood by forming a self-sustainable group, which prepares products and markets them.

Milestones: Cellulose bags introduced; proficiency achieved in stitching based products including school bags, ladies kurtas etc.

Self Help Group – Khedla

It aims at organizing a sustainable Self Help Group in Khedla, which produces and sells a variety of consumer goods, thereby helping in uplifting the womenfolk in the village.

Milestones: SHG formalized; bank account created.

Participative Community Development

To achieve an overall development of the targeted community (residents of Baas village) through its active involvement in the process of social innovation.

Milestones: Increased community involvement in our projects by winning the trust of the members of the community.

Parishodh

It aims to drive a socio economic change towards sustainable development by using Science and Technology as a tool.

Milestones: Shri Kshethra Dharmasthala Rural Development Project (SKDRDP)'s volunteer management project completed.

Disha

The project aims at helping students from remote rural areas or under-privileged sections to get excellent academic/career guidance and necessary monetary support to get the right education. It conducts career workshops in schools, in and around Pilani. A tele counselling helpline is also planned. Milestones: Career workshops have been conducted for about 1000 school students in nearby schools of Pilani.

National Talent Search Scheme

The number of National Talent Search Scheme Scholarship holders studying in the Institute during the year in various programmes was as follows:

Admission year	No. of students
I Year	20
II Year	19
III Year	14
IV Year	34
V Year	25
Total	<u>112</u>

Earn While You Learn

Professional Assistantship

One hundred forty eight students worked as Professional Assistants during this year, 14 in the Second Semester of 2011-2012 and 5 in the First Semester of 2012-2013. They participated in academic activities like development and assistance in labs, software development, educational planning etc. This gave them an opportunity of independent thinking and developing a sense of responsibility. The programme is not linked with any academic credit but the participants are paid honorarium for their services.

Aditya Birla Group Scholarships

Four students, Mr. Sentiwapang (2012A2PS006P), Mr. Gaurav Ghosh (2012A3PS001P), Mr. Bable Ashutosh Madhavrao (2012A4PS003) and Ms. Sujata Sharma (2012A7PS004P) have been awarded the prestigious Aditya Birla Scholarships for the academic year 2012-2013. These scholarships are awarded to meritorious students of Engineering from among those admitted to BITS Pilani and the IIT's at Bombay, Chennai, Delhi, Kanpur and Kharagpur after a rigorous selection process. The four continuing scholars (two from 2009, two from 2010 and one from 2011) were judged to have demonstrated satisfactory progress, and have received a sum of Rs. 65,000/- each as the scholarship amount for the academic year 2012-2013.

GE Fund Scholarship Program – 2011 - 13

GE Foundation, USA, which is the philanthropic organization of the General Electric Company, has sanctioned two scholarships worth \$ 6000 to a student in the fourth year of dual degree programme in BITS, Pilani in the areas of Computer Science and Mechanical Engineering. The scholarships were awarded to Ms. Madhumita Ghaddam, (ID No. 2008B1A4458H) M.Sc. (Hons.) Biological Sciences and B.E. (Hons.) Mechanical Engineering from Hyderabad Campus and Mr. Akshay Goel (2008B3A7646G) M.Sc. (Hons.) Economics and B.E. (Hons.) Computer Science programme from Goa Campus.

Institute Fellowship

With a view to increase enrolment of Ph.D. students, Institute has created Research Assistantship for full time Research Fellows. Currently 128 full time research students, who have been admitted to Ph.D. programme, are receiving Research Assistantship across campuses. These full time research scholars are doing research in the areas such as Biotechnology, Pharmacy, Economics, Management, Physics, Mechanical Engineering Computer Science, Civil Engineering, Electrical and Electronics Engineering and Chemistry.

CSIR/UGC/ICMR Fellowship

Funding agencies such as Council of Scientific and Industrial Research (CSIR), DST, ICMR has provided 20 JRFs and 23 SRFs to the research scholars of the Institute. These research fellows; both JRFs and SRFs are working for their Ph.D. degree across the campuses.

The University Grants Commission has provided 15 research fellowships to the research scholars of the Institute. These research fellows are working for their Ph.D. degree in the area of Biological Sciences and Pharmacy at Pilani campus.

Fellowships under Externally Funded Projects

Apart from the above mentioned fellowship there are full time research scholars working on projects sponsored by various agencies like DST, DBT, CSIR, ICAR, NPMAS, Incozen, Inspire, BRNS, MNRE, UGC, ICMR, TCS etc. There are 101 research scholars across three campuses at present in such position.

Alumni Scholarships

BITS Alumni have instituted several merit-cum-means scholarships. For the First Semester 2011-2012 and Second Semester 2011-2012 the scholarships were awarded to the following students.

Scholarship	I Semester 2011-2012	II Semester 2011-2012
Vamsi Pendyala and Prasanna Kalahasthi Memorial Scholarship	S. Pramod ID No. 2010A3PS190P	Siddharth Mohan ID No.2010A4PS232P
S.S. Seshadri Memorial Scholarship	Pooja Choudhary ID No. 2009A4PS747P	Pooja Choudhary ID No. 2009A4PS747P
BITS Alumni Class of 1966-71 Scholarship	Divya Joshi ID No. 2010A3PS160P	Swetha Susan George ID No. 2010B2A7666P
Sharman's Family Scholarship	Zara Ahmed ID No. 2008B2A7738P	Ashutosh Banerjee ID No. 2008B2A3774P
Chaman Lal Scholarship	Ravi Kiran Chirravuri ID No. 2008A7TS059P	Ravi Kiran Chirravuri ID No. 2008A7TS059P
K.K. Rao Scholarship	Nitin Hireen ID No. 2008A2PS522P	Nitin Hireen ID No. 2008A2PS522P
Hiralal Agarwal Scholarship	Ashutosh Pandey ID No. 2008A4PS348P	Ashutosh Pandey ID No. 2008A4PS348P
Ram Nivas Yadav Scholarship	Rajesh Kumar Vijayvargiya ID No. 2011A3PS284P	Aayush Singal ID No.2011A3PS188P
	Nikhil Motiani ID No. 2011A8PS347P	Chirag Bansal ID No. 2011B2PS791P
Shantha E. Iyer Scholarship	Ashima Dharembra ID No.2011A8PS234P	Bhanu Priya S ID No. 2011B1PS515P
S.K. Agarwal Scholarship	Deepanshu Gupta ID No. 2011A4PS275P	Navdeep Bajaj ID No. 2011A8PS354P
	John Rajan Mavelly ID No. 2011B1PS831P	Gaurav Dadhich ID No. 2011B3PS513P

DETAILS OF ADMISSIONS MADE DURING THE YEAR 2012

(A) Second Semester 2011-2012

PROGRAMMES	No. of students joined
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Doctoral Programmes:

Ph.D.	30(16)
Total	30(16)

(B) First Semester 2012-2013

PROGRAMMES	No. of students joined	BITSAT Cut-off scores	
		Highest	Lowest

1. (a) Integrated First Degree Programmes at Pilani Campus:

Group A

B.E.(Hons.)			
Chemical	60(12)	333	316
Civil	61(7)	341	310
Computer Science	89(14)	414	356
EEE	90(16)	386	343
Electronics & Instrumentation	60(11)	346	331
Mechanical	80 (2)	376	332
Manufacturing	31(5)	323	303
B. Pharm. (Hons.)	42(7)	281	260
	513(74)		

Group B

M.Sc.(Hons.)			
Biological Sciences	53(14)	306	285
Chemistry	49(10)	315	294
Economics	51(9)	334	311
Mathematics	49(13)	347	300
Physics	50(7)	329	302
	252(53)		

Group C

M.Sc.(Tech.)			
Finance	17(6)	298	282
Gen. Studies	21(9)	294	294
Information Systems	59(10)	334	296
	97(25)		
Total :	862(152)		

- Note: (i) The above list consists of 24 students who are First rank holders from 17 different central/ state boards admitted under 'direct admission of board toppers' scheme.
- (ii) The above numbers also include 35 admissions of staff children and 13 admissions of BET school students, made under special dispensation consisting of 4 in Bio Sciences, 6 in Chemistry, 6 in Economics, 6 in Mathematics, 6 in Physics and 20 in General Studies.

2. Higher Degree Programmes:

(a) At Pilani Campus

M.E.	
Biotechnology	12(6)
Chemical Engineering	10(3)
Chemical (Petroleum Engineering)	7(2)
Civil (Structural Engineering)	13(1)
Civil (Transportation Engineering)	8(3)
Civil (Infrastructure Engineering)	8(3)
Computer Science	18(4)
Communication Engineering	17(4)
Design Engineering	8
Embedded Systems	8
Manufacturing Systems Engineering	7(1)
Mechanical Engineering	12(1)
Microelectronics	15(2)
Software Systems	24(5)
MBA	47(9)
M.Pharm.	11(6)
M.Pharm. (Pharmaceutics)	9(2)
M.Pharm. (Pharmaceutical Chemistry)	10(5)
Total	244(57)

Doctoral Programmes

Ph.D.	32(22)
Total	32(22)

SUMMARY

	II Semester 2011-2012	I Semester 2012-2013
Programmes		
Integrated First Degree Programmes	–	862(152)
Higher Degree Programmes	–	244(57)
Total	–	1106(209)
Doctoral Programme		
Ph.D.	30(16)	32(22)
Total	30(16)	32(22)
GRAND TOTAL	30(16)	1138(231)

STATEMENT SHOWING THE NUMBER OF CANDIDATES WHO HAVE BEEN PERMITTED IN THE ACADEMIC YEAR 2012-2013 TO PURSUE VARIOUS DUAL DEGREE PROGRAMMES UNDER VARIOUS PRIORITIES

FIRST PRIORITY

(From Group 'B' to Group 'A' Programmes)

Programmes* From ↓ To →	A1	A2	A3	A4	A5	A7	A8	AB	Total
B1	10	07	08	05	02	03	05	03	43
B2	04	04	09	06	01	06	05	04	39
B3	04	05	10	07	–	11	05	–	42
B4	07	02	07	08	01	09	04	02	40
B5	01	06	05	09	03	09	07	03	43
Total	26	24	39	35	07	38	26	12	207

OTHER PRIORITIES

Programmes* From ↓ To →	C6	C7	Total
A2	01	–	01
A5	02	04	06
B2	–	01	01
B3	–	02	02
B4	–	01	01
Total	03	08	11

NUMBER OF STUDENTS REGISTERED IN FIRST SEMESTER 2012-2013

Programme	Year of Admission						Total
	2007 and earlier	2008	2008	2010	2011	2012	
A. Integrated First Degree Programmes							
B.E.(Hons.)							
Chemical	0(0)	3(0)	54(11)	53(11)	58(10)	61(12)	228(44)
Civil	0(0)	2(0)	54(2)	50(6)	57(8)	61(7)	224(23)
E.E.E.	0(0)	3(0)	93(10)	91(13)	91(6)	90(16)	368(45)
Mechanical	0(0)	3(0)	85(6)	82(4)	79(2)	80(2)	329(14)
Computer Science	1(0)	7(0)	90(16)	95(7)	94(16)	89(14)	376(53)
Electronics & Instrumentation	1(0)	1(0)	58(9)	55(12)	56(8)	60(11)	231(40)
Manufacturing Engineering	0(0)	0(0)	27(0)	29(2)	30(2)	31(5)	117 (9)
B.Pharm.(Hons.)	0(0)	6(3)	37(12)	30(8)	26(11)	26(5)	125(39)
M.Sc.(Hons.)							
Bio. Sciences	1(0)	35(7)	44(1 3)	46(14)	44 (12)	53(14)	223(60)
Chemistry	4(0)	37(10)	32(4)	42(12)	44(10)	49(10)	208(46)
Economics	3(0)	44(6)	49(15)	50(9)	53(11)	51(10)	250(51)
Mathematics	4(1)	49(9)	52(6)	50(11)	51(9)	49(13)	255(49)
Physics	3(0)	45(8)	49(7)	52(7)	49(6)	50(7)	248(35)
M.Sc.(Tech.)							
Engineering Tech.	1(1)	7(2)	0(0)	0(0)	0(0)	0(0)	8(3)
Information Systems	0(0)	4(1)	60(16)	59(20)	71(17)	59(10)	253(64)
Gen. Studies	3(0)	14(3)	22(4)	21(1)	20(11)	21(10)	101(29)
Finance	0(0)	0(0)	9(3)	11(4)	16(7)	17(6)	53(20)
Sub Total	21(2)	260(49)	815(134)	816(141)	839(146)	846(152)	3597(624)

Note: The numbers in brackets indicate number of female students.

Programme	Year of Admission						Total
	2007 and earlier	2008	2009	2010	2011	2012	
B. Higher Degree Programmes							
M.E.							
Chemical	0(0)	0(0)	0(0)	9(3)	9(3)	10(3)	28(9)
Civil with Specialisation in Structural Engg.	1(0)	0(0)	0(0)	5(0)	11(3)	13(1)	30(4)
Electrical with Specialisation in Power Electron & Drives	0(0)	0(0)	0(0)	0(0)	9(2)	0(0)	9(2)
Computer Science	0(0)	0(0)	0(0)	14(4)	18(4)	18(4)	50(12)
Mechanical	0(0)	0(0)	0(0)	8(0)	14(0)	12(1)	34(1)
Software Systems	1(0)	0(0)	0(0)	13(3)	21(4)	24(5)	59(12)
Microelectronics	1(0)	0(0)	0(0)	1(0)	13(1)	15(2)	30(3)
Embedded Systems	0(0)	1(0)	0(0)	0(0)	10(0)	8(0)	19(0)
Design Engineering	0(0)	0(0)	0(0)	1(0)	12(0)	8(0)	21(0)
Biotechnology	0(0)	0(0)	0(0)	3(3)	10(4)	12(6)	25(13)
Civil with Specialisation in Transportation Engg.	0(0)	0(0)	0(0)	0(0)	7(2)	8(3)	15(5)
Chemical with Specialisation in Petroleum Engg	0(0)	0(0)	0(0)	0(0)	4(1)	7(2)	11(3)
Civil with Specialisation in Infrastructure Sys.	1(0)	0(0)	0(0)	0(0)	4(1)	8(3)	13(4)
Manufacturing Sys.Engg	0(0)	0(0)	0(0)	0(0)	8(1)	7(1)	15(2)
Communication Engineering	1(0)	0(0)	0(0)	9(2)	14(4)	17(4)	41(10)
M.Pharm.	0(0)	0(0)	0(0)	14(7)	6(2)	11(6)	31(15)
M.Pharm. (with Specializations in Pharmaceutics)	0(0)	2(2)	0(0)	0(0)	7(0)	9(2)	18(4)
M.Pharm. (with pecializations in Pharmaceutical Chemistry)	0(0)	0(0)	0(0)	0(0)	4(4)	10(5)	14(9)
Master of Business Administration	0(0)	0(0)	0(0)	1(0)	41(9)	47(9)	89(18)
Master of Public Health	0(0)	0(0)	0(0)	1(1)	6(5)	0(0)	7(6)
Sub Total	5(0)	3(2)	0(0)	79(23)	228(50)	244(57)	559(132)
C. Ph.D.	106(27)	41(10)	53(16)	44(13)	65(30)	32(22)	341(118)
Total (On Campus)	132(29)	304(61)	868(150)	939(177)	1132(226)	1122(231)	4497(874)

SUMMARY

	Engg.	Sc.	Hum.	Total
First Degree	2288(344)	1059(229)	250(51)	3597(624)
Higher Degree	407(86)	63(28)	89(18)	559(132)
Ph.D.	-	-	-	341(118)
Grand Total				4497(874)

Note: The numbers in brackets indicate number of female students.

STATEMENT OF DEGREES AWARDED

Degrees	No. of degrees		
	70 th Award (31.03.2012)	71 st Award (19.07.2012)	
On-campus Programmes			
A. Integrated First Degrees			
B.E.(Hons.)			
Chemical	1(0)		3(0)
Chemical (with PS)	4(0)		67(14)
Civil	1(0)		5(1)
Civil (with PS)	12(1)		66(6)
Computer Science	1(0)		4(0)
Computer Science (with PS)	5(2)		121(28)
EEE	0(0)		4(2)
EEE (with PS)	6(1)		128(18)
Electronics & Instrumentation	0(0)		1(0)
Electronics & Instrumentation (with PS)	0(0)		80(12)
Mechanical	1(0)		6(1)
Mechanical (with PS)	4(0)		112(12)
Manufacturing Engg. (with PS)	<u>0(0)</u>	35(4)	<u>3(1)</u> 600(95)
B.Pharm	0(0)		1(0)
B.Pharm.(Hons)(with PS)	<u>8(0)</u>	8(0)	<u>39(16)</u> 40(16)
M.Sc.(Hons)			
Bio. Sciences	1(0)		27(8)
Bio. Sciences (with PS)	4(2)		11(3)
Chemistry	0(0)		23(3)
Chemistry (with PS)	3(0)		11(2)
Economics	0(0)		21(2)
Economics (with PS)	3(2)		23(11)
Mathematics	0(0)		22(4)
Mathematics (with PS)	1(0)		27(11)
Physics	0(0)		33(6)
Physics (with PS)	<u>0(0)</u>	12(4)	<u>15(2)</u> 213 (52)
M.Sc. (Tech)			
Engg. Tech	0(0)		2(1)
Engg. Tech. (with PS)	0(0)		2(0)
Finance	0(0)		0(0)
Finance (with PS)	0(0)		19(10)
General Studies	0(0)		3(1)
General Studies (with PS)	1(0)		14(7)
Information Systems	0(0)		3(1)
Information Systems (with PS)	2(0)	3(0)	55(6) 98(26)
Sub Total		58(8)	951(189)

Note: The numbers in brackets indicate number of female students.

Degrees	No. of degrees	
	70 th Award (31.03.2012)	71 st Award (19.07.2012)
B. Higher Degrees		
M.E.		
Civil with specialisation in Structural Engineering	0(0)	0(0)
Civil with specialisation in Structural Engineering (with PS)	3(1)	12(4)
Civil with specialisation in Transportation Engg.	0(0)	6(0)
Civil with specialisation in Transportation Engg. (with PS)	0(0)	1(0)
Chemical with specialisation in Petroleum Engg.	2(1)	1(0)
Chemical with specialisation in Petroleum Engg. (with PS)	0(0)	6(4)
Chemical	2(1)	2(0)
Chemical (with PS)	2(0)	4(2)
Computer Science	3(1)	5(1)
Computer Science (with PS)	6(1)	5(1)
Communication Engineering (with PS)	13(1)	8(2)
Communication Engineering	0(0)	3(1)
Embedded Systems	1(0)	0(0)
Embedded Systems (with PS)	2(0)	14(0)
Master of Business Administration	0(0)	2(0)
Master of Business Administration (with PS)	0(0)	48(6)
Mechanical	4(0)	1(0)
Mechanical (with PS)	10(0)	6(1)
Electrical with specialization in power Electronics & Drives (with PS)	0(0)	7(1)
Software Systems	2(0)	5(2)
Software Systems (with PS)	9(4)	22(4)
Microelectronics	0(0)	3(0)
Microelectronics (with PS)	0(0)	7(1)
Biotechnology	2(1)	5(3)
Biotechnology (with PS)	1(1)	9(4)
Manufacturing Systems Engg.	0(0)	1(1)
Manufacturing Systems Engg. (with PS)	0(0)	9(1)
Design Engineering	0(0)	7(1)
Design Engineering (with PS)	0(0)	3(0)
M.Pharm.	3(1)	0(0)
M.Pharm. (with PS)	9(0)	10(6)
M.Pharm.(with Specializations in Parmaceutics)	0(0)	2(0)
M.Pharm.(with Specializations in Parmaceutics)(with PS)	1(1)	6(1)
M.Pharm.(with Specializations in Parmaceutical Chemistry)	0(0)	1(0)
M.Pharm.(with Specializations in Parmaceutical Chemistry) (with PS)	1(1)	6(3)
<i>Master of Public Health</i>	3(1)	3(3)
<i>Master of Public Health (with PS)</i>	2(2)	3(2)
Sub Total	81(18)	233(55)
C. Ph.D.	13(4)	9(3)
Total (On Campus)	152(30)	1193(247)

Note: The numbers in brackets indicate number of female students.

SUMMARY

Award	70th Award	71st Award	Total
Integrated First Degree	58(8)	951(189)	1009(197)
Higher Degrees	81(18)	233(55)	314(73)
Ph.D.	13(4)	9(3)	22(7)
Total	152(30)	1193(247)	1345(277)

72nd AWARD OF DEGREES TO BE APPROVED BY THE 66th MEETING OF THE BOARD OF GOVERNORS

(No. in brackets indicates no. of female students)

Programme	Dist.	I	II	Total
I. On-Campus				
B.E.(Hons.) (Chemical)	0	3	1	4(0)
B.E.(Hons.) (Chemical) (with Practice School)	0	0	2	2(0)
B.E.(Hons.) (Civil)	0	1	1	2(0)
B.E.(Hons.) (Electrical and Electronics)(with Practice School)	0	3	2	5(0)
B.E.(Hons.) (Mechanical)	0	0	1	1(0)
B.E.(Hons.) (Mechanical))(with Practice School)	0	1	0	1(0)
B.Pharm.(Hons.)	0	1	0	1(1)
B.Pharm.(Hons.) (with Practice School)	0	1	4	5(4)
B.E.(Hons.) (Computer Science)	0	1	1	2(0)
B.E.(Hons.) (Computer Science) (with Practice School)	0	2	5	7(0)
B.E.(Hons.) (Electronics and Instrumentation) (with Practice School)	0	1	0	1(0)
M.Sc.(Hons.) (Biological Sciences)	0	0	2	2(0)
M.Sc.(Hons.) (Biological Sciences) (with Practice School)	0	0	1	1(1)
M.Sc.(Hons.) (Chemistry) (with Practice School)	0	0	3	3(0)
M.Sc.(Hons.) (Economics)	0	1	0	1(0)
M.Sc.(Hons.) (Economics) (with Practice School)	0	0	1	1(0)
M.Sc.(Hons.) (Mathematics)	0	1	2	3(0)
M.Sc.(Hons.) (Mathematics) (with Practice School)	0	0	2	2(0)
M.Sc.(Hons.) (Physics)	0	0	2	2(1)
M.Sc.(Hons.) (Physics) (with Practice School)	0	1	1	2(0)
M.Sc.(Tech.) (General Studies)(with Practice School)	0	1	5	6(0)
M.Sc.(Tech.) (Information Systems) (with Practice School)	0	1	2	3(1)
M.Sc.(Tech.) (Finance) (with Practice School)	0	1	0	1(0)
Sub total first degree	0	20	38	58(8)
M.E.(Chemical)				5(1)
M.E.(Computer Science)				2(1)
M.E.(Mechanical)				7(0)
M.E.(Software Systems)				2(0)
M.E.(Microelectronics)				1(0)
M.E.(Communication Engineering)				3(0)
M.E.(Biotechnology)				1(1)
M.E.(Civil with specialisation in Structural Engineering)				4(0)
M.E.(Chemical) (with Practice School)				4(2)
M.E.(Computer Science) (with Practice School)				12(3)
M.Pharm. (with Practice School)				14(7)
M.E.(Software Systems) (with Practice School)				10(2)
M.E.(Communication Engineering) (with Practice School)				5(2)
M.E.(Biotechnology) (with Practice School)				2(2)
Master of Public Health(with Practice School)				1(1)
M.E.(Design Engineering) (with Practice School)				1(0)
M.E.(Civil with specialisation in Structural Engineering)(with Practice School)				1(0)
Master of Business Administration (with Practice School)				1(0)
Sub total higher degree				76(22)
Ph.D.				27(8)
Total for On-Campus Degrees				161(38)

LIST OF ORGANIZATIONS WHICH CONDUCTED CAMPUS INTERVIEWS

S.No.	Name of Organization	Number of students		Discipline
		Interviewed	Selected	
1	Adobe Systems	10	3	CS/IS
2	Amazon Development Centre (India) Pvt Ltd	23	4	CS/IS
3	Arista Networks	15	2	EEE/EnI
4	Atrenta India Pvt Ltd	5	1	EEE/Eni
5	Avery Dennison	14	2	Chemical
6	B&S Engineering Consultants Pvt. Limited	9	1	Civil
7	BA Continuum Solutions Private Limited	21	9	All
8	BAIN CAPABILITY CENTER	12	3	All
9	Barclays Technology Center, India	9	2	All
10	BeeHyv Software Solutions Pvt. Ltd.	16	3	All
11	BOC India	12	2	Chemical
12	Bogolik Software Solutions Pvt. Ltd.	13	4	All
13	Bosch Limited	14	2	EEE/Eni/Mech
14	BrahMos Aerospace Pvt. Ltd.	8	2	EEE/Eni/Mech
15	Bravo Lucy Technologies (P) Ltd.	9	3	CS/IT/EEE/Eni
16	Broadcom India Research Pvt Ltd	62	17	EEE/Eni
17	Brocade Communications	16	5	CS/IT/EEE/Eni
18	CA Technologies	24	7	CS/IT
19	Cadence Design System	14	2	EEE/EnI
20	Capital IQ	16	2	All
21	Capital One Financial Services	9	1	All
22	Carrier India	12	2	Mech/Chem
23	Caterpillar India Pvt. Ltd.	18	4	Mech/Chem
24	Chambal Fertilisers and Chemicals Limited	16	8	Chemical
25	CISCO Systems (India) Pvt Ltd	38	21	CS/IT/EEE/Eni
26	Citicorp Services India	12	5	CS/IT/EEE/Eni
27	Citrix R&D India Pvt Ltd	9	3	Mech
28	Cognizant	32	20	All
29	Commvault Systems (I) Pvt Ltd	9	2	EEE/EnI
30	Concept2Silicon Systems (P) Ltd	13	5	EEE/EnI
31	Cosmic Circuits Pvt Ltd	9	2	EEE/Eni
32	Credit Suisse	15	6	All
33	Cypress Semiconductors	23	11	EEE/EnI
34	D. E. Shaw India Software Private Limited	15	3	All

S.No.	Name of Organization	Number of students		Discipline
		Interviewed	Selected	
35	Dell International Services Private Limited	23	10	All
36	Deloitte Consulting India Private Limited	23	17	All
37	Directi	5	1	All
38	eBay, India Product Center	12	5	CS/IT
39	EMC Software and Services India Pvt Ltd	24	9	EEE/Eni
40	Engineers India Ltd.	8	1	Civil
41	Epic	23	6	EEE/Eni/CS/IT
42	Ericsson India Global Service Pvt. Ltd.	22	9	CS/IT
43	ERNST & YOUNG PVT. LTD	9	3	All
44	eValueserve	10	7	All
45	Expert Voicetap Technologies Ltd.	18	2	All
46	FactSets Systems India Pvt. Ltd.	13	6	CS/IT/EEE/Eni
47	Flipkart Online Services Pvt.Ltd	13	5	CS/IT
48	Freescale Semiconductor India Pvt. Ltd.	6	1	EEE/Eni
49	Future Bazaar	15	4	All
50	Futures First Info Services Pvt Ltd	19	7	All
51	Galaxy Surfactants Limited	9	3	Chemical
52	GE HCT	6	1	Mech
53	GlobeOp Financial Services	24	7	All
54	Grail Research	12	1	All
55	Groupsoft IT Services	7	2	All
56	Halcrow	19	4	Civil
57	Harman International India (Pvt) Ltd	38	9	EEE/Eni
58	Headstrong Services India Pvt Ltd	38	19	All
59	Honda Motorcycles & Scooter India Private Limited	13	3	Mech
60	IBM India Pvt Ltd	14	2	CS/IT
61	IBM Research - India	15	2	CS/IT
62	Indian Oil Corporation Limited	10	7	Mech/Chem/EEE/Eni
63	Infineon Technologies India Pvt Ltd	14	5	All
64	Infosys Limited	45	36	CS/IT
65	Ingersoll Rand	21	6	Mech
66	InMobi	20	4	CS/IT
67	Intel India Technologies Pvt. Ltd.	25	11	EEE/Eni
68	Intel Mobile Communications India Pvt Ltd	10	4	EEE/Eni
69	IVY Comptech Pvt. Ltd	23	10	CS/IT
70	John F Welch Technology Centre (GE)	6	1	EEE/Eni
71	JP Morgan Services India Pvt Ltd	25	14	All
72	Juniper Networks India Pvt. Ltd.	19	9	CS/IT/EEE/Eni

S.No.	Name of Organization	Number of students		Discipline
		Interviewed	Selected	
73	KBR	11	3	Chemical
74	Kinapse India Scientific Services	15	6	Pharmacy
75	KonyLabs IT Services Pvt Ltd	14	4	CS/IT
76	L&T-RAMBOLL	41	14	Mech/Civil
77	Lakshmi Precision Screws Ltd.	17	4	Mech
78	Lanco Infratech Ltd.	16	6	Civil
79	Larsen & Tubro (MT)	17	6	Mech/EEE
80	Lohia Starlinger	7	1	Mech/Civil
81	M/s Isgec Heavy Engineering Limited	16	2	Mech
82	M/S UOP india Private Limited	12	4	Chemical
83	MaaS360	10	2	All
84	Magneti Marelli India Pvt. Ltd.	19	5	EEE/Enl
85	Mahindra & Mahindra	36	10	Mech
86	Michelin India Tamil Nadu Tyres Pvt. Ltd.	9	1	Mech
87	Microsoft Corporation (India)	22	6	CS/IT
88	Microsoft Corporation (US)	5	2	CS/IT
89	MilkorWater	26	8	All
90	Morgan Stanley Advantage Services Private Limited	19	5	All
91	Mu Sigma	38	24	All
92	National Instruments - India	6	2	EEE/Eni
93	NetApp	22	6	CS/IT/EEE/Eni
94	NTPC Limited	10	4	Mech/Chem/EEE/Enl
95	NVIDIA Graphics Pvt Ltd	21	12	EEE/Eni
96	Opera Solutions	24	4	CS/IT
97	Ophio	14	3	All
98	Oracle	144	62	All
99	Orbees Business Solutions Pvt Ltd	35	13	All
100	PayPal/eBay India Private Limited	13	3	CS/IT
101	Pocket Gems	6	2	All
102	Polaris Software Lab Limited	56	51	All
103	Qualcomm India Pvt Ltd	15	4	EEE/Eni
104	RANBAXY LABORATORIES LIMITED	5	3	Pharma
105	Redpine Signals Inc.	5	1	EEE/Eni
106	Reliance Industries Ltd	16	4	Chemical
107	Sabre Travel Technologies Pvt. Ltd.	23	6	All
108	Samsung India Software Operations Pvt Ltd	52	21	CS/IT
109	SAP Labs India Private Limited	9	5	CS/IT
110	Schlumberger Asia Services Ltd.	21	8	All

S.No.	Name of Organization	Number of students		Discipline
		Interviewed	Selected	
111	Simon India	17	5	Civil
112	Sourcebits Technologies	7	1	All
113	SRF Ltd.	19	5	Civil
114	SuccessFactors Business Solutions India Pvt Ltd	4	1	All
115	Symantec Software India Pvt. Ltd	17	3	CS/IT
116	Synopsys India Pvt Ltd	13	3	CS/IT
117	Tata Motors Ltd.	15	4	Mech
118	Tejas Networks Ltd	24	8	EEE/Eni
119	Texas Instruments	39	10	EEE/Enl
120	The Smart Cube	56	14	All
121	Thermax Ltd.	14	3	Chemical
122	Thoughtworks Technologies India Pvt Ltd	9	1	All
123	Total Environment Building Systems Pvt Ltd	8	2	Civil
124	UCO Bank	27	9	All
125	United Online Software Development	9	2	All
126	Value Edge Research	15	3	All
127	Voltas Limited	10	1	Mech
128	Water Jet Germany Private Limited	9	1	Mech
129	WIPRO Technologies	26	9	All
130	Yahoo! Research & Development Pvt. Ltd	15	2	CS/IT
131	Zynga Game Network India Pvt Ltd	20	11	CS/IT

Legend: BT: Biotechnology, CE: Civil, CHE: Chemical, CM: Communication Engineering, CS: Computer Science, DE: Design Engineering, EEE: Electrical & Electronics, ET: Engineering Technology, E&I: Electronics & Instrumentation, ECON: Economics, FIN: Finance, GS: General Studies, IS: Information System, MANUF: Manufacturing Systems Engineering, MATH: Mathematics, MECH: Mechanical, MI: Microelectronics, MMS: Master of Management Studies, PHARM: Pharmacy, SS: Software Systems, MBA

Summary

Total No. of companies:	131
Total No. of students interviewed:	2428
Total No. of appointments offered:	847

Legend

BT: Biotechnology, CE: Civil, CHE: Chemical, CM: Communication Engineering, CS: Computer Science, DE: Design Engineering, EEE: Electrical & Electronics, ET: Engineering Technology, E&I: Electronics & Instrumentation, ECON: Economics, FIN: Finance, GS: General Studies, IS: Information System, MANUF: Manufacturing Systems Engineering, MATH: Mathematics, MECH: Mechanical, MI: Microelectronics, MMS: Master of Management Studies, PHARM: Pharmacy, SS: Software Systems, MBA.

LIST OF PROJECTS COMPLETED UNDER CERTAIN PROJECT-ORIENTED COURSES IN THE YEAR 2012

Second Semester 2011-2012 (January 2012 to May 2012)

S.No.	Name	Faculty	Title
Computer Projects			
1.	Kushagra Singh	Shanta Pendkar	Data mining techniques in bioinformatics
2.	P Shiva Kumar	Shanta Pendkar	Data mining techniques in bioinformatics
3.	Prakhar Goyal	Shanta Pendkar	Problems in genome assembly and comparative genomics
4.	Roney Michael	Shanta Pendkar	Problems in genome assembly and comparative genomics
5.	Sahil Bansal	Shanta Pendkar	Problems in genome assembly and comparative genomics
6.	Vin Lamba	Shanta Pendkar	Data mining techniques in bioinformatics
Lab Oriented Projects			
1.	Akshit Singhvi	J L Raheja	Real time bridge dynamics monitoring using image processing
2.	Bhendawade Nikhil Nishikant	K. Solomon Raju	Real time voice recognition
3.	Chetan S	Sanjay Singh	FPGA based hardware accelerator for image scaling
4.	G Rahul Reddy	K.Solomon Raju	Implementation of energy efficient algorithms for placement of WSN sensor nodes.
5.	Jain Akhil Satendra	Raaj Ramsankaran	G.I.S. based hydrological modelling of an ungauged watershed.
6.	Jain Akhil Satendra	J V Madhuri	G.I.S. based hydrological modelling of an ungauged watershed.
7.	Kapil Vatwani	J L Raheja	Real time bridge dynamics monitoring using image processing.
8.	Naushad Ismail Dhamani	K.Solomon Raju	Structural health monitoring using wireless sensor network
9.	Reddigari Gopal Bhoomreddy	K.Solomon Raju	Implementation of energy efficient algorithms for placement of WSN sensor nodes.
10.	Vanga Sri Vivek	K.Solomon Raju	Implementation of energy efficient algorithms for placement of WSN sensor nodes
11.	Winy Jain	K.Solomon Raju	Structural health monitoring using wireless sensor network
12.	Yash Agarwal	K.Solomon Raju	Structural health monitoring using wireless sensor network
Study Oriented Projects			
1.	Aashray Agur	Gunjan Soni	Supply chain intelligence
2.	Abhishek Bhaskar	M Ganesh	A comprehensive analysis of business models

S.No.	Name	Faculty	Title
	Iyer		of fooll clubs
3.	Ajay Pal Singh	S Balasubramanian	Finite element analysis
4.	Ajitesh Srivastava	A. S. Mandal	Emotion recognition using genetic algorithm
5.	Ajitesh Srivastava	Akbar	Emotion recognition using genetic algorithm
6.	Akhil Umat	Dipak Kumar Satpathi(HYD)	Prediction of the cutting forces in the turning operation of the mild steel
7.	Aman Agarwal	J L Raheja	Real time image processing for human computer interface
8.	Ayush Agarwal	Gunjan Soni	Review of supply chain management in textile industry by method of case study
9.	Damera Saiteja	A. S. Mandal	Image enhancement of aerial videos
10.	Damera Saiteja	Akbar	Image enhancement of aerial videos
11.	G Prajwal	A. S. Mandal	Image enhancement of aerial videos
12.	G Prajwal	Akbar	Image enhancement of aerial videos
13.	Gaurav Mittal	Dipak Kumar Satpathi(HYD)	Prediction of cutting forces in turning operation of mild steel.
14.	Ishan Jain	Ashok Chauhan	Complex structure and dynamics of collective motion.
15.	Ishan Jain	Gunasoumya Gondeti	Complex structure and dynamics of collective motion.
16.	Jai Awasthi	Shashikant Sadistap	Study of advanced embedded linux operating systems
17.	Juhi Kapoor	S Balasubramanian	Theory & numerics of hyperbolic problems
18.	Keerty Sriram	J V Madhuri	Remote sensing and GIS applications in hydrology and water resource-a review
19.	Keerty Sriram	Raaj Ramsankaran	Remote sensing and GIS applications in hydrology and water resource-a review
20.	Md. Raza Ahmad	Varun Singh	Finite element analysis of bevel gear
21.	Mukul Gupta	A. S. Mandal	Developing a mathematical model for effective recognition of facial expressions
22.	Mukul Gupta	Akbar	Developing a mathematical model for effective recognition of facial expressions
23.	Nalin Gupta	S Balasubramanian	Finite element analysis using FEAP
24.	Nidhi Jayapalan	K.Solomon Raju	Hardware implementation of GMSK modulator and demodulator
25.	Parnika Shrivastava	J V Madhuri	Comprehensive review of soil erosion modelling
26.	Parnika Shrivastava	Raaj Ramsankaran	Comprehensive review of soil erosion modelling
27.	Pratyush Sanjay Shrotriya	Ajay Agarwal	Silicon nanowire fabrication techniques
28.	Rajiv J. Nagpal	Monica Sharma	Applicability of theory of constraints in total quality management
29.	Saraansh Rai	Varun Singh	Finite element analysis of helical gear
30.	Satyam Dutt	Dipak Kumar Satpathi (HYD)	Prediction of the cutting forces in the turning operation of mild steel.
31.	Shrinidhi Chaudhari	A. S. Mandal	Effective cognitive states color rendering and music, program rendering
32.	Shrinidhi Chaudhari	Akbar	Effective cognitive states color rendering and

S.No.	Name	Faculty	Title
			music, program rendering
33.	Siddarth Biyani	K.Solomon Raju	Hardware implementation of GMSK modulator and demodulator
34.	Sk Mohammad Ali	Amit Kumar Singh	Optimum design of vehicle suspension systems
35.	Sriram V J	M Ganesh	Game theory and its applications in the industry.
36.	Sushant Mattoo	J L Raheja	Real time image processing for human computer interface
37.	Tanveet Singh Saluja	Varun Singh	Finite element analysis (F.E.A) of roller contact bearings.
38.	Varun Penjuri	A. S. Mandal	Study of feature extraction techniques of video data
39.	Varun Penjuri	Akbar	Study of feature extraction techniques of video data
40.	Vedula Srikanth	A. S. Mandal	Study of feature extraction of video data.
41.	Vedula Srikanth	Akbar	Study of feature extraction of video data.
42.	Venkayala Pruthvi Raj	Amit Kumar Singh	Alternate forms of powertrain
43.	Vinay Kumar Reddy Konikanti	B.D.Pant	MEMS mechanical sensors
44.	Vishal Chowdhury	Gunjan Soni	Involvement of suppliers and consumers in new product development process
45.	Vivek Sharma	Ajay Agarwal	Controlling of PCR chip temperature using labview/embedded c

Reading Course

1.	Anirudh Mallem	S Balasubramanian	Humanities & Design
2.	Rishabh Gupta	S Balasubramanian	Humanities & Design
3.	Siddhant Jain	S Balasubramanian	Humanities & Design
4.	Siddharth Kshetrapal	S Balasubramanian	Humanities & Design
5.	Vishvmitra Belsare	S Balasubramanian	Humanities & Design

First Semester 2012-2013 (August 2012 to December 2012)

S. No.	Name	Faculty	Title
Computer Projects			
1.	Abhijit Bhomia	Sangeeta Sharma	Inculcation of soft skills in women and developing multipurpose website.
2.	Abhishek Jhanwar	Kiran DC	Development of a basic kernel (OS)
3.	Ajay Pal Singh	Rajesh Mehrotra	Developing Super Hydrophobic Surface Inspired From Lotus Leaf
4.	Akash Agarwal	Vinayak Kalluri	Developing A Software Using Bayesian Networks.
5.	Akshay Sharma	Yashvardhan Sharma	Design and development of a system for conducting survey in BITS-PILANI.
6.	Akshay Singhal	Rahul Singhal	Orthogonal frequency division multiplexing

S. No.	Name	Faculty	Title
			(OFDM)
7.	Amitvikram Dutta	Pratik N Sheth	Simulation of viscose flow in rayon plant
8.	Anant Bhargava	Dipendu Bhunia	Computer aided analysis of framed structures
9.	Anil Kumar Zedia	Virendra Singh Nirban	Dynamic web based application development (DBMS)for course management
10.	Anupam Purwar	P Srinivasan	Dual cylinder continuous combustion engine :design and analysis
11.	Archit Singh	Arun Kumar Jalan	Modelling of rotor system
12.	Arnav Jain	JP Misra	Development of self-configuring software application
13.	Ashish Chauhan	Amol M R Marathe	A study of metereological suspension of ground vehicle seat system with nonlinear biodynamics of driver
14.	Ashok Saini	R Purohit	Website designing for the instrumentation lab
15.	Ashu Gupta	HK Mohanta	Design of soft sensors for process monitoring and control
16.	Ashvin Agarwal	Suresh Gupta	Life cycle assessment of extraction process, used for extraction of carboxylic acids.
17.	Asmita Agrawal	N Mehala	Developing a plug-in to the web search model
18.	Atul Kumar Saini	R Purohit	Website designing for the instrumentation lab
19.	B Shravan Achar	Rahul Singhal	Modelling of KLATT speech synthesizer in matlab
20.	B. Abhinav Ramana	Poonam Goyal	Design and implementation of an efficient method for cluster labeling
21.	Babita Rathore	Pushp Lata	Web designing for technical report writing
22.	Bajaj Jash Shailendra	MS Dasgupta	Design optimization
23.	Bannore Kunal Girish	JP Misra	Implementation of incremental fuzzy pid control in a autonomous line tracking and collision avoidance robot
24.	Bhagyashree Nayak	SP Vimal	Scene classification based on salient regions
25.	C.V.Shankar Ram	HK Mohanta	Modelling and simulation of multicomponent distillation column using aspen
26.	Debabrata Ghosh	Md. Baseer Ahmed	Economic and environment based analysis of chemical processes
27.	Deepa Deepta Acharya	Shibasish Chowdhury	Computer oriented study of ligand-receptor docking mechanism.
28.	Deepika Saini	Pushp Lata	Web desiging for technical report writing
29.	Dhananjaya Singh Kathait	Rajesh P Mishra	Application of value stream mapping using simulation
30.	Dharmapuram Suraj	Mukesh Kr Rohil	Techniques for visualizing change in context of time series data.
31.	Dhruv Sharma	K Hari Babu	To study p2p streaming systems and reduce the start-up time after channel selection.
32.	Ganesula Manikanta Sai Ram	Virendra S Shekhawat	Addition of various features to an existing moodle
33.	Gaurav Raj	Mukesh Kr Rohil	Techniques for visualizing change in context of time series data.
34.	Goda Vinay	Ajit Pratap Singh	Fuzzy multi-criteria decision making for water

S. No.	Name	Faculty	Title
			management
35.	Grandhi S N Venkataramana Ajit	K Hari Babu	Improving neighbour selection algorithm in P2P streaming systems.
36.	Harjot Kaur	Mayuri Digalwar	Development of operating system KENEL
37.	Harsh Bhalotia	Pankaj Vyas	Automatic timetable generation for resolving DTC cases
38.	Harshil Khimesara	G Muthukumar	Design of multi-storeyed rcc building using STAAD.
39.	Himanshu Aggarwal	G Muthukumar	Design of multi-storeyed rcc building using STAAD.
40.	Irvinder Noor Singh	HK Mohanta	Modeling, simulation and control of a FCC unit.
41.	Jasneet Singh	HK Mohanta	Modelling, simulation and control of reactive distillation systems.
42.	Kazi Parvez Alam	JP Misra	Implementation of incremental fuzzy PID control in a autonomous line tracking and collision avoidance robot
43.	Kiran K	Jitendra S Rathore	Effective product development through integration of reverse engineering and rapid prototyping
44.	Manish Piplawa	Ankit Chaudhary	GUI for embeded systems
45.	Marakani Pranav	Sachin Maheshwari	Design of low voltage OPAMP for biomedical applications.
46.	Md. Raza Ahmad	Amol M R Marathe	A study of metereological suspension of ground vehicle seat system with nonlinear biodynamics of driver
47.	Mitul Chotia	JP Misra	Design & development of reconfigurable s/w application
48.	Modi Krupal Chandresh	Anu Gupta	Minimization of power and delay of digital circuits using method of logical efforts.
49.	Mohit Sankhla	Pushp Lata	Website designing for effective public speaking
50.	Muppalla Usha	Nikhil Prakash	Study of METALLOCENE catalyzed propylene polymerization
51.	Nagavaram Ashritha	Kiran DC	Instruction scheduling techniques for multi-core and parallel architectures
52.	Nalin Gupta	Kuldip Singh Sangwan	Modeling and simulation of metal cutting
53.	Nikhil Shrivastava	G Muthukumar	Analysis of structures using ANSYS
54.	Pargaonkar Aniket Arvind	Rahul Singhal	Extraction of speech parameters from a voiceprint
55.	Pimpale Abhishek Krishnakumar	Surekha Bhanot	Adaptive neuro fuzzy inference systems (ANFIS) based non linear control of a ph neutralization process
56.	Piyush Sharma	Yashvardhan Sharma	Design and implementation of web services with asp.net technologies
57.	Pothypalli Hareesh Babu	Subhajit Majumdar	Modeling of heat integrated distillation process
58.	Pramod Kumar	Devika	Webpage designing and database management for creative writing
59.	Pranjal Prabhash	Pushp Lata	Developing web based applications which will

S. No.	Name	Faculty	Title
			help develop English proficiency test
60.	Prateek Raj Srivastava	Maheswar Dwivedi	Solving non-linear optimization problems using gradient based projection methods
61.	Prayas Mittal	Maheswar Dwivedi	Study of numerical methods using matlab
62.	Ranveer Singh	Anil Rai	Music and literature
63.	Rishabh Gupta	Anu Gupta	Design, analysis and simulation of low power digital system design.
64.	Rishi Bansal	K Hari Babu	Developing an algorithm for peer partner switching based on heuristic criteria
65.	Rohan Manchanda	Md. Baseer Ahmed	Economic and environmental based analysis of chemical processes
66.	S.Pramod	Hari Om Bansal	Estimation of state of charge(soc) in a hybrid electric vehicle (HEV)
67.	Sachin Kumar Soni	Ankit Chaudhary	Web development
68.	Sameer Goyal	K Hari Babu	Proposing a mechanism for control operations in on demand video streaming
69.	Sandeep Kumar Sharma	Devika	Webpage designing and database management for creative writing
70.	Saurabh Kumar	JP Misra	Implementation of incremental fuzzy PID control in a autonomous line tracking and collision avoidance robot.
71.	Saurav Pandey	Rahul Singhal	Code division multiple access (CDMA)
72.	Shaleen Kumar Sharma	Navneet Goyal	Game theoretic machine learning and its application in social networks
73.	Shiv Kumar	Anil Rai	Mathematical aspects of music
74.	Shreel Vijayvargiya	Abhijit R Asati	Conversion of image processing algorithm from matlab to c
75.	Shreevar Rastogi	Sai Jagan Mohan	Application of fungs theories on continuum mechanics for material modelling
76.	Shubham Goel	Suresh Gupta	Life cycle assessment of extraction process, used for extraction of carboxylic acids.
77.	Siddharth Arya	Virendra Singh Nirban	Development of mass media content and design website.
78.	Siddharth Sharma	G Muthukumar	Analysis of structures using ANSYS
79.	Subhayan Mukerjee	Navneet Goyal	Game theoretic machine learning and its application in social networks
80.	Sukant Dewangan	Anu Gupta	Design, simulation and analysis of clockless logic based circuits
81.	Sumit Kumar	R Gupta	Integration of G.I.S (geographical information system), hydraulic network solver and evolutionary algorithm for optimization of tank pipeline network
82.	Sunila	Omvir Chaudhry	Model for capital budgeting of a business enterprise.
83.	Surbhi Garg	Mayuri Digalwar	Development of a basic kernel
84.	Sushil Kumar	Ankit Chaudhary	GUI for embedded systems
85.	Sushila Kirodiwal	Ankit Chaudhary	Web development.
86.	Swapnil Mishra	Sangeeta Sharma	Website development in order to inculcate soft skills in rural areas
87.	Syed Ain Ahmad	Shamsher B Singh	Finite element analysis of beams

S. No.	Name	Faculty	Title
88.	Tanmay Rajendra Ramaiya	Srikanta Routroy	Development of benchmarking model for supply chain agility.
89.	Tarun Chhabra	G Muthukumar	Development of user friendly software for structural designing and analysis of buildings.
90.	Thoram Sri Harsha	Virendra S Shekhawat	Implementation of chord, a scalable peer-to-peer lookup service for internet applications
91.	Udit Pillai	Arun Kumar Jalan	Modelling of disk rotor system
92.	Vanama Venkata Sri Harsha Sai	Virendra S Shekhawat	Addition of various features to an existing moodle
93.	Vatsal Rastogi	Murali P	Multi-channel routing algorithms on mobile adhoc networks
94.	Vengatesh Muralidharan	HK Mohanta	Modelling, simulation and control of a distillation column
95.	Venkatramanan S	Sachin Maheshwari	Design of low voltage OPAMP for biomedical applications.
96.	Vijay Shankar Saini	Suneel Kumar	Construction of java classes in an existing MVC application.
97.	Vinay Kumar.B.R.	Rahul Singhal	Determination of spectral parameters in human speech
98.	Vishal Mehta	Pushp Lata	Developing web based applications which will help develop English proficiency test
99.	Vivek Notani	Kiran DC	Developing a basic kernel
100.	Yogendra Singh	Pushp Lata	Web designing for technical report writing

Lab Oriented Projects

1.	Aashutosh Bajaj	Jaipal A	Design and development of BUCCAL tablet for systemic availability of a suitable drug tablet
2.	Abhishek Mukherjee	Abhijit R Asati	Architecture of a generic (MXN) BAUGH WOOLEY multiplier
3.	Adarsh Mishra	Shamsher B Singh	Investigation of material and structural response of fiber reinforced concrete.
4.	Aditya Kaushik	Dipendu Bhunia	Investigation into the behavior of coupling beam.
5.	Alugubelli Shanthan Reddy	Anshuman Dalvi	Mg ²⁺ ion conducting polymers. Synthesis and characterization.
6.	Anirban Mukherjee	Rahul Banerjee	Investigations into body area networks: lower level design and implementation aspects
7.	Anirudh Singh	R Mahesh	Synthesis of potential intermediates & precursors for novel anti depressants.
8.	Anirudha S Bhat	RP Khare	Development of a pc-based fiber optic displacement/position monitor
9.	Ankush Agarwal	Dipendu Bhunia	Disaster mitigation through base isolators.
10.	Anshul Misra	Ashish Mishra	C based extraction of performance graphs in FPGAS
11.	Antony Abraham	Paritosh Shukla	Some basic techniques for synthetic organic chemistry
12.	Anurag Kankanala	Anshuman Dalvi	Development of lithium ion conducting glass ceramic NANO composites for lithium ion

S. No.	Name	Faculty	Title
			batteries.
13.	Apoorv Tandon	Suresh Gupta	Carbon mitigation using various methods (biological methods)
14.	Arpit Kishore	Suresh Gupta	Bio-remediation of heavy metals
15.	Ashis Dash	Pratik N Sheth	Gasification of JATROPHA residue cake to generate producer gas
16.	Ashish Bussa	NN Sharma	Study of ZNO based MEMS acoustic sensor
17.	Ayan	Suresh Gupta	Study and analysis of phenol adsorbing properties of rice husk and other alternatives for treatment of industrial waste water
18.	Ayush Gupta	Shriniwas Arkatkar	Study of traffic flow on INDIAN roads.
19.	B. Abhinav Ramana	Rahul Banerjee	Investigations into body area networks: higher level design and implementation aspects
20.	Bojanapalli Rajagopal	Lucky Sharan	FPGA based MIMO system
21.	Cherukuri Mohana Sai	K Hari Babu	Simulation of dos, ICMP and TCP attacks in laboratory environment.
22.	Chetan S	Nitin Chaturvedi	Verilog implementation of last level cache for CMP
23.	Chitransh Agrawal	Dipendu Bhunia	Disaster mitigation through base isolators
24.	Damera Saiteja	Anu Gupta	Exploration, design and analysis of CMFB circuits in integrated analog circuits
25.	Deepa Deepta Acharya	R Mahesh	Synthesis of novel intermediates for potential pde-4 inhibitors.
26.	Deepak G	S Mohan	Localization of mobile robot using computer vision.
27.	Devashish Bansal	Ashish Mishra	Auto generation of wrapper in digital systems
28.	Eshan Verma	Ashish Mishra	Audio processing using FPGAS.
29.	G Prajwal	Anu Gupta	Design and analysis of sample and hold circuit for ICS
30.	Gain Emdo Bimal	Shamsher B Singh	Response of FRP reinforced sustainable concrete structure
31.	Gaurav Agarwal	Pratik N Sheth	Experimental investigations on pyrolysis of plastic and rubber tyres
32.	Gautam Kumar Singh	Shamsher B Singh	Response of F.R.P reinforced sustainable concrete structures
33.	Goutham Sekhar	Geetha B	Video content creation: short documentary films
34.	Gunturu Anvesh	K Hari Babu	Simulation of dos, ICMP & TCP attacks in laboratory environment
35.	Harsha Rastogi	Ashish Mishra	Implementation of general synthesis system for SRAM-based FPGAS named rasp
36.	Himanshu Aggarwal	Shriniwas Arkatkar	Study of traffic flow characteristics on INDIAN roads.
37.	Himanshu Tyagi	Pratik N Sheth	Production and characterization of bio-oil from Jatropha residue cake
38.	Itiyama Sadana	Rahul Banerjee	Algorithms and mechanisms for qos-capable manets.
39.	Joshi Raj Kiran	Rahul Banerjee	Algorithms and mechanisms for qos-capable manets

S. No.	Name	Faculty	Title
40.	Kiran K	Geetha B	Video content creation on innovative technical projects at bits Pilani
41.	Komara Venkata Nitin	Geetha B	Video content creation for innovative teaching and learning
42.	Kosana Karthik	Shamsher B Singh	Response of FRP reinforced structures (concrete+clay brick)
43.	Kunal Saluja	Arshad Javed	Development of automated systems using PIC microcontroller
44.	Lingireddy Praneeth Kumar Reddy	Shamsher B Singh	Response of FRP reinforced masonry structures (concrete+clay brick)
45.	M.V.S.Kireeti	Smita Raghuvanshi	Identifying microbes for the methanogenesis of various wastes & a design of bioreactor for efficient and mobile methanogenesis
46.	Md Urooj Abdullah	R Gupta	Designing an automated water level measurement and database management system for a network of tanks using f-bus and microcontroller
47.	Modi Krupal Chandresh	Abhijit Karmakar	PSOC based application development
48.	Neeti Pokharna	Prabhat Nath Jha	Computer vision based application for plant recognition and classification
49.	Neha Jain	Rajiv Ranjan Singh	Biomedical instrumentation for disabilities
50.	Nelabhotla Anirudh Bhanu Teja	SK Verma	Biodiesel production from microalgae
51.	Nemmaru V Bhargava	Smita Raghuvanshi	Identifying microbes for the methanogenesis of various wastes & a design of bioreactor for efficient and mobile methanogenesis
52.	Nidhi Doshi	Jaipal A	Design and development of NANO particulate drug delivery system for a suitable drug candidate.
53.	Nidhi Jayapalan	Ashish Mishra	Rasp- a general logic synthesis system for SRAM-based FPGAS
54.	Nikhil Mittal	Bijoy Kumar Raut	Intelligent exoskeleton module for rehabilitation
55.	Nishant Babel	Sanghamitra Kundu	Study of leaching properties of fly ash
56.	Nishant Sangal	Shamsher B Singh	Response of FRP reinforced sustainable concrete structures
57.	Nitin Khandelwal	Dipaloy Datta	Separation of heavy metals from aqueous solution using reactive extraction
58.	Paras Joshi	Shamsher B Singh	Investigation of material and structural response of fiber reinforced concrete
59.	Phalguni Jain	SC Bose	Delay locked loop (DLL)
60.	Pimpale Abhishek Krishnakumar	Abhijit R Asati	Semi custom design of a generic (MXN) DADDA multiplier
61.	Prakash Yadav	Bijoy Kumar Raut	Intelligent exoskeleton module for rehabilitation
62.	Prankur Sharma	Dipaloy Datta	Separation of heavy metals from aqueous solution using reactive extraction
63.	Prashanth.B	Nitin Chaturvedi	Verilog implementation of last level cache of chip multi processors.
64.	Raghava Adusumilli	AK Sarkar	Use of NANO silica for improving the

S. No.	Name	Faculty	Title
			engineering characteristics of demolished building materials.
65.	Rahul Deshmukh	NN Sharma	Study of ZNO based MEMS acoustic sensor
66.	Ravi Ranjan	AK Das	Purification of recombinant il-1beta and raising of antibodies to the recombinant protein detection of il-1beta in malarial sera.
67.	Rayudu Venkata Suresh	RP Khare	Development of pc-based fiber-optic sensor for measurement of pressure
68.	Reetika Kumari Agarwal	SC Bose	Programmable low power and low noise neural recording amplifier for hand prosthesis applications.
69.	Ritendra Sankar Biswas	Inamur R Laskar	Synthesis of highly efficient organic luminescent material of light elements (Zn-Zinc, Cu-Copper) for applications in organic light emitting diodes.
70.	Ruchika	R Mahesh	Synthesis of novel intermediates for potential antimalarial.
71.	S. Sumanth	RP Khare	Development of a pc-based fiber optic displacement/position monitor
72.	Sagnik Singha	Sachin U Belgamwar	Characterization of carbon-nanotubes.
73.	Sahil Deep Bajwa	Abhijit R Asati	Design of a generic binary multiplier using wallace tree algorithm
74.	Saksham Pant	SC Bose	Delay locked loop (DLL)
75.	Sanjeev Agarwal	Srikant Y Charde	Design and development of NANO particulate drug delivery system for a suitable drug candidate.
76.	Saurabh Pradeep Bondarde	Rajneesh Kumar	Design of sensor for maximum power point tracking
77.	Shivam Masuriha	Sanghamitra Kundu	Leaching properties of fly ash
78.	Shivani Jakhodia	RN Saha	Nanotechnology in protein drug delivery
79.	Shouvik Basak	Jaipal A	Design and development of BUCCAL tablet for systemic availability of a suitable drug
80.	Shreel Vijayvargiya	S Gurunarayanan	FPGA based system design of high speed Arithmetic circuits
81.	Shriharsh S Rahatgaonkar	Vinod Kumar Chaubey	Wireless relay control using ZIGBEE and PSOC.
82.	Shubham Gupta	Rahul Banerjee	Algorithms and mechanisms for qos-capable manets
83.	Siddharth Garg	Anu Gupta	Design, modeling and simulation of a neuron using analog VLSI technology
84.	Siddharth Shah	Rahul Banerjee	Algorithms and mechanisms for quality of service - capable mobile ad-hoc networks.
85.	Srija Lahiri	Manoj Kumar Dutta	Modeling and characterization of optical WDM network
86.	Subhendu Mishra	Rajiv Ranjan Singh	Design and automation of a digital blood pressure monitor
87.	Sukant Dewangan	Abhijit Karmakar	PSOC based applications development
88.	Sukhatme Sarvesh Abhay	NN Sharma	Instrumentation of MEMS sensor
89.	Sumit Kumar	K K Gupta	Study of micro-controllers and plc

S. No.	Name	Faculty	Title
	Pradhan		
90.	Suyash Anant	Jaipal A	Design and development of nanoparticles for transdermal drug delivery.
91.	Tanay Upadhyaya	Rahul Banerjee	Algorithms and mechanism for quality of service-capable manets
92.	Tejas Suhas Pande	Rajneesh Kumar	Design of sensor for maximum power point tracking
93.	Tharun Kumar Reddy Aluka	AK Sarkar	Use of NANO silica for improving the engineering characteristics of demolished building materials.
94.	Tushar Agrawal	S Mohan	Localization of a mobile robot using computer vision
95.	Vankadari Koushik Kumar	Srikant Y Charde	Design and development of BUCCAL MUCO adhesive delivery system for selected drug.
96.	Vattikuti Siddhartha	RN Saha	Development of analytical method and design of novel delivery systems of selected drug.
97.	Venkatramanan S	Ashish Mishra	Interfacing of FPGA using OPENCV library
98.	Vinit Kumar Bansal	Surekha Bhanot	Intelligent ph control of PCT-40
99.	Vivek Chirania	R Gupta	Designing an automated water level management and updating system for a network of water tanks using f-bus and microcontrollers.
100.	Voditel Viraj Suneel	Shamsher B Singh	Study of carbonation of concrete made with fly ash and slag cement

Study Oriented Projects

1.	Aakriti Goel	Smita Kashiramka	A review of debt crisis since 1990.
2.	Aashutosh Bajaj	Shvetank Bhatt	Recent advances in diabetes mellitus
3.	Aastha Mital	Paritosh Shukla	Antimalarial chemical agents and their chemistry
4.	Abhijit Bhomia	Gajendra S Chauhan	Amul butter ads: Where is the language?
5.	Abhinav Duggal	Poonam Goyal	Design and implementation of concept hierarchy for efficient information retrieval.
6.	Abhinav Jha	Yashvardhan Sharma	Issues with cloud computing
7.	Abhishek Choudhery	N Mehala	Web search enhancement
8.	Abhishek Goel	Suneel Kumar	Implementing AI techniques using PHP and MYSQL
9.	Abhishek Jhanwar	Virendra S Shekhawat	Retransmission of TCP packets from intermediate node.
10.	Abhishek Mukherjee	Navneet Gupta	Study of electrical behaviour of NC-TFTS
11.	Abhishek Saxena	Manoj Kumar	Economical span of RC bridges.
12.	Abhishek Singh	Amit Kumar Verma	Study of a model on unemployment
13.	Adhiraj Singh Rathore	Sanghamitra Kundu	Characterisation of Khetri copper mine tailing and their leaching aspects
14.	Aditya Kashi	Jitendra S Rathore	Study of tapered flagella and influence of its geometric parameters on its performance, i.e., velocity, efficiency and thrust force
15.	Aditya Kaushik	Manoj Kumar	Design aspects of suspension bridges.
16.	Adnan Husain	Navneet Goyal	Rare class classification using data mining

S. No.	Name	Faculty	Title
17.	Agrawal Chirag Shivprakash	Sangeeta Sharma	Study of advertising strategies used by mobile companies
18.	Akash Agarwal	Satish K Dubey	Heat transfer and combustion modeling of burners using fluent.
19.	Akash Saxena	Suneel Kumar	A rule based editor for a rule based system.
20.	Akshay Mittal	Rajan Pandey	Application of black scholes model in real world
21.	Aman Aggarwal	AK Sarkar	Innovative transportation system inspired from spiders web
22.	Aman Pratap Singh Rajvi	Bijoy Kumar Raut	Process capability analysis in manufacturing & services industry
23.	Anirudh Aggarwal	Srikanta Routroy	Development of performance measurement system for supply chain agility
24.	Anirudh Mallem	Kumar Neeraj Sachdev	Impact of society on technology
25.	Anirudh Singh	Srikant Y Charde	Sustained release formulations.
26.	Anirvan Komath Majumdar	Manoj Kannan	Genetic, biochemical and metaphysical approaches for the basis of instinct and other selected animal behaviors
27.	Anjishnu Kumar	Srikanta Routroy	Development of a DSS for measuring supply chain collaboration
28.	Anjum Dhamija	Harikrishnan G Nair	Devising an educational model for rural India
29.	Ankita Ashok Sarda	Navneet Goyal	Stream data mining
30.	Ankita Duggal	Ruchika Sharma	The psychology of interpersonal communication
31.	Anmol Agrawal	Surekha Bhanot	Recent trends and technologies in sensors and display devices
32.	Anmol Gupta	Arya Kumar	Forecasting and monitoring the aggregate Indian economy through a composite index of leading business cycle indicators.
33.	Anshul	AK Sarkar	Innovative transportation system inspired from spiders web
34.	Anshul Garg	Hari Om Bansal	Various control strategies in hybrid electrical vehicles
35.	Anshul Sharma	Rajan Pandey	Impact of dividends on stock price volatility: Observations from Indian stock market
36.	Anupam Purwar	Vinod Kumar Chaubey	Anti jamming techniques for GPS systems: Study, analysis and design
37.	Apoorv Pathak	Rajesh P Mishra	Design of facilities layout
38.	Apoorv Tandon	Leela Rani	Foreign investment in oil and gas industry
39.	Apurva Sharma	SP Vimal	Scene recognition using PLSA (probabilistic latent semantic analysis)
40.	Archit Singh	Rajesh P Mishra	Strategies for sustainable product design for mass customization
41.	Arunima Das	Arun Kumar Jalan	Study of vibrations for shape memory alloys
42.	Avinash Nayak	P Srinivasan	Analysis of heat transfer in composite nuclear fuels during nuclear reaction and propose a suitable insulation design around the fuel assembly.
43.	Avishek Banerjee	Arun Kumar Jalan	Control of mechanical vibration by delayed resonators.

S. No.	Name	Faculty	Title
44.	Avishek Saha	Rajesh P Mishra	A survey on multi objective facility location problem
45.	Ayush Agrawal	NV Muralidhar Rao	Effects on foreign exchange market of breaking-up of a currency union
46.	Ayushman Kheterpal	Meghna Charde	Thermal performance (experimental and simulation) and cost analysis of energy efficient buildings.
47.	Babita Rathore	Satyendra Kr Sharma	Stake holder analysis of project
48.	Bhatlapenumarathi Ambarisha	Shan Balasubramaniam	Cloud computing
49.	Bhawarth	Arvind Kumar Sharma	Design stage optimization of fluidized bed catalytic cracking unit (FCCU)
50.	Bhawika Jain	Arvind Sudarshan	Accounting standards and financial statements
51.	Bhutada Shrikant Lakshmikant	Hitesh Dutt Mathur	Modelling of solar photovoltaic with grid interconnection.
52.	Bitul Sinha	MS Soni	Power generation using concentrated solar collector with geothermal cooling
53.	C.V.Shankar Ram	Smita Raghuvanshi	Bio based methods for the mitigation of flue gases
54.	Chakradeo Saneet Shirish	Anupam Singhal	A study of non-conventional methods of power generation.
55.	Charudatt Chaudhari	Ruchika Sharma	Product placement in Indian movies
56.	Chauhan Bhavesh Jaikumar	RR Mishra	Advanced topics in general relativity and applications to cosmology
57.	Cherukuri Mohana Sai	NV Muralidhar Rao	Economics of cloud adaptation in mobile technology
58.	Chinta Surya Naga Malleswara Rao	Kumar Neeraj Sachdev	Social perspective of Indian Diaspora relations
59.	Deepesh Lakhota	Arvind Sudarshan	Analysis of acquisitions in India
60.	Deepika Saini	Omvir Chaudhry	Survey methodology for demand forecasting in the context of infrastructure projects
61.	Dhananjaya Singh Kathait	NV Muralidhar Rao	Why some countries default more than others
62.	Dipesh Gupta	Virendra S Shekhawat	Securing wireless networks using cryptographic techniques
63.	Divya Joshi	Vinod Kumar Chaubey	Anti jamming techniques for GPS systems: Study, analysis and design
64.	Divya Kadiyan	Arvind Kumar Sharma	Simulation and analysis of fluidized bed catalytic cracker unit (FCCU)
65.	Divyanshi Srivastava	AK Das	Variations in cell cycle regulation: a comparative study between malaria and cancer.
66.	Ekansh	Rajesh P Mishra	Optimization of cutting operation through design of experiment method
67.	Ganesula Manikanta Sai Ram	A Anand Kumar	Study of fir filter in DSP
68.	Goda Vinay	AK Sarkar	Development of a plan for sustainable growth of Pilani.
69.	Gune Abhishek Avinash	Niranjan Swain	Business analysis - application of balanced scorecard at DIVGI-WARNER

S. No.	Name	Faculty	Title
70.	Gunturu Anvesh	Kumar Neeraj Sachdev	Impact of technology on society
71.	Gurlinka K L Srinivasarao	Ajit Pratap Singh	Ground water quality assessment using fuzzy logic technique
72.	Harsh Bhalotia	Sushila Shekhawat	Role of marketing research & advertising in promoting sale and internationalization of small firms
73.	Harshdeep Singh	Varinder Kumar Mittal	Process improvement for sustainable manufacturing - a case study
74.	Harshil Khimesara	AK Sarkar	Development of a plan for the sustainable growth of Pilani.
75.	Hemant Khatri	P Srinivasan	Feasibility study of OXY-FUEL combustion and simulation of tangentially fired boilers
76.	Himaghna Bhattacharjee	Arvind Kumar Sharma	Biological treatment of water and waste water -latest developments
77.	Himanshu Poonia	Smita Kashiramka	Raising capital in foreign markets
78.	Isha Inani	Rajiv Kumar	Study of linear partial differential equations
79.	Ishan Jain	Umesh Dhyan	Perspective of education policy in India
80.	Jais Dev	Ruchika Sharma	A study on the effectiveness of endorsement of products, unrelated to sports, by sport stars
81.	Jatin Bansal	Varinder Kumar Mittal	Study of sustainable manufacturing systems/a case of India
82.	Jithin Joseph	Kuldip Singh Sangwan	Applications of lean manufacturing
83.	K Kalyan Kumar	Harikrishnan G Nair	Study on selected works of Alexis De Tocqueville
84.	Kale Pooja Pramod	Amit Kumar Verma	Numerical solution of problem arising in tumour growth.
85.	Kalika Saxena	Lucky Sharan	Modelling and simulation of non-linear effects in WDM systems.
86.	Kamaneeya Kalaga	Jaipal A	Recent advances and improvements in the ophthalmic drug delivery system
87.	Kanak Lata	Kiran DC	Comparison of scheduling techniques of multi core architecture
88.	Kapil Vatwani	PC Panchariyan	Elliptic seizure detection using brain wave activity
89.	Kavya Yarlagadda	Arvind Kumar Sharma	Biological treatment of water and waste water- recent developments
90.	Kazi Parvez Alam	NV Muralidhar Rao	Stock market prediction using hidden MARKOV models
91.	Khannan Sundar	Vandana Agarwal	Object tracking and trajectory feature extraction.
92.	Kriti Soni	Surekha Bhanot	Optical waveguide based micro-cantilever biosensor
93.	Kuheli Jati	Surekha Bhanot	Study of soft sensors and their applications in monitoring and control.
94.	Kunal Sapra	AK Sarkar	A detailed study on pedestrian safety
95.	Kunchey Pavan Kumar	Arun Kumar Jalan	Control of mechanical vibrations by delayed resonators
96.	Kurre Abhishek	P Srinivasan	Feasibility study of implementing solar power plant for BITS -Pilani campus

S. No.	Name	Faculty	Title
97.	Lakshmi Gangavathi Karri	Jaipal A	Transdermal drug delivery system - recent advances
98.	Madhulika Rai	Anil Rai	The laya (speed) and the layakari (multiple speeds)
99.	Mahan Singh Sekhon	Gajendra S Chauhan	The power and reach of social media networks in mobilising the public opinion
100.	Malpani Vaibhav Omprakash	S Mohan	Study of some flocking algorithms for swarm robots
101.	Mamidi Venkata Naga Jaggarao	Abhijit K Digalwar	Lean manufacturing "value stream management"
102.	Manasa G	Arvind Sudarshan	Development of infrastructure index
103.	Manish Piplawa	Anil Rai	Ustad Allarkha Khan : A tabla maestro
104.	Manisha Rana	Pushp Lata	Essay writing - a tool to critical thinking
105.	Maniyar Shrikant Narsing	R Gupta	Solar energy potential assessment of India using geographic information systems.
106.	Manu Dixit	P Srinivasan	Simulation of heat transfer in nuclear reactor core
107.	Manupriya Veerman	Smita Kashiramka	A comprehensive study of mutual fund market in India.
108.	Marakani Pranav	S Gurnarayanan	Architectural exploration of reduced instruction set computing (RISC) processors.
109.	Megha Gupta	Smita Kashiramka	Indian stock market since 1991
110.	Mehul Mittal	Rajan Pandey	Impact of dividends on stock price volatility: observations from Indian stock market
111.	Mellacheruvu Padmini	MS Soni	Concentrating solar photo-voltaic power generation
112.	Mogili Sankeerth Reddy	NV Muralidhar Rao	Economics of cloud adaptation in mobile technology
113.	Mohammad Shakir	Rajesh P Mishra	Development of maintenance model using graph theory.
114.	Mohammed Shariq Farhan	Harikrishnan G Nair	Devising an educational model for rural India
115.	Mohit Agarwal	S Kannan	Study of management information systems
116.	Mohit Sankhla	Satyendra Kr Sharma	Assessment of environmental risk using graph theory
117.	Monica Jain	Anupam Singhal	Reduction of CO2 emissions
118.	Mukundan Sandeep	Dipak Bansal	High speed RF MEMS
119.	Munje Ishan Deepak	Rajiv Ranjan Singh	Exploring the implementation of DSP algorithms on FPGA or reconfigurable hardware
120.	Muppalla Usha	Md. Baseer Ahmed	Design stage optimization of low density polyethylene reactor
121.	Nagavaram Ashritha	Yashvardhan Sharma	Query processing with xml
122.	Naik Shilpa Sheshadri	MS Dasgupta	Design optimization
123.	Nainy Agrawal	Vinod Kumar Chaubey	Anti jamming techniques for GPS systems: study, analysis and design
124.	Nalin Gupta	Sai Jagan Mohan	Simulation and modeling of fracture mechanics using finite element analysis

S. No.	Name	Faculty	Title
			program (FEAP)
125.	Naveen Kumar	Virendra S Shekhawat	Retransmission of TCP packets from intermediate node.
126.	Neeraja Sridhar	Hari Om Bansal	Study of various types of induction motor contioning processes
127.	Neha Anand	Nikhil Prakash	Studies on metallocene catalyzed ethylene polymerization.
128.	Nelabhotla Anirudh Bhanu Teja	Prabhat Nath Jha	Role of endophytic micro-organizms in biofuel production and microalgal growth and development.
129.	Nidhi Doshi	Smita Kashiramka	Market for initial public offers in India
130.	Niel Kaustubh Patel	Sai Jagan Mohan	Aerodynamics of sports balls
131.	Niharika Gupta	Dileep Kumar Gupta	Modelling and simulation of heat exchanger using fluent
132.	Nipun Kothare	P Srinivasan	Simulation of heat transfer in nuclear reactor core
133.	Nishank Varshney	Shashi	Optimization of cutting parameters for continuous finished profile machining using particle swarm optimization.
134.	Olive Chakraborty	Amit Kumar Verma	Study of some advanced concepts of complex analysis.
135.	P Anand	Rajiv Ranjan Singh	Exploring the implementation of DSP algorithms on FPGA or reconfigurable hardware.
136.	P Rishikesan	Harikrishnan G Nair	The evolution of the (JAN) LOK PAL movement- a study on its origins and implications on corruption in India.
137.	P.Nishit.Jain	Jyoti	Portfolio analysis and valuation of patents
138.	Palak Dada	NV Muralidhar Rao	Role of intellectual property rights (IPR) in encouraging FDI, technology transfer and economic development
139.	Palash Gupta	Manoj Kumar	Study of concrete filled steel tube arch bridges
140.	Pasumarthi N Ram Gopal Viswanadh	NV Muralidhar Rao	Exchange rate determination and forecasting.
141.	Peeyush Kumar	Jitendra S Rathore	An aerodynamic investigation of an isolated stationary/running "formula 1" wheel assembly.
142.	Pershant Goyal	Jitendra S Rathore	An aerodynamic investigation of an isolated stationary/running "formula 1" wheel assembly
143.	Phalguni Jain	Rajneesh Kumar	Applications of nanosensors
144.	Pingili.V.Lohith	Srikant Y Charde	Laws governing pharmaceutical profession in India and their impact on India pharma sector
145.	Piyush Bindu	Varinder Kumar Mittal	Process improvement for sustainable manufacturing-a case study
146.	Piyush Sharma	Devika	Motivation enhancing factors among student
147.	Potla Bharath	A Anand Kumar	Study of dc to ac converter
148.	Prabhat Gupta	Anupam Singhal	Hazardous waste management facilities in India
149.	Prachi Mittal	Paritosh Shukla	Important drugs derived from plants - from isolation to application

S. No.	Name	Faculty	Title
150.	Pramod Kumar	Satyendra Kr Sharma	Can India's logistics industry deliver a better model for transporting goods?
151.	Prashant Mital	P Srinivasan	Time prediction analysis of cooling time of oil mixture during breakdown of fractional distillation plant in a refinery.
152.	Prashanth.B	S Gurunarayanan	Study and analysis of multiscale pipelined architectures.
153.	Pratik Anand	Vinita Tiwari	Optical signal modulation using optism
154.	Pulkit Khemka	Surekha Bhanot	Intelligent control schemes for ph neutralization process.
155.	Puneet Redu	Omvir Chaudhry	Role of FDI in economic development.
156.	R Krishna Kumar	P Srinivasan	Feasibility study of implementing solar power plant for BITS -Pilani campus
157.	Rachit Jain	P Srinivasan	Utilization of exhaust gases from an engine.
158.	Raghava Adusumilli	Meghna Charde	Thermal performance (theoretical) analysis and cost analysis of energy efficient buildings.
159.	Rahul Deshmukh	Satish K Dubey	Heat transfer and combustion modeling of burners using fluent
160.	Rahul Garg	P Srinivasan	Utilization of heat of exhaust gases from an engine.
161.	Rahul Mehta	Omvir Chaudhry	Development of a model for forecasting human resource requirement in engineering projects.
162.	Rahul Singla	Sai Jagan Mohan	Aerodynamic drag through simulation and experiments.
163.	Rajat Sethi	Shuvendu N Patel	Seismic retrofitting of concrete buildings
164.	Ramprasad M Nambisan	Amit Kumar Verma	Study of numerical solutions of partial differential equations using MATLAB
165.	Ramya Singh	Smita Kashiramka	India vs china-an in depth growth analysis
166.	Ranabir Mitra	Avinash Gautam	Area exploration with SRV-1 robot
167.	Ranveer Singh	Devika	Role of personality in studenthood
168.	Rathi Roshan Radheshyam	MS Soni	Study of generation of power through vertical axis windmill.
169.	Ravin Arora	Bijoy Kumar Raut	Process capability analysis in manufacturing & services industry
170.	Reetika Kumari Agarwal	Nitin Chaturvedi	Analysis and design of an analog subsystem for neural architecture modeling.
171.	Reuben Benjamin George	Arvind Sudarshan	Development of infrastructure index
172.	Richika Chohan	Shvetank Bhatt	Novel therapeutic target and drugs for treatment of parkinsonism (including animal models)
173.	Rishabh Gupta	Shan Balasubramaniam	Finding methods of specification, representation and verification of answers other than multiple choice input in an educational tool.
174.	Ronak Maheshwari	NV Muralidhar Rao	Why some countries default more than others
175.	Ronak Mundra	Suneel Kumar	Mathematical modelling using A.I. techniques
176.	Roney Michael	Rajesh P Mishra	Study and analysis of various non-traditional optimization techniques for manufacturing systems

S. No.	Name	Faculty	Title
177.	Rubin Kothari	Rajan Pandey	Evaluating the performance of volatility forecasting models
178.	Ruchika	Srikant Y Charde	Novel approaches for drug targeting of anti-cancer drug based on ADME and clinical principle.
179.	Rumanshu Katiyar	Sanghamitra Kundu	Water resource information system
180.	S Bhargav	Kunal Bhattacharya	Application of non-equilibrium statistical Physics in Biological matter
181.	S Venkatesh	Rajesh P Mishra	Study of some aspects single point cutting tool.
182.	Sagi Avinash Varma	Ajit Pratap Singh	Ground water quality assessment using fuzzy logic technique
183.	Sagnik Singha	P Srinivasan	To determine the HTC (heat transfer coefficient) in a super critical boiler.
184.	Saksham Pant	Rajneesh Kumar	Applications of nanosensors
185.	Samarth Hegde	AK Das	Protein-protein interactions (PPIS) in two-hybrid systems with emphasis on vector-borne diseases.
186.	Sanchit Garg	MS Soni	Study and design of solar concentrators
187.	Sandeep Kumar Sharma	Satyendra Kr Sharma	Management of enterprise risk in financial crisis
188.	Saneet Agrawal	HK Mohanta	Simulation and optimisation of hydrocracking process
189.	Saraansh Rai	Rajesh P Mishra	Strategies for sustainable product design for mass customization
190.	Sarim Hassan	Manoj Kumar	A study of structural design and constructional aspects of new age structures
191.	Sartaj Singh Manhas	Smita Raghuvanshi	Studies on carbon dioxide mitigation using bio based technique.
192.	Saumya Agrawal	A K Giri	Benchmarking financial development of India
193.	Saurabh Kumar	Poonam Goyal	Design and implementation of concept hierarchy for efficient information retrieval.
194.	Saurabh Pradeep Bondarde	Biswanath Layek	Introductory cosmology
195.	Saurabh Sandeep Kothari	Murali M Pandey	Psychotropic drugs used for recreational purposes
196.	Saurav Pandey	Harikrishnan G Nair	A review of literature on Gandhi's relationship with Italy
197.	Shah Roshni Rajesh	P Srinivasan	Internalizing the external costs in power generation.
198.	Shardool Rastogi	Harikrishnan G Nair	The relationship between two anarchists - mahatma Gandhi and Leo Tolstoi
199.	Shauvik Agrawal	A Anand Kumar	Analysis of signal in Labview.
200.	Shiv Kumar	Devika	Importance of conversation skills among professionals
201.	Shivam Pratap Singh	Anupam Singhal	To study the impacts on environment of a hydro power plant.
202.	Shivani Jakhodia	R Mahesh	Impact of allelic polymorphism on drug metabolism and personalisation of therapy
203.	Shlok Satyam	Lucky Sharan	Simulation and modelling of WDM systems in presence of non-linearity

S. No.	Name	Faculty	Title
204.	Shouvik Basak	Shvetank Bhatt	Recent advances in schizophrenia
205.	Shrey Kapoor	Sai Jagan Mohan	To study the steering dynamics and self stability of bicycles using Newtonian equations and simple experiments.
206.	Shruti Inamdar	Surekha Bhanot	Detailed study of different types of amplifiers, their principles and applications.
207.	Shrutika Soni	NV Muralidhar Rao	IPR and incentive to innovate
208.	Shwetabh Sameer	Sai Jagan Mohan	To study the steering dynamics and self stability of a bicycle with the help of Newtonian dynamics and simple experiments.
209.	Siddhant Agasti	Madhukar Mishra	Quarkonia suppression/production in QCD matter
210.	Siddharth Arya	Satyendra Kr Sharma	Logistic analysis of transportation industry.
211.	Sk Mohammad Ali	Abhijit K Digalwar	Lean manufacturing techniques for productivity improvement.
212.	Snigdha Nigam	Rajesh Mehrotra	Study of trans-esterification reaction in biodiesel production.
213.	Sonit Tayal	Kuldip Singh Sangwan	Lean implementation in a SME using multi attribute decision making techniques
214.	Soumyadipto Ray	Kaushar Vaidya	Life cycle of stars (stellar evolution)
215.	Sourabh Bhati	Meghna Charde	Thermal performance (experimental and simulation) and cost analysis of energy efficient buildings.
216.	Sriivatsan G	Shvetank Bhatt	Novel therapeutic targets for the treatment of depression and anxiety
217.	Srija Lahiri	Abhijit R Asati	Implementation of an image processing algorithm on FPGA
218.	Srikirti.L.Velivela	Vinayak Kalluri	Study of interpretive structural modelling process and applying into a case problem
219.	Sriram V	Nitin Chaturvedi	Verilog implementation of last level cache for CMP
220.	Sukriti Kumari	Smita Kashiramka	A comprehensive study of mutual fund market in India
221.	Sukriti Sapra	Arvind Sudarshan	A study of the capital structure and shareholder returns of Indian companies
222.	Sumit Gupta	Umesh Dhyani	The era of BUDDHA
223.	Sumit Kumar	Ajit Pratap Singh	Fuzzy multicriteria decision making for water management
224.	Sunkara Kamal	Kuldip Singh Sangwan	Implementation of sustainable manufacturing : a case study
225.	Surabhi Kothiyal	Rajan Pandey	The impact of derivatives trading on market efficiency and volatility: observations on the Indian capital market
226.	Surawar Neha Vilas	Mayuri Digalwar	Study and implementation of different thread scheduling algorithms for multiprocessor and multi-core processors
227.	Suyash Anant	Shvetank Bhatt	Novel therapeutic target and drugs for the treatment of diabetes mellitus (including animal models).
228.	Swapnil Dineshchandra Haria	Nitin Chaturvedi	Novel SRAM cell architecture

S. No.	Name	Faculty	Title
229.	Swapnil Mishra	Satyendra Kr Sharma	Identification and assessment of environmental risk in Indian automobile segment
230.	Swati Prusty	Hari Om Bansal	Power optimization of hybrid electric vehicle
231.	Syed Ain Ahmad	Manoj Kumar	Design aspect of cable stayed bridge
232.	Tanu Gupta	NV Muralidhar Rao	IPR and incentive to innovate
233.	Tanveet Singh Saluja	P Srinivasan	An econometric study on long-term energy outlook and the implications of renewable energy utilization in India.
234.	Tarun Chhabra	Anupam Singhal	Environmental impact of hydro power plant.
235.	Thoram Sri Harsha	Kumar Neeraj Sachdev	Social perspective of Indian diaspora relations
236.	Tripti Rawal	Paritosh Shukla	Protein KINASE inhibitors.
237.	Tushar Agrawal	PC Panchariyan	Epileptic seizure detection using brain wave activity
238.	Umesh Anandram Balwani	Anupam Singhal	Hazardous waste management facilities in India.
239.	Uppala Venkata Vamsi Krishna	Srikanta Routroy	Study of supplier development collaboration in manufacturing supply chain
240.	V Deepti	SP Vimal	Scene recognition using probabilistic latent semantic analysis
241.	V Shashi Kiran	Harikrishnan G Nair	Rights of man-its evolution in the west
242.	Vadapalli Vijay Subrahmanya Varma	RR Mishra	Advanced topics in general relativity and applications to cosmology
243.	Vaibhav Sinha	Rakhee	Path delay analysis of wireless sensor networks (WSNS) and also implementing the concept of g-queues in WSNS.
244.	Valluri Manoj Kumar	Smita Raghuvanshi	An introduction to fuel cells and their potential application in the present scenario
245.	Vattikuti Siddhartha	Srikant Y Charde	A study on design and recent advances in developing specific site targeted novel nano-particle drug delivery systems
246.	Ved Parth Bharatkumar	Kuldip Singh Sangwan	Lean implementation in small and medium enterprises using MADM techniques
247.	Vengatesh Muralidharan	Smita Raghuvanshi	Environmental impact assessment for process industries
248.	Vineela Meghana Ramadana	Arvind Sudarshan	A study of corporate governance in the Indian scenario.
249.	Vinti Arora	Dileep Kumar Gupta	Modelling and simulation of heat exchanger using fluent.
250.	Vishal Mehta	Omvir Chaudhry	Economic parameters in implementation of cloud computing platform in India.
251.	Vishal Singh Chundawat	Sanghamitra Kundu	Characterization of Khetri copper mines tailing and their leaching aspects
252.	Vishnu Kaant Pitty	Rajan Pandey	The impact of derivatives trading on market efficiency and volatility: observations from the Indian capital market
253.	Vishvmitra Belsare	SP Vimal	Local and global features based topic model for scene recognition.
254.	Yash Vakilna	Manoj Kannan	Genetic, biochemical and metaphysical approaches for the basis of instinct and other selected animal behaviours

S. No.	Name	Faculty	Title
255.	Yeruva Taj Kumari	S Murugesan	Antibacterials and drug resistance : an overview
256.	Yudhajeet Dasgupta	Vinita Tiwari	Optical signal modulation using optimism
Reading Course			
1.	Agam Kapur	Geetha B	Humanities and design
2.	Akhil Chaturvedi	Geetha B	Humanities and design
3.	Bahety Urvi Prashant	Sarvesh Satija	Study of criminal psychology
4.	Chauhan Bhavesh Jaikumar	Risikesh Vaidya	Group theory and its applications to theoretical physics
5.	Debabrata Ghosh	Sarvesh Satija	To study contemporary topics of positive psychology
6.	Gorthi Bhavana Deepthi	Risikesh Vaidya	Group theory and its applications to theoretical physics
7.	Kartik.N.Sunku	Geetha B	Humanities and design
8.	Pranav Kochatta	Geetha B	Humanities and design
9.	Shauvik Agrawal	Umesh Dhyani	The story of my experiments with truth, an autobiography by mahatma gandhi
10.	Vadapalli Vijay Subrahmanya Varma	Risikesh Vaidya	Group theory and its applications to theoretical physics
11.	Varundev Solanki	Geetha B	Humanities and design
12.	Vineet Maheshwari	Geetha B	Humanities and design
Special Projects			
1.	Anagh Pathak	RR Mishra	A study of the quantum theory of electrodynamics (Q.E.D)
2.	Astha Dhayal	Smita Kashiramka	Study on foreign exchange market
3.	Juhi Singh	Arvind Sudarshan	Study of market structure and functioning
4.	Nomchin Banga	Rajiv Kumar	Minimal spanning tree problems with constraints
5.	Palak Dada	A K Giri	An analysis of business climate in different Indian states
6.	Pothypalli Hareesh Babu	Suresh Gupta	Removal of chromium CR(VI) from waste water using low cost adsorbents
7.	Saurabh Bulchandani	Dipendu Bhunia	Investigation into the behavior of coupling beam
8.	Supreet Gupta	Smita Raghuvanshi	Modeling, simulation and control of a ph neutralization process
9.	Vibhor Chaturvedi	Omvir Chaudhry	To study about different companies in it sector and compare their dividend payout ratio and profit margin

NEW COURSES INTRODUCED IN THE YEAR 2012

New / Modified Courses:

S.No.	Course No.	Course Title
1.	BIO F110	Biology laboratory
2.	BIO F111	General Biology
3.	BIO F201	Introductory Biology
4.	BIO F211	Biological chemistry
5.	BIO F212	Microbiology
6.	BIO F213	Cell Biology
7.	BIO F214	Integrated Biology
8.	BIO F215	Biophysics
9.	BIO F241	Ecology and Environmental Sciences
10.	BIO F242	Introduction to Bioinformatics
11.	BIO F243	Genetics
12.	BIO F244	Instrumental Methods of Analysis
13.	BIO F266	Study Project
14.	BIO F311	Recombinant DNA Technology
15.	BIO F312	Plant Physiology
16.	BIO F313	Animal Physiology
17.	BIO F341	Developmental Biology
18.	BIO F342	Immunology
19.	BIO F352	Cell and Tissue Culture Technology
20.	BIO F366	Lab Project
21.	BIO F367	Lab Project
22.	BIO F376	Design Project
23.	BIO F377	Design Project
24.	BIO F411	Laboratory
25.	BIO F413	Molecular Biology of Cell
26.	BIO F417	Biomolecular Modelling
27.	BIO F418	Genetic Engineering Techniques
28.	BIO F419	Molecular Evolution
29.	BIO F421	Enzymology
30.	BIO F431	Reproductive Physiology
31.	BIO F441	Biochemical Engineering
32.	BIO F451	Bioprocess Technology
33.	BIO F491	Special Projects
34.	BIOT F215	Biophysics
35.	BIOT F241	Genetic Engineering Techniques
36.	BIOT F242	Introduction to Bioinformatics
37.	BIOT F243	Genetics
38.	BIOT F244	Instrumental Methods of Analysis

S.No.	Course No.	Course Title
39.	BIOT F245	Introduction to Environmental Biotechnology
40.	BIOT F266	Study Project
41.	BIOT F311	Recombinant DNA Technology
42.	BIOT F314	Industrial Microbiology and Bioprocess Engineering
43.	BIOT F342	Immunology
44.	BIOT F343	Experiments in Biotechnology
45.	BIOT F344	Downstream Processing
46.	BIOT F345	Proteomics
47.	BIOT F346	Genomics
48.	BIOT F347	Immunotechnology
49.	BIOT F352	Cell and Tissue Culture Technology
50.	BIOT F366	Lab Project
51.	BIOT F367	Lab Project
52.	BIOT F376	Design Project
53.	BIOT F377	Design Project
54.	BIOT F413	Molecular Biology of the Cell
55.	BIOT F416	Introduction to Pharmaceutical Biotechnology
56.	BIOT F417	Biomolecular Modeling
57.	BIOT F420	Introduction to Plant Biotechnology
58.	BIOT F422	Nanobiotechnology
59.	BIOT F423	Drug design and delivery
60.	BIOT F424	Food Biotechnology
61.	BIOT C463	Introduction to Immunology & Immunotechnology
62.	BITS F110	Engineering Graphics
63.	BITS F111	Thermodynamics
64.	BITS F112	Technical Report Writing
65.	BITS F201	Material Science and Engineering
66.	BITS F221	Practice School
67.	BITS F231	Practice School
68.	BITS F241	Practice School
69.	BITS F311	Image Processing
70.	BITS F312	Neural Networks and Fuzzy Logic
71.	BITS F313	Multicriterion Decision Making in Engineering and Management
72.	BITS F316	Nonlinear Dynamics and Chaos
73.	BITS F331	Quantum Computation and Information
74.	BITS F343	Fuzzy Logic and Applications
75.	BITS F345	Information Law and Cyber Law
76.	BITS F351	Nonlinear Dynamics and Chaos
77.	BITS F364	Human Computer Interaction
78.	BITS F385	Introduction to Gender Studies
79.	BITS F386	Quantum Information and Computation
80.	BITS F407	Selected Readings
81.	BITS F412	Practice School II

S.No.	Course No.	Course Title
82.	BITS F413	Practice School II
83.	BITS F415	Introduction To MEMS
84.	BITS F421T	Thesis
85.	BITS F422T	Thesis
86.	BITS F423T	Thesis
87.	BITS F424T	Thesis
88.	BITS F437	Technical Communication
89.	BITS F463	Cryptography
90.	BITS F464	Machine Learning
91.	BITS F467	Bioethics and Biosafety
92.	CE F211	Mechanics of Solids
93.	CE F212	Transport Phenomena
94.	CE F213	Surveying
95.	CE F214	Construction Materials
96.	CE F241	Analysis of Structures
97.	CE F242	Construction Planning and Technology
98.	CE F243	Soil Mechanics
99.	CE F244	Highway Engineering
100.	CE F266	Study Project
101.	CE F311	Design of Concrete Structures
102.	CE F312	Hydraulics Engineering
103.	CE F313	Foundation Engineering
104.	CE F323	Introduction to Environmental Engineering
105.	CE F324	Numerical Analysis
106.	CE F341	Hydrology & Water Resources Engineering
107.	CE F342	Water & Waste Water Treatment
108.	CE F343	Design of Steel Structures
109.	CE F366	Lab Project
110.	CE F367	Lab Project
111.	CE F376	Design Project
112.	CE F377	Design Project
113.	CE F411	Management Research for Engineers
114.	CE F412	Disaster Management
115.	CE F413	Advanced Structural Design
116.	CE F415	Design of Prestressed Concrete Structures
117.	CE F416	Computer Applications in Civil Engineering
118.	CE F417	Applications of Artificial Intelligence in Civil Engineering
119.	CE F419	Geotechnical Earthquake Engineering and Machine Foundation
120.	CE F420	Introduction to Bridge Engineering
121.	CE F421	Analysis and Design of FRPReinforced Concrete Structures
122.	CE F423	Green Buildings and Energy Conservation
123.	CE F425	Airport, Railways and Waterways
124.	CE F426	Geosynthetics and ReinforcedSoil Structure

S.No.	Course No.	Course Title
125.	CE	F427 System Modeling and Analysis
126.	CE	F428 Earthquake Resistant Design and Construction
127.	CE	F429 Design of Foundation Systems
128.	CE	F430 Design of Advanced Concrete Structures
129.	CE	F431 Principles of Geographical
130.	CE	F432 Structural Dynamics
131.	CE	F433 Remote Sensing and Image Processing
132.	CE	F434 Environmental Impact Assessment
133.	CE	F435 Introduction to Finite Element Methods
134.	CE	F491 Special Projects
135.	CHE	F211 Chemical Process Calculations
136.	CHE	F212 Fluid Mechanics
137.	CHE	F213 Chemical Engineering Thermodynamics
138.	CHE	F214 Engineering Chemistry
139.	CHE	F241 Heat Transfer
140.	CHE	F242 Numerical Methods for Chemical Engineers
141.	CHE	F243 Material Science and Engineering
142.	CHE	F244 Separation Processes I
143.	CHE	F266 Study Project
144.	CHE	F311 Kinetics and Reactor Design
145.	CHE	F312 Chemical Engineering Lab I
146.	CHE	F313 Separation Processes II
147.	CHE	F314 Process Design Principles I
148.	CHE	F341 Chemical Engineering Laboratory II
149.	CHE	F342 Process Dynamics and Control
150.	CHE	F343 Process Design Principles II
151.	CHE	F366 Lab Project
152.	CHE	F367 Lab Project
153.	CHE	F376 Design Project
154.	CHE	F377 Design Project
155.	CHE	F411 Environmental Pollution Control
156.	CHE	F412 Process Equipment Design
157.	CHE	F413 Process Plant Safety
158.	CHE	F414 Transport Phenomena
159.	CHE	F415 Molecular and Statistical Thermodynamics
160.	CHE	F416 Process Plant Design Project I
161.	CHE	F417 Process Plant Design Project II
162.	CHE	F418 Modelling and Simulation in Chemical Engineering
163.	CHE	F419 Chemical Process Technology
164.	CHE	F421 Bio-chemical Engineering
165.	CHE	F433 Corrosion Engineering
166.	CHE	F471 Advanced Process Control
167.	CHE	F491 Special Projects

S.No.	Course No.	Course Title
168.	CHEM F110	Chemistry Laboratory
169.	CHEM F111	General Chemistry
170.	CHEM F211	Physical Chemistry I
171.	CHEM F212	Organic Chemistry I
172.	CHEM F213	Physical Chemistry II
173.	CHEM F214	Inorganic Chemistry I
174.	CHEM F223	Colloid and Surface Chemistry
175.	CHEM F241	Inorganic Chemistry II
176.	CHEM F242	Chemical Experimentation I
177.	CHEM F243	Organic Chemistry II
178.	CHEM F244	Physical Chemistry III
179.	CHEM F266	Study Project
180.	CHEM F311	Organic Chemistry III
181.	CHEM F312	Physical Chemistry IV
182.	CHEM F313	Organic Chemistry III
183.	CHEM F323	Biophysical Chemistry
184.	CHEM F324	Numerical Methods in Chemistry
185.	CHEM F325	Polymer Chemistry
186.	CHEM F326	Solid State Chemistry
187.	CHEM F327	Electrochemistry: Fundamentals and Applications
188.	CHEM F328	Supramolecular Chemistry
189.	CHEM F329	Analytical Chemistry
190.	CHEM F330	Photophysical Chemistry
191.	CHEM F333	Chemistry of Materials
192.	CHEM F334	Magnetic Resonance
193.	CHEM F335	Organic Chemistry and Drug Design
194.	CHEM F336	Nanochemistry
195.	CHEM F337	Green Chemistry and Catalysis
196.	CHEM F341	Chemical Experimentation II
197.	CHEM F342	Organic Chemistry IV
198.	CHEM F343	Inorganic Chemistry III
199.	CHEM F366	Lab Project
200.	CHEM F367	Lab Project
201.	CHEM F376	Design Project
202.	CHEM F377	Design Project
203.	CHEM F412	Photochemistry and Laser Spectroscopy
204.	CHEM F413	Electron Correlation in Atoms and Molecules
205.	CHEM F414	Bio and Chemical Sensors
206.	CHEM F415	Frontiers in Organic Synthesis
207.	CHEM F422	Statistical Thermodynamics
208.	CHEM F491	Special Projects
209.	CS F111	Computer Programming
210.	CS F211	Data Structures & Algorithms

S.No.	Course No.	Course Title
211.	CS	F212 Database Systems
212.	CS	F213 Object Oriented Programming
213.	CS	F214 Logic in Computer Science
214.	CS	F215 Digital Design
215.	CS	F222 Discrete structures for Computer Science
216.	CS	F241 Microprocessors & Interfacing
217.	CS	F266 Study Project
218.	CS	F301 Principles of Programming Languages
219.	CS	F303 Computer Networks
220.	CS	F314 Software Development for Portable Devices
221.	CS	F342 Computer Architecture
222.	CS	F351 Theory of Computation
223.	CS	F363 Compiler Construction
224.	CS	F364 Design and Analysis of Algorithms
225.	CS	F366 Lab Project
226.	CS	F367 Lab Project
227.	CS	F372 Operating Systems
228.	CS	F376 Design Project
229.	CS	F377 Design Project
230.	CS	F401 Multimedia Computing
231.	CS	F404 Computer Crime and Forensics
232.	CS	F406 Ethical Hacking
233.	CS	F407 Artificial Intelligence
234.	CS	F413 Internetworking Technologies
235.	CS	F415 Data Mining
236.	CS	F422 Parallel Computing
237.	CS	F424 Software for Embedded Systems
238.	CS	F441 Selected Topics from Computer Science
239.	CS	F446 Data Storage Technologies and
240.	CS	F451 Combinatorial Mathematics
241.	CS	F491 Special Projects
242.	CS	G501 Mobile Computing
243.	CS	G514 Object Oriented Analysis and Design
244.	CS	G517 Network and System Security
245.	CS	G520 Advanced Data Mining
246.	CS	G527 Cloud Computing
247.	CS	G557 Distributed Computing
248.	CS	G559 Database Security
249.	CS	G564 Advanced Cryptography
250.	ECE	F211 Electrical Machines
251.	ECE	F212 Electromagnetic Theory
252.	ECE	F214 Electronic Devices
253.	ECE	F215 Digital Design

S.No.	Course No.	Course Title
254.	ECE F241	Microprocessors and interfacing
255.	ECE F242	Control Systems
256.	ECE F243	Signals and Systems
257.	ECE F244	Microelectronic Circuits
258.	ECE F266	Study Project
259.	ECE F311	Communication Systems
260.	ECE F314	Electromagnetic Fields and Microwave Engineering
261.	ECE F341	Analog Electronics
262.	ECE F343	Communication Networks
263.	ECE F344	Information Theory and Coding
264.	ECE F366	Lab Project
265.	ECE F367	Lab Project
266.	ECE F376	Design Project
267.	ECE F377	Design Project
268.	ECE F414	Telecommunication Switching Systems and Networks
269.	ECE F416	Digital Communication
270.	ECE F418	Modern Communication Technologies
271.	ECE F431	Mobile Telecommunication Networks
272.	ECE F434	Digital Signal Processing
273.	ECE F472	Satellite Communication
274.	ECE F491	Special Projects
275.	ECON F211	Principles of Economics
276.	ECON F212	Fundamentals of Finance and Accounts
277.	ECON F213	Mathematical & Statistical Methods
278.	ECON F214	Economic Environment of Business
279.	ECON F241	Econometric Methods
280.	ECON F242	Microeconomics
281.	ECON F243	Macroeconomics
282.	ECON F244	Economics of Growth and Development
283.	ECON F266	Study Project
284.	ECON F311	International Economics
285.	ECON F312	Money, Banking and Financial Markets
286.	ECON F313	Issues in Economic Development
287.	ECON F341	Public Finance Theory and Policy
288.	ECON F342	Applied Econometrics
289.	ECON F343	Economic Analysis of Public
290.	ECON F351	Indian Economic Development
291.	ECON F352	Management of Banks and Financial Institutions
292.	ECON F353	Energy Economics and
293.	ECON F354	Derivatives and Risk Management
294.	ECON F355	Business Analysis and Valuation
295.	ECON F356	Strategic Financial Management
296.	ECON F357	Management Control System

S.No.	Course No.	Course Title
297.	ECON F366	Lab Project
298.	ECON F367	Lab Project
299.	ECON F376	Design Project
300.	ECON F377	Design Project
301.	ECON F411	Project Appraisal
302.	ECON F412	Security Analysis and Portfolio Management
303.	ECON F413	Financial Engineering
304.	ECON F414	Creating and Leading Entrepreneurial Organizations
305.	ECON F415	New Venture Creation
306.	ECON F416	Regional Economics
307.	ECON F422	Functions and Working of Stock Exchanges
308.	ECON F471	Resources and Environmental Economics
309.	ECON F491	Special Projects
310.	EEE F111	Electrical Sciences
311.	EEE F211	Electrical Machines
312.	EEE F212	Electromagnetic Theory
313.	EEE F214	Electronic Devices
314.	EEE F215	Digital Design
315.	EEE F241	Microprocessors and Interfacing
316.	EEE F242	Control Systems
317.	EEE F243	Signals & Systems
318.	EEE F244	Microelectronic Circuits
319.	EEE F266	Study Project
320.	EEE F311	Communication Systems
321.	EEE F312	Power Systems
322.	EEE F313	Analog & Digital VLSI Design
323.	EEE F341	Analog Electronics
324.	EEE F342	Power Electronics
325.	EEE F345	Power Apparatus & Networks
326.	EEE F346	Data Communication Networks
327.	EEE F366	Lab Project
328.	EEE F367	Lab Project
329.	EEE F376	Design Project
330.	EEE F377	Design Project
331.	EEE F414	Telecommunication Switching Systems & Networks
332.	EEE F416	Digital Communication
333.	EEE F418	Modern Communication Technologies
334.	EEE F422	Modern Control Systems
335.	EEE F425	Power System Analysis and Control
336.	EEE F426	Fiber Optics & Optoelectronics
337.	EEE F427	Electric Power Utilization and Illumination
338.	EEE F431	Mobile Telecommunication Networks
339.	EEE F432	Medical Instrumentation

S.No.	Course No.	Course Title
340.	EEE	F433 Electromagnetic Fields & Waves
341.	EEE	F434 Digital Signal Processing
342.	EEE	F435 Digital Image Processing
343.	EEE	F472 Satellite Communication
344.	EEE	F491 Special Projects
345.	FIN	F212 Fundamentals of Finance and Accounts
346.	FIN	F213 Mathematical and Statistical Methods
347.	FIN	F214 Economic Environment of Business
348.	FIN	F242 Introduction to Financial Mathematics
349.	FIN	F243 Functions and Working of Stock Exchanges
350.	FIN	F244 Indian Financial System
351.	FIN	F266 Study Project
352.	FIN	F311 Derivatives & Risk Management
353.	FIN	F312 Fundamental of Taxation & Audit
354.	FIN	F313 Security Analysis and Portfolio Management
355.	FIN	F314 Investment Banking and Financial Services
356.	FIN	F315 Financial Management
357.	FIN	F341 International Financial Markets and Services
358.	FIN	F342 Project Finance
359.	FIN	F366 Lab Project
360.	FIN	F367 Lab Project
361.	FIN	F491 Special Projects
362.	GS	F211 Modern Political Concepts
363.	GS	F212 Environment, Development & Climate Change
364.	GS	F213 Development Theories
365.	GS	F221 Business Communication
366.	GS	F222 Language Lab Practice
367.	GS	F223 Introduction to Mass Communication
368.	GS	F224 Print and Audio-Visual Advertising
369.	GS	F231 Dynamics of Social Change
370.	GS	F232 Introductory Psychology
371.	GS	F233 Public Policy
372.	GS	F234 Development Economics
373.	GS	F241 Creative Writing
374.	GS	F242 Cultural Studies
375.	GS	F243 Current Affairs
376.	GS	F244 Reporting and Writing for Media
377.	GS	F245 Effective Public Speaking
378.	GS	F266 Study Project
379.	GS	F311 Introduction to Conflict Management
380.	GS	F312 Applied Philosophy
381.	GS	F321 Mass Media Content & Design
382.	GS	F322 Critical Analysis of Literature and Cinema

S.No.	Course No.	Course Title
383.	GS	F325 Journalism
384.	GS	F326 Creative Thinking
385.	GS	F327 Selected Reading
386.	GS	F331 Techniques in Social Research
387.	GS	F332 Contemporary India
388.	GS	F333 Public Administration
389.	GS	F334 Global Business, Technology and Knowledge Sharing
390.	GS	F341 Copywriting
391.	GS	F342 Computer Mediated Communication
392.	GS	F343 Short Film and Video Production
393.	GS	F366 Lab Project
394.	GS	F367 Lab Project
395.	GS	F491 Special Projects
396.	HIST	F112 Main Trends in Indian History
397.	HIST	F211 Main Currents of Modern History
398.	HSS	F221 Readings from Drama
399.	HSS	F222 Linguistics
400.	HSS	F223 Appreciation of Indian Music
401.	HSS	F226 Postmodernism
402.	HSS	F227 Cross Cultural Skills
403.	HSS	F228 Phonetics and Spoken English
404.	HSS	F229 Introduction to Western Music
405.	HSS	F312 Bureaucracy
406.	HSS	F315 Society, Business and Politics
407.	HSS	F325 Cinematic Adaptation
408.	HSS	F326 Humanities and Design
409.	HSS	F327 Contemporary Drama
410.	HSS	F328 Human Resource Development
411.	HSS	F329 Musicology – An Introduction
412.	HSS	F331 Sankara's Thoughts
413.	HSS	F332 Cinematic Art
414.	HSS	F333 Comparative Religion
415.	HSS	F334 Srimad Bhagavad Gita
416.	HSS	F335 Literary Criticism
417.	HSS	F336 Modern Fiction
418.	HSS	F337 English Literary Forms and Movements
419.	HSS	F338 Comparative Indian Literature
420.	HSS	F339 Theatre Art-Acting and Production
421.	HUM	C233 Music of the World: An Introduction
422.	HUM	F411 Professional Ethics
423.	HUM	F412 Heritage of India
424.	INSTR	F211 Electrical Machines
425.	INSTR	F212 Electromagnetic Theory

S.No.	Course No.	Course Title
426.	INSTR F214	Electronic Devices
427.	INSTR F215	Digital Design
428.	INSTR F241	Microprocessors and Interfacing
429.	INSTR F242	Control Systems
430.	INSTR F243	Signals & Systems
431.	INSTR F244	Microelectronic Circuits
432.	INSTR F266	Study Project
433.	INSTR F311	Electronic Instrumentation & Instrumentation Technology
434.	INSTR F312	Transducers and Measurement Systems
435.	INSTR F313	Analog & Digital VLSI Design
436.	INSTR F341	Analog Electronics
437.	INSTR F342	Power Electronics
438.	INSTR F343	Industrial Instrumentation and Control
439.	INSTR F366	Lab Project
440.	INSTR F367	Lab Project
441.	INSTR F376	Design Project
442.	INSTR F377	Design Project
443.	INSTR F411	Opto-Electronic Instruments
444.	INSTR F412	Analysis Instrumentation
445.	INSTR F413	Advanced Process Control
446.	INSTR F414	Telecommunication Switching Systems & Networks
447.	INSTR F415	Digital Control
448.	INSTR F419	Virtual Instrumentation
449.	INSTR F420	Design of Instrumentation Systems
450.	INSTR F422	Instrumentation for Petrochemical Industry
451.	INSTR F432	Medical Instrumentation
452.	INSTR F491	Special Projects
453.	IS F211	Data Structures & Algorithms
454.	IS F213	Object Oriented Programming
455.	IS F214	Logic in Computer Science
456.	IS F222	Discrete Structures for Computer Science
457.	IS F241	Digital Electronics and Microprocesors
458.	IS F242	Computer Organization
459.	IS F243	Database Systems & Application
460.	IS F266	Study Project
461.	IS F301	Principles of Programming Languages
462.	IS F303	Computer Networks
463.	IS F311	Computer Graphics
464.	IS F322	Software Testing
465.	IS F341	Software Engineering
466.	IS F342	Compiler Design
467.	IS F366	Lab Project
468.	IS F367	Lab Project

S.No.	Course No.	Course Title
469.	IS	F376 Design Project
470.	IS	F377 Design Project
471.	IS	F372 Operating Systems
472.	IS	F462 Network Programming
473.	IS	F491 Special Projects
474.	MATH	F111 Mathematics I
475.	MATH	F112 Mathematics II
476.	MATH	F113 Probability & Statistics
477.	MATH	F211 Mathematics III
478.	MATH	F212 Optimization
479.	MATH	F213 Discrete Mathematics
480.	MATH	F214 Elementary Real Analysis
481.	MATH	F215 Algebra-I
482.	MATH	F231 Number Theory
483.	MATH	F241 Mathematical Methods
484.	MATH	F242 Operations Research
485.	MATH	F243 Graphs and Networks
486.	MATH	F244 Measure and Integration
487.	MATH	F266 Study Project
488.	MATH	F311 Introduction to Topology
489.	MATH	F312 Ordinary Differential Equations
490.	MATH	F313 Numerical Analysis
491.	MATH	F314 Algebra II
492.	MATH	F341 Introduction to Functional Analysis
493.	MATH	F342 Differential Geometry
494.	MATH	F343 Partial Differential Equations
495.	MATH	F353 Statistical Inference and Applications
496.	MATH	F354 Complex Analysis
497.	MATH	F366 Lab Project
498.	MATH	F367 Lab Project
499.	MATH	F376 Design Project
500.	MATH	F377 Design Project
501.	MATH	F421 Combinatorial Mathematics
502.	MATH	F431 Distribution Theory
503.	MATH	F441 Discrete Mathematical Structures
504.	MATH	F471 Nonlinear Optimization
505.	MATH	F481 Commutative Algebra
506.	ME	F110 WORKSHOP PRACTICE
507.	ME	F211 Mechanics of Solids
508.	ME	F212 Fluid Mechanics
509.	ME	F213 Materials Science & Engineering
510.	ME	F214 Applied Thermodynamics
511.	ME	F215 Mechanical Engineering Laboratory

S.No.	Course No.	Course Title
512.	ME	F241 Machine Design & Drawing
513.	ME	F242 IC Engines
514.	ME	F243 Production Techniques I
515.	ME	F244 Kinematics & Dynamics of Machinery
516.	ME	F266 Study Project
517.	ME	F311 Heat Transfer
518.	ME	F312 Advanced Mechanics of Solids
519.	ME	F313 Production Techniques II
520.	ME	F341 Prime Movers & Fluid Machines
521.	ME	F342 Computer Aided Design
522.	ME	F343 Mechanical Vibrations
523.	ME	F344 Engineering Optimization
524.	ME	F366 Lab Project
525.	ME	F367 Lab Project
526.	ME	F376 Design Project
527.	ME	F377 Design Project
528.	ME	F411 Fluid Power Systems
529.	ME	F412 Production Planning and Control
530.	ME	F413 Nonlinear Vibrations
531.	ME	F415 Gas Dynamics
532.	ME	F416 Reverse Engineering and Rapid Prototyping
533.	ME	F417 Advanced Metal Forming
534.	ME	F418 Rocket and Spacecraft Propulsion
535.	ME	F419 Total Product Integration Engineering
536.	ME	F420 Power Plant Engineering
537.	ME	F432 Computer Aided manufacturing
538.	ME	F441 Automotive Vehicles
539.	ME	F443 Quality Control, Assurance and Reliability
540.	ME	F451 Mechanical Equipment Design
541.	ME	F452 Composite Materials & Design
542.	ME	F461 Refrigeration and Air conditioning
543.	ME	F472 Precision Engineering
544.	ME	F481 Project Appraisal
545.	ME	F491 Special Projects
546.	MF	F211 Mechanics of Solids
547.	MF	F212 Fluid Mechanics
548.	MF	F213 Materials Science & Engineering
549.	MF	F214 Applied Thermodynamics
550.	MF	F215 Mechanical Engineering Laboratory
551.	MF	F241 Machine Design & Drawing
552.	MF	F242 Manufacturing Management
553.	MF	F243 Manufacturing Processes
554.	MF	F244 Kinematics & Dynamics of Machinery

S.No.	Course No.	Course Title
555.	MF	F266 Study Project
556.	MF	F311 Mechatronics & Automation
557.	MF	F312 Tool and Fixture Design
558.	MF	F313 Metal Forming and Machining
559.	MF	F341 Design of Machine Tools
560.	MF	F342 Computer Aided Design
561.	MF	F343 Casting and Welding
562.	MF	F344 Engineering Optimization
563.	MF	F366 Lab Project
564.	MF	F367 Lab Project
565.	MF	F376 Design Project
566.	MF	F377 Design Project
567.	MF	F411 Fluid Power Systems
568.	MF	F412 Automotive Systems
569.	MF	F413 Mechanical Vibrations and Acoustics
570.	MF	F414 Manufacturing Excellence
571.	MF	F418 Lean Manufacturing
572.	MF	F421 Supply Chain Management
573.	MF	F442 Advances in Materials Science
574.	MF	F453 Industrial Relations
575.	MF	F463 Maintenance and Safety
576.	MF	F471 Instrumentation and Control
577.	MF	F472 Precision Engineering
578.	MF	F473 Product Design and Development
579.	MF	F474 Product Design and Development Projects
580.	MF	F491 Special
581.	MUSIC	N105T Western Classical Music I
582.	MUSIC	N106T Western Classical Music II
583.	MUSIC	N205T Western Classical Music III
584.	MUSIC	N206T Western Classical Music IV
585.	PHA	F211 Pharmaceutical Analysis
586.	PHA	F212 Dispensing Pharmacy
587.	PHA	F213 Microbiology
588.	PHA	F214 Anatomy Physiology & Hygiene
589.	PHA	F241 Pharmaceutical Chemistry
590.	PHA	F242 Biological Chemistry
591.	PHA	F243 Industrial Pharmacy
592.	PHA	F244 Physical Pharmacy
593.	PHA	F266 Study Project
594.	PHA	F311 Pharmacology I
595.	PHA	F312 Medicinal Chemistry I
596.	PHA	F313 Instrumental Methods of Analysis
597.	PHA	F314 Pharmaceutical Formulations and Biopharmaceutics

S.No.	Course No.	Course Title
598.	PHA F341	Pharmacology II
599.	PHA F342	Medicinal Chemistry II
600.	PHA F343	Forensic Pharmacy
601.	PHA F344	Natural Drugs
602.	PHA F366	Lab Project
603.	PHA F367	Lab Project
604.	PHA F376	Design Project
605.	PHA F377	Design Project
606.	PHA F413	Pharmaceutical Management and Quality Control
607.	PHA F414	Biopharmaceutics
608.	PHA F415	Pathophysiology
609.	PHA F416	Chemistry of Synthetic Drugs
610.	PHA F417	Pharmacoeconomics
611.	PHA F422	Cosmetic Science
612.	PHA F432	Hospital Pharmacy
613.	PHA F441	Biochemical Engineering
614.	PHA F442	Applied Pharmaceutical Chemistry
615.	PHA F461	Phytochemistry
616.	PHA F491	Special Projects
617.	PHIL F211	Introductory Philosophy
618.	PHIL F221	Symbolic Logic
619.	PHY F110	Physics Laboratory
620.	PHY F111	Mechanics, Oscillations and Waves
621.	PHY F211	Classical Mechanics
622.	PHY F212	Electromagnetic Theory I
623.	PHY F213	Optics
624.	PHY F214	Electricity, Magnetism, and Optics Lab
625.	PHY F215	Introduction to Astronomy and Astrophysics
626.	PHY F241	Electromagnetic Theory II
627.	PHY F242	Quantum Mechanics I
628.	PHY F243	Mathematical Methods of Physics
629.	PHY F244	Modern Physics Lab
630.	PHY F266	Study Project
631.	PHY F311	Quantum Mechanics II
632.	PHY F312	Statistical Mechanics
633.	PHY F313	Computational Physics
634.	PHY F315	Theory of Relativity
635.	PHY F341	Solid State Physics
636.	PHY F342	Atomic and Molecular Physics
637.	PHY F343	Nuclear and Particle Physics
638.	PHY F344	Advanced Physics Lab
639.	PHY F366	Lab Project
640.	PHY F367	Lab Project

S.No.	Course No.	Course Title
641.	PHY F376	Design Project
642.	PHY F377	Design Project
643.	PHY F412	Introduction to Quantum Field Theory
644.	PHY F413	Particle Physics
645.	PHY F414	Physics of Advanced Materials
646.	PHY F415	General Theory of Relativity and Cosmology
647.	PHY F416	Soft Condensed Matter Physics
648.	PHY F417	Experimental Methods of Physics
649.	PHY F418	Lasers and Applications
650.	PHY F419	Advanced Solid State Physics
651.	PHY F420	Quantum Optics
652.	PHY F421	Advanced Quantum Mechanics
653.	PHY F422	Group Theory and Applications
654.	PHY F423	Special Topics in Statistical Mechanics
655.	PHY F424	Advanced Electrodynamics
656.	PHY F425	Advanced Mathematical Methods of Physics
657.	PHY F426	Physics of Semiconductor Devices
658.	PHY F427	Atmospheric Physics
659.	PHY F491	Special Projects
660.	PHY G513	Classical Electrodynamics
661.	PHY G514	Quantum Theory and Applications
662.	PHY G515	Condensed Matter Physics I
663.	PHY G516	Statistical Physics & Applications
664.	POL F311	Gandhian Thoughts
665.	POL F321	International Relations
666.	SS G520	Advanced Data Mining
667.	SS G527	Cloud Computing

SPECIAL LECTURES DELIVERED BY INVITED SCHOLARS

1. Prof. Ioannis A. Kakadiaris, Depts. of Computer Science, Electrical & Computer Engineering, Biomedical Engineering, University of Houston, TX, USA, delivered a talk on Computational Intelligence: From Biometrics to Biomedicine, on 16 January, 2012.
2. Prof. Rakesh Kumar Mahajan, Professor, Department of Chemistry, Guru Nanak Dev University, Amritsar, delivered a talk on Chemical sensors based on new ionophores on 27 February, 2012.
3. Prof. Ashok Kumar Mishra, Professor, Department of Chemistry, Indian Institute of Technology, Madras, Chennai, delivered a talk on Excited Prototropism in fluorescent molecular probing on 27 February 2012.
4. Dr. Anu Puri, National Cancer Institute at Frederick, National Institute of Health, Frederick, USA delivered a talk entitled, 'Lipid Based Nanotechnology Platforms for Drug Delivery' on 6 March, 2012.
5. Professor N. R. Garg, M. D. University, Rohtak delivered a talk on 'Plain strain deformation analysis of an elastic solid' on 26 March, 2012.
6. Professor V. D. Sharma, Department of Mathematics, IIT Bombay delivered a talk on 'Evolution and asymptotic behavior of nonlinear waves in compressible flows' on 23 April, 2012.
7. Dr. Mukund Jha, Assistant Professor, Department of Biology and Chemistry, Nipissing University, Canada, delivered a talk on Synthesis of Novel Heterocycles using Indilin-2-ones and Indoline-2-thiones as Building Blocks on 5 May 2012.
8. Prof. Chien-Hsiang Chang, Professor, Department of Chemical Engineering, National Cheng Kung University, Tainan, Taiwan, spoke about Physical Stability and Charge Characteristic Control of Catanionic Vesicles with Double-Chained Cationic Surfactants and Cholesterol on 8 May, 2012.
9. Dr. Amitabh Jha, Professor, Department of Chemistry, Acadia University, Wolfville, Canada, delivered a talk on Development of Selective Estrogen Receptor Modulator on 19 May, 2012.
10. Dr. Chandrashekhar Udata, Director, Clinical Pharmacology, Biotech Unit, Pfizer, USA, delivered a talk entitled "Introduction to Population PK-PD and its applications in Clinical drug development" on 26 July, 2012.
11. Mr. Praful Jain, Design Engineer, Cosmic Circuits, Bangalore, delivered a talk on "Next Generation Research Opportunities in Electronics" on 20 October, 2012.
12. A lecture by Peter Cooke, Head, School of Drama, University of Carnegie Mellon was organized on the topic Technology and the Arts on 17 November 2012.
13. 5 invited lectures were organized by the Department of Languages in the areas of Advertising, Technology in Education, Animation, Constitution Design.
14. Dr. Murali Raman, GM, Operations, Apex Laboratories Ltd, Chennai, delivered a talk entitled, "GMP and cGMP" on 27 November, 2012.
15. Prof Sandeep Kumar of Raman Research Institute, Bangalore has delivered a talk entitled "The fascinating world of Liquid Crystals" on 21 December, 2012.
16. An invited lecture on 'Entrepreneurial experiences in Indian Electronics Industry' by Mr. Jayant Somani, Vice President, Cypress semiconductor.
17. Dr. Samir Hemant Mushrif, Assistant Professor, School of Chemical and Biomedical Engineering (SCBE), Nanyang Technological University (NTU) has delivered a seminar focusing on his research areas along with those of various faculty members of SCBE, NTU which include Catalysis and Chemical System Engineering, Nanotechnology and Printed Devices, Tissue Engineering and Regenerative Medicine, Synthetic Biology and Biosensors and Devices, etc.

LIST OF FIRST DEGREE THESIS PROJECTS COMPLETED DURING THE YEAR 2012

Second Semester 2011-2012 (January 2012 to May 2012)

S.No.	Name	Topic	Supervisor
<i>Pilani campus</i>			
1.	Devansh Gupta	3G WLAN interworking	Vishal Gupta
2.	Vemuri Rahul	8057 based biosensors for arsenic detection in water samples	S. K. Verma
3.	B Shaurya	A framework for sports sustainability in India	A. K. Digalwar
4.	Lokesh Kumar Bhomia	A study of the need of soft skills for software professionals	Pushplata
5.	Digvijay Singh Chauhan	A study on straw bale construction during earthquakes in India	Dipendu Bhunia
6.	Akitav Sharma	A study on the postmodern author	Geetha B.
7.	Nagapurushothama Anil Thontepu	Advertising strategies for social activism In rural india	Sangeeta Sharma
8.	Yatharth Mathur	Aerial estimation of average annual rainfall	Raaj Ramasankaran
9.	Saurabh Dwivedi	Aircraft morphing : A brief study and analysis of airfoils	MS Dasgupta
10.	Paranjape Niraja Shreekant	ALU Design for ASIPs	Pawan Sharma
11.	Haridas Pranjal Rajesh	An analytical study of relative ion array and its versions and other interactions measures	Amit Jain
12.	Kunal Rahar	An explanatory study on public policy evaluation in India	N. V. M. Rao
13.	Puranik Awantika Deepak	An impirical investigation of the contribution of strategic sourcing to manufacturing agility and performance	Satyendra Kumar Sharma
14.	Shekhar Girish Teny	An interactive ray tracer using photon mapping technique	Mukesh Kumar Rohil
15.	Indrajit Sen	Analysis of fluid instability using group theory	Sai Jagan Mohan
16.	R Naga Swarnika	Analysis of stock market volatility - An international comparision	A. K. Giri
17.	Manish Kumar Rai	Analysis of television industry using QFD	Monica Sharma
18.	R C Sindhu	Application of fuzzy logic in ground water quality evaluation in Jhunjhunu district of Rajasthan	A. P. Singh
19.	Kritika Garg	Architecture specific synthetic on xilin using SVIF compiler	Ashish Mishra
20.	Vinila S B S	Artificial intelligence in VLSO implementation	Surekha Bhanot
21.	Apurva Singh	Automatic generation control for deregulated environment with distributed generations	H. D. Mathur
22.	Aditya Chowdhury	C to WHDL compiler development	Ashish Mishra
23.	Abhishek Ravi	Carbonation and its effects on mechanical	Dipendu Bhunia

S.No.	Name	Topic	Suervisor
		properties of cement	
24.	Surya Santosh T	Combined transport and kinetic modelling and simulation of bio-mass gasifier	Pratik N. Sheth
25.	Swati Singh	Control of a thidized bed catalytic cracking unit using ANN controller	H. K. Mohanta
26.	C Prathyusha	Control of ethylacetate reactive distilation column using ANN controller	H. K. Mohanta
27.	Ashish Srivastava	Crystal engineering of metal organic framework based on pyridyl based ligand	Madhu Shree Sarkar
28.	Shivangi Mittal	Design analysis and simulation of integrated circuits using alternative FET technology	Anu Gupta
29.	Sailesh Conjeti	Design and development of an EMG based control mechanism for a robotic exoskeleton for stroke flumiparesis patients	B. K. Rout
30.	Saniya Ambardekar	Design and implementation of zero information loss database	Navneet Goyal
31.	Anupam Maurya	Design of amplifiers in subthreshold region for s-micron devices	Anu Gupta
32.	Autade Siddharth Ashok	Design, analysis and simulation of integrated circuits using carbon nanotube FETs	Anu Gupta
33.	Utkarsh Singh	Determining risk appetite with focus on SRM and managing risk appetite in Capital budgeting decisions	Satyendra Kumar Sharma
34.	R Srinivas	Development of a decision support system for water and waste load allocation in river basis	Ajit Pratap Singh
35.	Vipur Kumar	Development of a serach algorithm for chemical compound imformation from Web	S. C. Sivasubramanian
36.	Shourya Saxena	Development of risk assessment model for manufacturing supply chain using benchmarking approach	Srikanta Routroy
37.	Srinivas Maddula	Digital implementation of biometric algorithm and its verification	Abhijit R. Asati
38.	Pranshu Nahar	Digital system design using altera software on FPGA boards	Abhijit R. Asati
39.	Rishabh Gupta	Economic analysis of food subsidy program in India	Omvir Chaudhry
40.	Diwakar Pant	Economic assessment of policies for renewable energy development in India	Omvir Chaudhry
41.	Abhishek Anand	Effect of guest molecules and counter anions in assembling metal organic framework	Madhu Shree Sarkar
42.	Anoop Singh	Electromagnetic design, simulation and analysis of RF-MEMS switch	Mahesh Angira
43.	V Harikrishnan	Electron transport in graphane quantum dots	M. Aslam
44.	Akshay Mishra	Empirical analysis of risk management abilities of Indian banks	Anil Bhat
45.	Prina Singh	Empirical investigation of supplier development issues in Indian industry	Srikanta Routroy

S.No.	Name	Topic	Suervisor
46.	Surabhi Bhatnagar	Energy efficient building design for the climate of Rajasthan, India	Mrs. Meghana Charde
47.	Gaurav Ahuja	Exploration of flip flop architecture	Abhijit R. Asati
48.	Manognalakshmi Namburi	Explicit segmentation based offline handwriting recognition	Raj Kumar Gupta
49.	Rajat Batra	Extraction of organic acids using amin and extractants and ionic liquids	Sushil Kumar
50.	Vikas Ranjan	Facial exprenion recognition based system	K. K. Gupta
51.	Yalavali Manudeep Teja	Feasibility of flyash as adsorbent for removal of pollutants from water.	Sanghamitra Kundu
52.	Paritosh Misra	Fibre Optic linear and angular displacement sensors	R. P. Khare
53.	Siddharth Burman	GIS based campus information and navigation system	Raaj Ramasankaran
54.	Vishal Dugar	Graph theoretic approach to multibody dynamics	Sai Jagan Mohan
55.	Astha Pareek	Humanitarian supply chain	Avinash Gautam
56.	Siddharth R	Hyperbolic numerical solviphs for SHDCKS in single phase and two phase flow	Sai Jagan Mohan
57.	Nikhil Choudhary	Impact Assessment of demand side management species	M. S. Soni
58.	Abhyuday Singh	Impact of energy efficiency certificates	M. S. Soni
59.	Shasleen Islam	Implementation of 3D reconstruction using multiple features derived from uncalibrated image sequences	Mukesh Kumar Rohil
60.	Ankit Khandelwal	Implementation of beam principles in modern insulators limited	K. S. Sangwan
61.	Abhishek Jagetiya	Importance of fuzziness in artificial intelligence	Shivi Agarwal
62.	Aditya Shanker Raghuwanshi	Innovation in industry in Indian context	Monica Sharma
63.	Thouta Uday Kiran	Integrated renewable energy resource planning for decentralized power generation of india	P. Srinivasan
64.	Sailil Goyal	Investigation into the behaviour of coupling beam	Dipendu Bhunia
65.	Abhinav Mahajan	Issues in derivative pricing solved by extended method of moments	N. V. M. Rao
66.	Ganesh G Sompur	Justification of advanced manufacturing systems using analytic hierarchy process	J. P. Misra
67.	Ankit Gangal	Kinematic control of mobile robot from freescale semiconductor	B. K. Rout
68.	Vibhor Mehta	Kinetic parameter estimation of metallocene catalyzed orfin polymerization using artificial neural network	Nikhil Prakash
69.	Rahul Ajmera	Linkage kbetween infrastructure and economic growth in India	Geetilaxmi Mohapatra
70.	Parakh Rishabh Uttam	Market microstructure : A literature review	Rajan Pandey
71.	Soumendu Sinha	Mechanical design and analysis of RE MEMS switches	N. N. Sharma

S.No.	Name	Topic	Suervisor
72.	Wdaru Sri Harsha Reddy	Modeling and algorithm design for policies and infrastruture of online social networks	S. Balasubramaniam
73.	Aaditya Jain	Modeling and simulation of a fluidized bed biomass gasifiers	Pratik N. Sheth
74.	Puneet Chadha	Modeling and simulation of a refrigerant condenser using fluent	Dileep Kumar Gupta
75.	Ajay Kumar Singh	Modeling and simulation of air-water heat exchanger using fluen	Dileep Kumar Gupta
76.	Auritro Paldas	Modeling and simulation of RF MEMS switches	Navneet Gupta
77.	Sangvikar Parikshit Gopal	Modelling amd simulation of bown draft biomass gasifier using FLUENT software.	Pratik N. Sheth
78.	S Bhavesh	Modern theories of growth and relevance to India	Omvir Chaudhry
79.	Saurabh Kumar	Modification of OTDM technique for higher channel capacity	Vinita Tiwari
80.	Kumar Shubham Dubey	New Business model for Indian aviation industry	Omvir Chaudhry
81.	Ms. Divita Bhandari	Night visibility and accidents of tractor-trailer	M. S. Dasgupta
82.	Saurabh Yadav	Opinion mining	Yashvardhan Sharma
83.	Saurabh Dixit	Portial relanfiguration of ALU	Ashish Mishra
84.	K Shanthi Swaroop	Power aware risk scheduling algorithms	J. P. Misra
85.	Mamidwar Neha Ajay	Power optimization techniques for cache memory organisation	S. Gurunarayan
86.	Bandla Ajay	Power optimization techniques for Cache memory organization	S. P. Vimal
87.	Kriti Harlalka	Prediction of heat affected zone on friction stir welding	P. Srinivasan
88.	Lucky Sharma	Reacrtive extraction approach for thre separation of organic compounds from aqueous solution	Sushil Kumar
89.	Aman Sachan	Removal of heavy metals using nano adsorbents	Suresh Gupta
90.	Suraj Rai	Role of higher education in social transformation of women in India	Umesh Dhyani
91.	Sidharth M	Selection of sustainable manufacturing system : A MCDM approach	A. K. Digalwar
92.	Shabnam Bhattacharyya	Simulation of a distillation column using aspen Hy Sys	Pradipta Chattopadhyay
93.	Amish Tambi	Solar water distillation	M. S. Soni
94.	Kaushik Reddy G	Stagenography : A cryptographic technique in digital images	Raj Kumar Gupta
95.	Krishna Chaitanya V	Stastical analysis and neural modeling of thermal power plant for the gas prediction	Ajay Kumar Pani
96.	Naveen Rathani	Statistical data analysis and neural network modeling of thermal power plant for flue gas prediction	Ajay Kumar Pani
97.	Prerna Mittal	Studezing characteristics of PZP streaming overlays	K. Hari Babu
98.	Nilanjana Sadhu	Studies on enhancement of solubility of poorly	R. N. Saha

S.No.	Name	Topic	Suervisor
		water soluble drugs for designing novel delivery systems	
99.	Potnuru Dhinesh Babu	Study of chip multicore processors and operating system schedulers	Mayuri Digalwar
100.	Kunal Suraj	Study of metal catalysed olefin polymerisation	Nikhil Prakash
101.	Sharvin Bhatt	Study of nonholonomic dynamics	Sai Jagan Mohan
102.	Rahul Bhura	Study of nuclear multifragmentation process	Champak Baran Das
103.	Abhinav	Study of product design and operations management in the context of bicycle manufacturing	A. K. Digalwar
104.	Saurabh Joshi	Study of validity to its stylized facts : international evidence	Rajan Pandey
105.	Deepak Mehandiratta	Study of variables affecting the credit risk of MFI barrown	Arun K. Vaish
106.	Anand Gupta	Studying supply chain management for Indian retail sector	C. B. Gupta
107.	Vinay Dwivedi	Supply chain risk assessment using fuzzy logic	Trilok Mathur
108.	Arpit Agrawal	Sustainability issues and challenges in the automobile industry	Abhijeet K. Digalwar
109.	Rahul Raushan	Testing semi strong form of efficient Mastul hypothesis for Sensex for the period April 2009-April 2011	Arya Kumar
110.	Nitish Yadav	Theoretical studies of physical properties and processes in graphene	S. N. Karbelkar
111.	Shailendra Pratap Singh	To develop a quantify function development (QED) model for road construction and maintenance	R. P. Mishra
112.	Tashmita Kaur Arora	To integrate lean and si sigma methodologies for improved process development	R. P. Mishra
113.	Dominic Noble	Tourism development and economic growth in some South Asian countries : A panel data approach	A. K. Giri
114.	Kartikeya	Traffic precasting and analysis for road widening projects	Sriniwas S. Arkatkar
115.	Ujjwal Jain	Treatment of waste water generated from textile industry and its reuse	Anupam Singhal
116.	Sri Harsha S	Understanding the relationship between corporate social responsibility and financial performance : An empirical study in Indian context	Satyendra Kumar Sharma
117.	Manpreet Singh	Video stabilization	A. S. Mandal
118.	S Sanjay Bhargav	VLSI implementation of 16 BIT CISC processor	Abhijit R. Asati
119.	Gopale Manoj Patilbuva	VLSI Implementation of digital circuits using bit slice architecture	Abhijit R. Asati
120.	Kuldeep Sharma	Waste water treatment plant and air pollution control system for cement plant - a case study	Anupam Singhal
121.	Ms. Rekha	The significance of presentation skills in professional communication	Devika
122.	Mayank L Kumar	Supply chain risk assessment using fuzzy logic	Gunjan Soni

S.No.	Name	Topic	Suervisor
123.	Manraj Singh Bains	Study of heterogeneous traffic on Indian Roads using VISSIM 5.40	Rishi Ahuja
<i>KK Birla Goa Campus</i>			
124.	Suramya Munshi	Deposition of Plasma Polymer Coating by low Pressure and Atmospheric Pressure Plasma Technique and Process Optimization for Thickness Uniformity in Flat and 3D Substrates in Case of Low Pressure Deposition.	S.K. Nema & Purvi Kikani, Institute of Plasma Research,Gujarat
125.	Abhishek Agarwal	Epileptic Seizure Detection Using Machine Learning & Electroencephalography	Justin Dauwels, Nanyang University, Singapore
126.	Akshay Walia	Analysis of Mt DNA & NRY Genetic Venation in the Karachay	Theodore Schurr, University of Pennsylvania, Usa
127.	Aarthi M.Sundaram	Characterizing Information Flow Control Models	K. Gopinath, Indian Institute of Science, Bangalore
128.	Nesar S.R	Dynamics of Ellipsoidal Collapse in Cosmological Context	Arum Mangalam Indian Institute of Astrophysics, Bangalore
129.	Achintya Prakash	Biometric Voice Authentication: A Study of the Effectiveness of Replay & Mimicry Attacks and Comparison Vs Human Authentication	Saurabh Panjwani, Bell Labs Research, Bangalore
130.	Samyuktha Subramanian	Infant Cry Analysis as a Non Invasive Technique to Detect and Predict Apnea in Pretermneonates	Shrutin Ulman, Hemant Misra, Philips Innovation Campus, Bangalore
131.	Abhinav Gupta	Filtering Relevant Text from HTML Pages	Onkar Dabeer, Tata Institute of Fundamental Research (TIFR),Bangalore
132.	Devika	Organization Analysis of Nonprofit Organizations Working for Women Development in India	Mridula Goel
133.	Adit Chaudhary	Cadmium Tolerance in Archera	Judith Branga
134.	Abhijeet Gautam	Development of Human Behavior & Applications	Sumit Biswas
135.	Rohit Reddy	Financing of Small & Medium Scale Enterprise	Debasis Patnaik
136.	Kshamank Shyamsundar Soni	Application of Sharp Portfolio Optimization Model to Indian Stock Market	Mridula Goel
137.	Mohamed Rameez	Fractional Statistics & the Quantum Hall Effect	Suresh Ramaswamy
138.	Vaidya Pankaj Sham	Six Sigma a way towards Business Excellence: Applications in Manufacturing Industry	Sachin Waigaonkar
139.	Sai Teja Rayala	Risk Analysis of Stock Market of Bric Countries: A Value at Risk Approach	Debasis Patnaik
140.	Aabhas Babbar	Statistical Modeling Technique for Multi Objective Optimization of Nickel Electroplating Process	Abhishek Kumar
141.	Avinash Raju	Base Einstein Condensation of Interacting Relativistic Gas	Suresh Ramaswamy

S.No.	Name	Topic	Suervisor
142.	Rangarajan	Simulation of Gasoline Fuelled Spark Ignition Engine using Star CD	Shibu Clement
143.	Prachi Shukla	Energy Efficient Multi Core Architecture	Biju Raveendran

Hyderabad Campus

144.	Gaurav Khandelwal	Enhance the principle and technology of declarative networking to support publish/subscribe.	Chittaranjan Hota
145.	Vikram Kumar Reddy	Experimental and Numerical Investigations of Sandwiched Modular Multilayer self compacting cement concrete parements	V R Vinayaka Rao
146.	Kamalapuram Sravya	Experimental and Numerical Investigations of Sandwiched Modular Multilayer self compacting cement concrete parements	V R Vinayaka Rao
147.	Vivek Kumar	Experimental and Numerical Investigations of Sandwiched Modular Multilayer self compacting cement concrete parements	V R Vinayaka Rao
148.	Anshul Vikram Pandey	Human Machine Interaction and its application in new media development	K M M Rao
149.	Veerubhatla V S L Vijay	Role of financial leverages in managerial decision making	Syama Sundar
150.	Sagnik Choudhury	Feature extraction and Training for Music Mining	Prafulla Kalapatapu
151.	Sarthak Gupta	Design of a Processor in Reversible Logic	M B Srinivas
152.	Lukka Chaitanya	Face detection using image processing and its applications in various fields	P K Thiruvikraman
153.	Shaik Ashiff	Pharmarokinetic Drug-Dng or dry food iteration of a candidate dng	Punna Rao Ravi
154.	M Saketh	Design of a biological array of protein kinose inhibitors useful for the treatment of painful diabetic neuropathy	P Yogeeswari
155.	P N S Chaitanya	Mathematical Modelling in Finance	T S L Radhika, P Lalitha

First semester 2012-2013 (August 2012 to December 2012)

S.No.	Name	Topic	Supervisor
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Pilani Campus

1.	Vishesh Jain	Genome wide analysis of cis elements	Rajesh Mehrotra
2.	Velivela Vignan	Macroeconomic models and policy	Tabassum Jamal
3.	Rahul Kumar Singh	Mathematical Modeling- Innovation and technology diffusion/forecasting	Shashi
4.	Garima Sharma	Development of DSS for measuring the strength of vertical collaboration in agile manufacturing system	S. Routroy
5.	Abhishek Kumar	Simulation of fluidised bed catalytic cracking unit using fuzzy logic controller	HK Mohanta

S.No.	Name	Topic	Supervisor
6.	Pranshu Agarwal	Reactive extraction of heavy metals	Diploy Datta
7.	Ajay Singh Jadhon	A simulation of fluidised bed catalytic cracking unit using ANN controller	H.K. Mohanta
8.	Siddharth Burman	A study on the strawble houses under earthquake motion	D. Bhunia
9.	Sainath Y	Data visualization techniques for multivariate time series data	M.K. Rohil
10.	Rahul Seth	Quantitative analysis of parliamentary questions - Implication for policy activism	Saumik Choudhary
11.	Divyanshu Singhal	Environmental Engineering	Suresh Gupta
12.	Bhavya R	To identify, characterize and ascertain the significance of glucose sensing neurons in the brain of filear fish (Zebrafish model)	N.K. Subhedar
13.	Ishaan Singh	Study of speech Signal processing using wavelet transforms	Navneet Upadhyay
14.	Pinaki Aggarwal	Effect of electrode flux composition on weld bead geometry	K.S. Sangwan
15.	Daga Nikhil Giriraj	Operations Management	R.P. Mishra
16.	Prashali Bansal	to identify growth regulators in Drosophila malanogastis	Hugo Stocker
17.	Ujjwal Kumar Banerjee	Functional characterization of fungal isolates from oil contaminated soil of Mehsona, Gujarat	Rajesh Mehrotra
18.	Lokesh Kadyan	Philosophical and constitutional frame work of government	K.N. Sachdev
19.	Abhimanyu Sharma	Kinetic studies of olefin polymerization using metallocene catalysts	Nikhil Prakash
20.	Sukrit Narula	Transportation Engineering	Sriniwas Arkatkar
21.	Jain Akhil Satendra	Investigation of structural and material response of F.R.C.	S.B. Singh
22.	R Ganeshkrishnan	Design of high performance dual modulus prescales using various flip flop architectures	Abhijit R. Asati
23.	Zara Ahmed	Study of fault tree analysis techniques for software	Pankaj Vyas
24.	Gaddam Shailen	Development of operational model of lean manufacturing practices	K.S. Sangwan
25.	Vishal Chowdhury	Maintenance Management	R.P. Mishra
26.	Bharath M	Application of optimization technique in transportation engineering	Shrinivas Arkatkar
27.	Deoghare Gaurang Sanjay	Water Resource Management	A.P. Singh
28.	M Deepika	Applying gender responsive budgeting tools to implementation of MGNREGA and RNLN : The case of 2 villages in Andhra Pradesh	Aasha Kapur Mehta
29.	Praful Kumar Parakh	Ultra low poer low noise mixed signal IC design techniques	Anu Gupta
30.	Kunal Bansal	Fault tolerant systems for reconfigurable architecture	S. Gurunarayanan
31.	Rahul Sethi	Analysis of the critical success factors of green	Srikant Routrey

S.No.	Name	Topic	Supervisor
		supply chain management	
32.	Dhwani Kamallesh Mehta	Manufacturing excellence production	K.S. Sangwan
33.	Archit Arora	Verification and validation of new product development process	K.Vinayak
34.	Kishan Kumar	Comparing methods to derive priorities from rank order matrices	Vishal Gupta
35.	Chellu Satish Kumar	Computer architecture	DC Kiran
36.	Prawal Agarwal	Comparing aggregation methods in AHP	Vishal Gupta
37.	N Trishool	Establishing pier to peer TCP connection through UDP hole punching in NAT based networks	K.Hari Babu
38.	Nikhil R Bafna	Embedding information into beacon frames	Vishal Gupta
39.	Pathan Adeeb Daulatkhan	Measurement of risk in infrastructure projects	S.K. Sharma
40.	Ruchir Jain	Information retrieval	Vandana Agarwal
41.	Bendre Chaitanya Manoj	Context driver scene classification using topic modelling	S.P. Vimal
42.	Yashas D	Survey of scheduling algorithms on SSA form program on parallel architectures	Kiran DC
43.	Saurabh Ahuja	Transportation Engineering	S. Arkatkar
44.	Surabhi Singh	VLSI Implementation and comparative study of different flip flop architectures	A.R. Asati
45.	Keshav L	Low power VLSI design for biomedical applicatin - neural recording amplifier	V.K. Chaubey
46.	Manish Gurwani	Comprehensive study of smart distribution systems	H.D. Mathur
47.	Pratik N Suchde	To assess and analyze various non-linear models for the vibrating string	Vadudeva Murthy
48.	Kunal Lad	Drawings of planar graphs and VLSI chip designing problem	Rajiv Kumar
49.	Aneesh Gupta	Data Mining	Poonam Goyal
50.	Rishabh Mehrotra	Gene theoretic combination of an ensemble of classifiers	Poonam Goyal
51.	Vaibhav Kankane	Multiconstraint Optimal Path Discovery	K. Hari Babu
52.	S Deepikaa	Classification of tweets, modeling and analysis	S.Balasubramanian
53.	Jai Awasthi	Risk assessment in project management using fuzzy logic	Shivi Agarwal
54.	Aaksha Meghawati	Software specification, design and implementation of 'Hedge Fund Business Simulation Game'	Narayan Naik
55.	Ishan Chopra	Web search performance and improvement	N. Mehala
56.	Appana Satya Harish	Investigations into a highly available tactile network architectures involving VANETs	R. Banerjee
57.	Agrawal Rushabh Rajendra	Matrix approximation techniques for link prediction in social networks	S.S. Balasubramaniam
58.	Nitin Gangahar	Some problems in distributed computing and	Madhavan Mukund

S.No.	Name	Topic	Supervisor
		concurrent programming	
59.	Aman Jain	Design simulation and mathematical modeling of various types of micro-heaters using TEM simulations using intellisuite TM and Comsol	Ajay Agarwal
60.	Sonal Nayak	VLSI Implementation and comparative study of different flip flop architectures	Abhijit R. Asati
61.	Digvijay Verma	Implementation of lean manufacturing practices at automotive supplier development department at Bosin, Bangalore	R.P. Mishra
62.	Amrit Kumar Saini	IP Traffic integration over WDM network	Virendra Shekhawat
63.	Mayank Abhishek	Operation Research	Chandra Shekhar
64.	Amilineni Bhargav Teja	Information technology in public administration in India - Emergence evolution and expansion	Umesh Dhyani
65.	Nitish Jitendrakumar Mehta	Fault tolerant systems for reconfigurable architecture	S. Gurunarayanan
66.	Priyadarshini Panda	Optimisation of high gain switched capacitor based op-amp circuit	V.K. Chaubey
67.	Durga Prasanna Ray	Dynamics of heavy ion reaction	C.B. Das
68.	Bhendawade Nikhil Nishikant	Signal processing	Soloman Kota Raju
69.	Amitesh Narayan	Design of low poer, high performance analog and mixed signal circuits	Anu Gupta
70.	Rohit Garg	Generation and analysis of conflict diagrams for state feedback control of semi-active and active suspension systems	Sebastian Spirk
71.	Kalantri Radhika Arun	Study of machinability of aerospace alloys	N. Khanna
72.	Chirag Maheshwari	Preparation and Characterization of Felodipine nanoparticles for solubility and dissolution enhancement	M.M. Pandey
73.	Siddharth Mittal	Study of disk scheduling algorithms with an view to optimize power consumption in large parallel storage system	J.P. Mishra
74.	Kesav Bharadwaj R	Investigations into a highly available tactile network architectures involving VANETs	R. Banerjee
75.	Dongare Pratiksha Digambarsing	Fabrication and study of graphene based transistors	Mandar Deshmukh
76.	Arvind Singh	Acoustic transient analysis	K.K. Gupta
77.	Rahul Sharma	Large scale distributed data mining with hadoop hive	Yashvardhan Sharma
78.	Ashwin Vijayvargia	An analysis of the factors responsible for the reent negative growth of MFIs in India	Omvir Choudhry
79.	Kaustav Mohanty	Study and analysis of nanofluids in two phase flow	M.S. Soni
80.	Viraja Ramanujam	Reduction of cycle time of back-end supply chain in the apparel industry	R.P. Mishra
81.	S. Subramanian	Development of strategic model of lean	K.S. Sangwan

S.No.	Name	Topic	Supervisor
		manufacturing measures	
82.	Divyansh Bhatia	Hierarchy building	N. Mehala
83.	Abhishek Agarwal	Modelling and simulation of FCC using model predictive controller	H.K. Mohanta
84.	Mohammad Tariq Khan	Investigation of response of FRP strengthened brick masonry structures	S.B. Singh
85.	Prakriti Kumar Singh	Structural analysis and aerodynamics of a race car	M.S. Dasgupta
86.	Bhagwat Shubhankar Sudhir	Structural analysis and aerodynamics of a race car	M.S. Dasgupta
87.	Ayush Arpit Garg	Micro electro mechanical systems devices (MEMS Devices)	Ajay Agarwal
88.	Krishnamohan T	Atomatic simulation of nanoscale energy transport	N.N. Sharma
89.	Ajay Khaitan	Study and analysis of heat transfer in evacuated tubes of solar collection using nano-fluids	M.S. Soni
90.	Shah Sahil Bharat	Estimation of the Luman pulse of a person while exercising by using factracting and RGB stream	Ankit Choudhary
91.	Nitish Balachandran	Energy efficient solutions to SyGI attaches in wireless sensor networks	K. Hari Babu

KK Birla Goa campus

92.	Adwaite Gandhe	3-D Reconstruction Using Set of Minimum Number of Images.	Andre Stork, Fraunhofer Institut, Germany
93.	Suramya Munshi	Deposition of Plasma Polymer Coating by Low Pressure and Atmospheric Pressure Plasma Technique and Process Optimization for Thickness Uniformity in Flat and 3D Substrates In Case of Low Pressure Deposition.	Purvi Kikani and S.K. Nema, Institute of Plasma Research, Gujarat
94.	Pushkar Mishra	Simulation of Coupled Electrostatic and Elastomechanic Problem Using Finite Element Method and its Implementation in MATLAB.	Dipankar Gupta, Tata Steel, Jamshedpur
95.	Himanshu Bansal	To Study Mobile Data Collection on Android Platform	Michael Lang, Apptelligence Gmbh, Germany
96.	Devika	Organizational and Impact Analysis of Non-Profit Organizations.	Mridula Goel Samhita Social Ventures, Mumbai
97.	Abhishek Agarwal	Behavior and Neurophysiological Study of Subliminal Priming in the Realm of Advertisement and Beyond Science and Society.	Justin Dauwels, Nanyang University, Singapore
98.	Akshay Walia	Analysis of Mitochondria DNA Y Chromosome and Autosomal Variation in Different Human Population.	Theodore Schurr, University of Pennsylvania, Usa
99.	Aarthi M.Sundaram	Design of a Secure Operating Systems with Information Flow Control.	K. Gopinath, Indian Institute of Science, Banglore
100.	Subarna Kar	Affine Algebraic Entities and their Role in Robotics	Prasanna Kumar
101.	Nazneen Fatima	Application of Artificial Neural Networks to Social	Gaurav Dar

S.No.	Name	Topic	Supervisor
	Rajan	Media Analysis	
102.	Anil Kumar Nekkalapudi	Non-Linear Stability Analysis of Stratified Fluid Equilibria	Shibu Clement, Chandradew Sharma
Hyderabad Campus			
103.	Advait A Nair	To Assess the Impact of Different Passive Architectural Elements on the Temperature Conditions inside a Building	Rajiv Gupta & Murari Verma
104.	Abhinay Teja	The Role of Humanities in Technical Education	M.G. Prasuna
105.	Naresh R Shah	Dicom-Based Streaming Service for the Digital Operating Room	K.M.M Rao
106.	Neil Chandrashekar Jog	Design of Test Fixture to Qualify S-Seals as per API Standards	Ashish Soni & S.P. Regalla
107.	Shah Shrenik Shreyas	Designing an In-Line Blending System (ILB) using a Piping and Instrumentation Drawing (P&ID) and Preparing it for Fabrication	Uday Rao & S.P. Regalla
108.	Prodduturi Prakash Chandra	Challenges, Opportunities and Policy Framework of Power Sector in India	T. Shyam Sundar
109.	Suhas Srivastava	To Study the Needs of Teachers in Delivering Learning Content in Classes and Develop a Learning Content Management System	Sanjeev Kumar & Chittaranjan Hota
110.	Paturi Viswa Sai Dutt	Carbon Nano Tubes Field Effective Transistor Based Logic Design Of Gates And Circuits Using Ternary Logic	M.B. Srinivas
111.	Abhiram M.V.S.P	Study of Chemical Resistant Heavy Duty Flooring	Balaji krishna murthy
112.	Santhosh V Yellajosula	Study of Chemical Resistant Heavy Duty Flooring	Balaji krishna murthy
113.	Sukanya Chakraborty	Reconstruction of Geometric Boundary Representation from Multi-Material Volume Fraction Data	Tathagata Ray
114.	Ahana Ghosh	Implementation of Space Partitioning Data Structures to Store Multi-Material Domains	Tathagata Ray
115.	V.Srinivas	Carbon Nano Tubes Field Effective Transistor Based Logic Design of Gates and Circuits using Ternary Logic	M.B. Srinivas
116.	J.V.Chaitanya	Mathematical Modeling and its Applications in Finance	A. Ramu
117.	Asmit Joshi	Designing of a Mechanically Operated Rigid Lock Running Retrieval Tool	S.P. Regalla
118.	Sayandeep Bhowmik	Designing of a Mechanically Operated Rigid Lock Running Retrieval Tool	S.P. Regalla
119.	Mohammad Shadabh Ravish	Forensic Structural Engineering – Seismic Analysis And Retrofit of Reinforced Concrete Structures	M.V.N. Shiva kumar
120.	U.L.Akhilesh	Non Linear Analysis of Stainless Steel Beams	P N Rao
121.	Velamuru Nikhilesh Reddy	Re-Establishment of Lane Distribution Factor of Indian Highways	V.R. Vinayak Rao

S.No.	Name	Topic	Supervisor
122.	Ayyagari Venkata Kameshwara Sandeep	Re-Establishment of Lane Distribution Factor of Indian Highways	V.R. Vinayak Rao
123.	Gaurav Duggal	Visual Odometry	P.K. Thiruvikraman
124.	Matikonda Siddharth Sai	Synthesis of Vinyl Fluorides From Ketones Via Modified Shapiro Reaction: Mimic of Amide Bond in Bioactive Molecules	Ryan A Altman & P Yogeewari
125.	Ch Sai Pradyumna Reddy	Analysis of Ddos Attacks: Prevention, Detection & Mitigation Techniques	G. Geetha Kumari
126.	Vinjamuri Praneeth	Study of Efficient Techniques for Network Management	G. Geetha Kumari
127.	Nitesh	A Study of Algorithms Involved in Quantum Computing	T.S. Mahesh & K.V.S. Shiv Chaitanya
128.	Biswa Prasanna Mishra	Studying Mirna-Mrna Interactions in Neuro-Developmental Disorders	Savitha Govardhan
129.	Amruta Vasudevan	Exploring the Role of Non-Coding RNAs In Cellular Stress Response	Mitali Mukerjee (IGIB) & Kumar Pranav Narayan
130.	Vakul Mohanty	Diseases and Post Transcriptional Regulations of RBPS	Sarath Chandra Janga & Hota
131.	Rathish. S.A.	Energy Savings and Comfort Improvements in a Building Through Envelope: Roofs	Vishal Garg & Vinayaka Rao
132.	Konka Raviteja	Gauge-Gravity Duality	Sashideep Gutti
133.	Pratyush Prabhav Buragohain	Controlling Spin Transport Through Nano-Systems By Solving the Landau Lifshitz Gilbert Equation	Swarnali Bandopadhyay
134.	Vignesh Sundaram	Construction and Analysis of Implied Volatility Surfaces of Indian Nifty Options	Hussain Yaganti
135.	Kasi Sarath Koundinya	Financial Lapses in Modern Economy	T. Shyam Sundar
136.	Swagat Yadav	Innovative Business Models In Emerging Markets for Inclusive Growth and Social Impact : The Case of Harva	Jahan Ara Peerally & Meeralal
137.	Iyer Kartheik Ganesh	A Study of Anyonic Properties, and the Presence of An Anyonic Component in two Particle Oscillations	Sashideep Gutti
138.	Astha Sethi	Study of AC Electrosmosis Flow Pattern Using Different Electrode Geometries	Souri Banerjee
139.	Parikh Pritesh Anish	Fabrication and Study of Vanadium Dioxide Nanowire Based Field Effect Transistors	Mandar Deshmukh & Sourı Banerjee
140.	Soham Pal	Black Hole Quasinormal Modes and Dissipative Dynamics	Sashideep Gutti

LIST OF PROJECTS COMPLETED UNDER HIGHER DEGREE DISSERTATIONS DURING THE YEAR 2012

Second Semester 2011-2012 (January 2012 to May 2012)

S.No.	Name	Topic	Supervisor
Pilani Campus			
1.	Rwitajit Majumdar	Simulation & Materials Analysis of Nanoswimmer	N.N. Sharma
2.	Arindam Paul	Distributed computing solution for Data-Mining	Navneet Goyal
3.	Debabrata Sikdar	Investigation of pulse evolution stability and collision dynamics for DM solutions	V. K. Chaubey
4.	Nipane Akshay Bhaskar	Modeling and simulation of downdraft gassific under steady and unsteady	Pratik Sheth
5.	Madhulika Mohanty	Ontology extraction by focused retrieval using the web as an oracle	Shan Balasubramaniam
6.	Sreeraj A Janardhanan	A Gesture-based programming language for multi-touch	Sundar Balasubramaniam
7.	Faizan Khaliq	Extracting ILP at SSA level for multipore architecture	D. C. Kiran
8.	Vikas Sharma	Design and Implementation of a routing and wavelength assignment	Virendra Singh Shekhawat
9.	Abhijeet Nawal	scheduling compi for level on multicore processors	D. C. Kiran
10.	Tarun Jhamb	Reverse Logistic Modelling and Analysis	Maheshwar Dwivedi
11.	Nikhil Gakkhar	Techno-economic assessment of solar power in India	MS Soni
12.	Pushkar Pandey	Characterization of Zn-transporter protein encoding gene from plasmodin species	Vishal Gupta
13.	Geetanjali Rakshit	Generic Density Based Clustering	Poonam Goyal
14.	Deepak Bharti	Design of a static device level simulation using a novel device matric algorithm	Abhijit R. Asati
15.	M S Bharath	Hardware implementation of support vector machine for facial emotion expression recognition	A.S. Mandal
16.	Rahul Ratnakumar	Interface circuit design for a MEMS vibrating gyroscope	G. Rajahari
17.	K Kaushik	Optimization of FIR filter coefficient using defferential evolution	K. Srinivas Reddy
18.	Akanksha Gupta	Characterization of Zn-transporter protein encoding gene from plasmodin species	Vishal Saxena
19.	Richa Upadhyay	Study of the lipid content and the biomass of algae under different stress condition and flocculation studies	S. K. Verma
20.	Ritika Lakhotia	Characterization of Rim. Encoding gene in P. vivax	Vishal Saxena
21.	Abhijit Das	Plant defense and microbial survival - A comperative analysis of plant immune response to endophytic and pathogeneic bacteria	Prabhat N. Jha
22.	Praveen Singh	Pedestrian gap acceptance behaviour analysis of mid-block sections	Indrajit Ghosh

S.No.	Name	Topic	Supervisor
23.	Umashankar S	Quantification of level of service of a few selected bus routes in Jaipur	A. K. Sarkar
24.	Kiran Gowda K S	Determination of Accessibility Index for Schools in rural India	A. K. Sarkar
25.	Behara Krishna Nikhil Sumanth	Quantification of users perceptions and evaluation of accessibility index in Jaipur city	Shriniwas Arkatkar
26.	Ankit Bhatt	Recycling of building pemolished materics and using it potentially in road	A. K. Sarkar
27.	P. Balaji	Diagnosis of bottlenecks on urban freeway of India and the United States	Shriniwas Arkatkar
28.	Suchith Chellappan	Intensification of separation of carboxylic acids using reactive extraction	Dipaloy Datta
29.	Jasdeep Kaur	Testing the viability of preventive health centres within hospitals	Bhaskar Bose
30.	M Niharika	Testing the mobility of establishing a managed core organization	Bhaskar Bose
31.	Faustina Natasha Gomez	Testing the viability of establishing preventive health centres within hospitals	Bhaskar Bose
32.	Sonar Prasad Ranganath	Design and analysis of robotic exoskeleton for rehabilitation engineering	B.K. Rout
33.	Rakesh Kumar	Progressive failure analysis of composite plate using abaqus	Dinesh Kumar
34.	Ravi Chandra Pothamsetti	study of mechanical and water absorption characteristics of glass/jute/silk fabric	Sharad Srivastava
35.	Aqsa Mushtaq	Catalytic miniaturized motors	N.N. Sharma
36.	Srinivas Nunna	Study of water absorption and tensile properties of silk/glass hybrid composites	Sharad Srivastava
37.	Hemanth Jangala	Formulation analytical and bioanalytical method development and validation of ketorolac	Sunil Kumar Dubey
38.	Gautham Gampa	Some aspects of Design Controlled drug delivery and role of carbopols	R.N. Saha
39.	Kakumanu Kishore Babu	Design and study of some novel non-nucleoside reverse transcriptase inhibitors as anti HIV-1 RT inhibitors	S. Murugan
40.	Abhinav Pandey	Study of cloud computing - A managerial prospective	NVM Rao
41.	Swapnil Mishra	Examining the acceptance of technology based banking	Leela Rani

KK Birla Goa Campus

42.	Mandha Prasad	Extraction of Nimbin From Neem Seeds By Using Supercritical CO ₂ : Theoretical Investigation Study	S.D. Manjare
43.	Akhil Mohan	Embedded Web Servers for Web Browsers	Mangesh Bedekar
44.	Badarvada G K Varma	Prevention of Arp Spoofing Using Cryptographic Techniques	S.K. Sahay
45.	Siva Sai Ram Prasad Kodali	A Study on Multi-Programming with Processes and Threads in Linux Operating System	Biju R.
46.	Pereira Clarice Genevive	An A-Fibrinogenase from Russell's Viper Venom	Dibakar Chakrabarty

S.No.	Name	Topic	Supervisor
47.	Deepthi Das	A Study of the Photo Protective Effects of Haloarchaeal Pigments Against Uv- Rays on Human Keratinocyte (Hacat) Cell Line	Judith B.
48.	Sibani Prasad Dash	Study of Anticancer Activity of Vitex Nigundo	Anushya G.
49.	Ketaki Ramesh Deshmukh	Antibiofilm, Cytotoxic and Cytocompatible Properties of Silver Hydroxyapatite Nanoparticles Coating for Medical Implants	Meenal K.
50.	Ashwin K P	A Study on the Dynamics of Electrostatically Actuated Micro-Resonator Considering Squeeze Film Damping Effects	Praveen Singru
51.	Allen Anilkumar	Hysteretic Seat Design and Control of Passenger Vibrations in a Quarter Car Model	Praveen Singru

Hyderabad Campus

52.	Soumya Subhra Chatterjee	Dependency Identification and Scheduling of Kernels Using Abstract Parallel Machines	R Gururaj
53.	Naveen Kumar S	Optimizing system Architectures	G Geetha Kumari
54.	M.Shiva Kumar	Design of a DC precision of Amp for audio and instrumentation applications	M B Srinivas
55.	Sumit Kumar Kulshreshtha	Verification of a RISC processor using United Verification Methodologies	Murthy Muthukrishnan
56.	N.Mahesh Narayan	Verification of Multi purpose I/O using co-simulator	M B Srinivas
57.	Samatha B	Fabrication of Nanometer Gap Electrode using electron Beam lithography	Souri Banerjee
58.	Aparajita Singh	Mechanical properties of nano cantilevers	Murthy Muthukrishnan
59.	Ankita Singh	Verification of a RiSC processor using United Verification Methodologies	Murthy Muthukrishnan
60.	Amit Khare	Design of Linear phase wave digital filter for Wireless Networks	Y Yoganandam
61.	Avinash S Vaidya	Medical device design and development for telemedicine	M B Srinivas
62.	L Srinivasu Manne	Implementation of variable data rate digital demodulator for 64QAM on vertex-5 FPGA	M B Srinivas
63.	Siddharth Vijay	Pattern recognition techniques for medical diagnosis	M B Srinivas
64.	Lakshmi Indira Vadlamani	Drug-Drug Interaction studies of Drugs being co-administered with Anti T.B. Therapy	A V Ramani
65.	Karyavardhi Gopiseti	Excretion studies for a new chemical entity	A V Ramani
66.	V V Nirmal Ramesh Rayulu	Android application for SMS translation to telugu	M B Srinivas
67.	V.Muruganandam	Design, Development and Integration of a Quad Rotor for Aerial Surveillance with Video Telemetry	Moorthy Muthukrishnan
68.	P. Srinivasu	Delay locked Loop for wideband Applications	M B Srinivas, Srihari
69.	Hajari Rakesh	FPGA Implementation of HD Video object detection and Highlighting	Srihari, Prabhakara Rao

S.No.	Name	Topic	Supervisor
70.	V. Chandrasekhara Srinivas	FPGA Implementation of variable data rate QAM receiver for software designed radio application	M B Srinivas
71.	Arun Kumar Nellur	HEC Algorithm implementation	Srihari, Prabhakara Rao
72.	M Praveen Kumar	Digital Circuits for low Power design	Mr. Srihari, Prabhakara Rao
73.	Neelam Srikanth	Design and Implementation of Reconfigurable MAC in FPGA	M B Srinivas Mr. Srihari
74.	Prem Kumar Dodda	Design of Charge Pump for Flash Programming	M.B.Srinivas
75.	Sandeep Vangapalli	Design of Solatube for Home Lighting	Murthy Muthukrishnan, Srihari
76.	E. Srikanth	Side Channel Attack Consideration for configuring FPGA Configuration through PCI Express	Srihari
77.	Usr Praveen Kumar	Implementation of Elliptic Curve Crypto-Processor	M B Srinivas, Srihari
78.	K Krishna Kishore Reddy	Unified Bandgap reference voltage and constant current Generation	M B Srinivas, Srihari
79.	Manidhar Parvatam	Design & Development of Solar power plant, LED lighting	Murthy Muthukrishnan, Srihari
80.	Robert Bellarmin S	Implementation of High Speed Virtual memory engine in FPGA	Srihari, Prabhakara Rao
81.	O. Lakshmi Kusuma	Telemeiry encoder for Missile Applications	N Murthy Muthukrishnan
82.	Mahesh Deepak Bendre	Open source ATPG tool	M B Srinivas, Srihari
83.	Y Shefali	Design & Implementation of Transmit Mask filter for	B Prabhakara Rao
84.	Atmakuri Naveen Kumar	Implementation of optimal ECHO Cancellation algorithm for Digital cancellation	M B Srinivas, Srihari
85.	Sainath Varanasi	Future gadget	M B Srinivas, Srihari
86.	R Kiran Kumar	Fault tolerance communication in Embedded networking	K C S Murthi
87.	Anita Pandey	Sixth Sense	M B Srinivas, Srihari
88.	Jyothi Basu Dasari	Study on Echo cancellation for Digital repeater	Y Yoganandam
89.	Ravi Jain	Clard care	M B Srinivas
90.	Prasanna Kumari HNLP	Mullilanch(Gestur capture & Recognition Pool0	M B Srinivas

First semester 2012-2013 (August 2012 to December 2012)

S.No.	Name	Topic	Supervisor
Pilani Campus			
1.	Jagat Sesh Challa	Designing and implementing data mining algorithm on a cluster	Navneet Goyal
2.	G Prashanth	Characterization of BI oil produced from pyrolysis of biomass	P.N. Sheth
3.	N. Arun Prem Anand	Surfactant generated aqueous ethanol based foam characterization	Pradipta C.
4.	Chhayakanta Acharya	Fuzzy logic based non linear control of Ph neutralization process	H.K. Mohanta
5.	Harshal Suresh Rao Kharwade	Modelling and simulation of chemical process	Baseer Ahmed
6.	Deepanjana Deb	Design and implementation of a specification language for subject domains to verify answers in test	S. Balasubramanian
7.	Khiani Susheel Suresh	Design and analysis of multipath TCP	V.S. Shekhawat
8.	Gaurav Watts	Hygrothermal behaviour of laminated plates	Dinesh Kumar
9.	Jigar Ravindrakumar Shaila Pat	Design & development of mechatronics 2-axis gumbal for targeted seeker	M.K. Kundawala
10.	Bejgam Raghavendra Rajendrabab	Application of element free galerkin method to solid mechanics problems	Dinesh Kumar
11.	Ramkumar S	Ultimate tensile strength of GFRP specimen using acoustic emission and Acousto-ultrasonic emission response	Sharad Shrivastava
12.	Ashwani Kumar Sengar	Dynamics of a ground vehicle driven model with strongly nonlinear car suspension and MR seat suspension	Amol M. Marathe
13.	Hitesh Verma	Computational study on flow over a oscillating rectangular cylinder	S.K. Dubey
14.	Avinash Mishra	Visualization technique for multi-variate time series data	Mukesh Kr. Rohil
15.	Sivarama Prasad K	8-bit clockless pipelined ADC with muller-C-clement for self trigger sensor based applications	Anu Gupta
16.	Balasubramanian M	Design and analysis of integrated Electro Optic Switch	Rahul Singhal
17.	Vinay Chamola	Hi speed WDM Systems	V.K. Chaubey
18.	Toms Thomas	Analysis and simulation of a second order electrostatic coupled filter	M.Sundaram
19.	Anyaa Mittal	Study immune system - cancer interaction using cell lines in presence of activators & inhibitors	Uma S. Dubey
20.	Nikhil Gakkhar	Techno-economic parametric assessment of solar power in India	Manoj S. Soni
21.	Mukund Lahoti	Development and usage of innovative dustile composite materials for repair and retrofilling of masonry structure	S.B. Singh
22.	Anshul Bansal	Analysis and design of industrial steel chimney	Anshuman
23.	Himanshu Chawla	Plates for the measurement of of actual frequency with and without imperfection	S.B. Singh

S.No.	Name	Topic	Supervisor
24.	Anil Pradeep Konda	Viability of RCC and Steel industrial chimneys based on height	Anshuman
25.	Saiyedul Islam	Parallelizing Clustering Algorithms for multi-core MPI cluster	Navneet Goyal
26.	Sampath Kumar Rachakonda	Nonlinear Harmonic response of a two dof quarter car model having suspension system with end-stop buffers and MR damper	Amol Marathe

KK Birla Goa Campus

27.	Shailendra Pathak	Iphone Application Development Using –X-Code Web App V/S Native App as Library Application	Venkata Ramaswamy
28.	Sudhir Kumar	Implementation of Ad-Hoc Network Via Wireless Technologies Using Android Platform to Control Electrical Appliances	Mangesh Bedekar
29.	Ganeshkumar A	Analysis of P53 Mutation and DNA Methylation Status of HSA-MIR-145 Gene In A549 and Hacat Cell Lines and Mechanism of Anticancer Activity of Ethanolic Extract from Vitex Negundo in A549 Cell Line	Anushya Ganguly
30.	Aswathy N. Nair	Study on Diurnal Activity Patterns in Swallowtail Butterflies, Papilio Polytes (Lepidoptera : Papilionidae)	Krunshnamegh Kunte
31.	Mansi Baveja .	Purification and Characterisation of An Anticoagulant Toxin from Russell’S Viper Venom and Development of a Novel Spectrophotometric Assay for Quantification of Fibrinolysis by Venom from Various Sources	Dibakar Chakrabarty
32.	Subhasish Sahoo	Purification and Identification of Therapeutic Components of Leaf Extract from Moringa Oleifera	Sumit Biswas
33.	Patil Makarand Pradeep	Inhibitory Effect of Various Co Receptor Antagonists on In-Vitro Infection of Human Immune Deficiency Syndrome Virus (HIV-1)	Madhuri Thakar
34.	Kamdar Nishad Naresh	Design and Development of Cross-Layered Protocol Stack for Condition Based Monitoring of Pipelines Using Wireless Sensor Networks	K.R. Anupama
35.	T Krishnakumar	Design and Fabrication of Weather Protection Accessory for Motorcycles	David Chen
36.	Swethapadmini P.B.	Coke Reduction and Selectivity Increase in Allyl Chloride Process Reactor Design and Engineering Studies	Krishnaswamy
37.	Deepak Kumar Ojha	Commissioning of Pilot Plant to Study The Aqueous Ammonia Based CO ₂ Absorption System	Krishnaswamy

Hyderabad Campus

38.	Vaivhav Jain	Human Motion Detection for Surveillance Sytems	K C S Murthy
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STATISTICS OF Ph.D. QUALIFYING EXAMINATION

I. Statistical Information for Ph.D. Programme

Sem	Permitted to Appear in Qual. Exam	Appeared	Passed	Failed	Did not Appear and Dropped
II Sem 2011-2012	43	43	39	04	0
I Sem 2012-2013	50	50	42	08	0
Total	93	93	81	12	0

II. Statistical Information for Faculty Development Scheme

Sem	Permitted to Appear in Qual. Exam	Appeared	Passed	Failed	Did not Appear and Dropped
II Sem 2011-2012	0	0	0	0	0
I Sem 2012-2013	3	3	3	0	0
Total	3	3	3	0	0

III. Analysis of candidates permitted to appear in Ph.D. qualifying examination

(i) BITS faculty (Total) 3

(ii) Aspirants of High Standing and proven Competence (Total) 14

(iii) Full time Students (Total) 71

Discipline wise Break-up

Pharmacy	01
Lang. & Hum.	01
EEE	01
TOTAL	03

Organizational Break-up

Government	01
Research	08
Corporate	12
TOTAL	21

Discipline wise Break-up

Biosciences	07
Chemistry	17
Chemical	01
EEE	09
Mathematics	02
Mechanical	03
CSIS	02
Lang. & Hum.	02
Management	07
Pharmacy	04
Physics	15
TOTAL	69

LIST OF EQUIPMENTS PROCURED DURING THE YEAR 2012

Name of Equipment	Used for Courses/Thesis/Dissertation Computational/Administrative Work
Biological Sciences	
1. Plant Growth Chamber 964 Ltrs (215 R)	BIO G642 Experimental Technique
2. Refrigerated Multistack Shaking Incubator (215 R)	Thesis/Dissertation/Ph.D/Research
3. Chiralpak IE, Analytical (664 R)	
4. Orbital Shaking incubator (1291 R)	
5. Tissue Tearer (1291 R)	
6. Micropipette Puller (1935)	
7. Membrane Feeding System (1962)	
8. WEIBER Incubator Shaker (2007)	
9. Real-Time PCR Detection System (2104 R)	
10. T 100™ Thermal Cycler (4) (284 R, 2108 R, 2418 R, 2979 R)	
11. Hybridization Oven (284 R)	
12. Circulation Water Bath (284 R)	
13. Electrophoresis Unit (2) (2105 R,2106)	
14. Nanoject II (2163)	
15. Micromanipulator (2163)	
16. Magnetic Support Base (2163)	
17. Ultrasonic Homogenizer (2416 R)	
18. Benchtop Incubator Shaker (2418 R)	
19. Mixed Signal Oscilloscope (2982 R)	
20. Binocular Stereo Zoom Dissecting Microscope (2388 R)	
21. Refrigerated Bath Circulation (2417 R)	
22. Portable Ultrasonic Homogenizer (1966)	
23. Table Top Incubator Shaker (572 R)	
Chemical Engineering	
1. Drop wise & film wise Condensation Apparatus (2008)	Heat Transfer Lab
2. Open pan Evaporator (2008)	Chemical Engg. Lab-I
3. Double effect Evaporator with Accessories(2008)	Mass Transfer Lab
4. Plate Type Heat Exchanger (2008)	Fluid Mechanics Lab
5. Sieve plate distillation column with accessories (2008)	Thesis/Dissertation/Ph.D/Research
6. Parallel Flow/Counter Flow Heat Exchanger (2009)	
7. Shell & Tube Heat Exchanger (2009)	
8. Finned Tube Heat Exchanger (2009)	
9. York Scheibel's Extraction Unit (2009)	
10. Solid-Liquid Extraction (2009)	
11. Batch Distillation Setup (2009)	

Name of Equipment	Used for Courses/Thesis/Dissertation Computational/Administrative Work
12. Absorption In Wetted Wall Column With Accessories (2009) 13. Vapour-Liquid Equilibrium Set-Up, Optional : Refractometer (2009) 14. Mass Transfer With & Without Chemical Reaction (2009) 15. Adsorption In Packed Bed (2009) 16. Pressure Drop Through Packed Bed (2009) 17. Fluidized Bed Characteristics (2009) 18. Drag Co-Efficient Apparatus (2009) 19. Pressure Drop In Two Phase Flow With Accessories (2009) 20. Automatic Potentiometric Titrator (2014 R) 21. Karl Fischer attachment for Auto Titrator (2013 R) 22. Shimadzu Atomic Absorption Spectrophotometer (2221) 23. WCOT Fused Silica RTX-1 (2074 R) 24. Capillary Column Attachment with SS Diaphragm (2074 R) 25. Stirring Mega Platform & hot water bath (2877 R) 26. Steam Generator SS304 (2336 R) 27. Continuous Analyzer for Carbon Dioxide Measurement (3026) 28. Rota vapor System (1829) 29. Frontier MIR (2084) 30. Online IR Thermometer System (1996 R) 31. Julabo Shaking Water Bath (2156)	
Chemistry 1. MS 105 DU (Mettler Toledo Balance) (577 R) 2. Rotary Evaporator (3) (933 R, 1154 R, 2875 R) 3. Rotovac Valve Tec (2) (933 R, 2875 R) 4. Rota Chill with High Cooling (2) (933 R, 2875 R) 5. Manual Spin Coating System (1101 R) 6. Diaphragm Vacuum Pump (1154 R) 7. Re-circulation Chiller (1154 R) 8. Weighing Machine (1287) 9. Analytical balance (2101 R) 10. Heating Immersion Circulator (2189 R) 11. Orbital 1000 Multipurpose digital Shaker (2876 R) 12. Systronics Micro Controller Based Universal titrator (2102 R) 13. Sartorius (2986) 14. Automated melting point System (3071 R) 15. IKAMAG® safety control (16) (935 R, 1103 R, 2927 R, 3046 R)	Chemical Experimentation Lab CHEM F242 Chemical Experimentation-I CHEM F313 Instrumental Method of Analysis Chemistry Laboratory Thesis/Dissertation/Ph.D./Research

Name of Equipment	Used for Courses/Thesis/Dissertation Computational/Administrative Work
Civil Engineering	
<ol style="list-style-type: none"> 1. MICLINS Peristaltic Pump (1047 R) 2. Mettler Electronic Balance (1288 R) 3. Self Consolidated Concrete Equipments (1673) 4. Concrete Permeability Apparatus with Compressor (2151) 5. Cube Cutter (2152) 	Public help Engg. Lamp Concrete Lab Thesis/Dissertation/Ph.D/Research
Computers and Peripherals	
<ol style="list-style-type: none"> 1. Dell Inspiron 14R (739 R) 2. Dell T3500 Chassis (2) (1366 R, 2068 R) 3. Dell Latitude (58) (1366 R, 2309 R, 2262 R, 2882 R) 4. HP Pro book Laptop (1503 R) 5. Apple Mac Mini & Mac Pro (6) (733 R, 2486 R) 6. IBM SERVER (4) (3038 R, 1184 R, 1425 R) 7. SUSE Linux Enterprise Server (1185 R) 8. Dell™ PowerEdge™ Tower Server (3) (2872 R, 2918 R) 9. Dell™ PowerEdge™ Rack Mount Server (6) (2920 R, 2917 R) 10. IBM Blade Servers & Storage (2) (2247 R) 11. CISCO VC System with Dual Display (1675) 12. CISCO Switch (5) (571 R, 2890 R, 3048 R) 13. Panasonic Professional Plasma display (1500 R) 14. iPad (6) (735 R, 995 R, 3123 R) 15. HP Elite Tablet PC (569 R) 16. CISCO Telepresence Conferencing System (2265 R) 17. E-Puck Robot (9) (2961 R) 18. Wireless Access Point (3) (734 R) 19. OptiPlex™ Desktop (334) (737 R, 1369 R, 1622 R, 2873 R, 2180 R, 3037 R, 3068 R, 3066 R, 441 R, 1151 R, 2310 R, 2492 R, 3065 R) 20. HP LaserJet Printer (5) (986 R, 2490 R) 21. LCD Projector (5) (795 R) 	ARCD Pharmacy, WILPD Pharmacy, IPC, WILPD, Civil ARCD CSIS, Language WILPD, Chemistry, I.U. Chemistry CSIS, IPC Physics, IPC WILPD SDET EMU, Maths, CSIS SDET CSIS, IPC Placement SDET Admissions CSIS CSIS , IPC, WILPD, Mech. Engg., Chem. Engg., PSD, I.U. CSIS I.U.
Campus Networking	
<ol style="list-style-type: none"> 1. HiPath 3000 Communication System (1929) 	Campus Networking IPC
Computer Software	
<ol style="list-style-type: none"> 1. Discovery Studio (1509) 2. Automation Studio Software (993) 3. Development of Virtual Testing Application for Solid works (2266) 4. FG-80C, Bundle with 8*5 Support (2973 R) 	BIO Mech. Engg. Mech. Engg. Admissions

Name of Equipment	Used for Courses/Thesis/Dissertation Computational/Administrative Work
5. FortiGate FortiGate-200B with 24*7 Support (3082 R)	IPC
6. WebEx EE with IM – Enterprise subscription (2225 R)	SDET
7. Solid works Educational Edition (2265 R)	SDET
8. Mentor Graphic's Higher Education Program HEP-1, HEP-2 design tools (250 R)	EEE
9. HMS with Integrated Modules (443 R)	Medical Center
10. Provident Fund (1109 R)	IPC
11. Red Hat Enterprise Linux (2) (1426 R, 2465 R)	EEE, IPC
12. COSMO therm Software (1508 R)	Chem. Engg
13. Turbomole-Quantum Chemistry Software (1508 R)	Chem. Engg
14. Mathematica 8.0 (2253 R, 3041 R)	Maths , CSIS
15. Cyberoam CR2500iA with firewall, Bandwidth management & Multiple link management (2) (3033 R)	IPC
16. Antivirus, Antispyware, Antimalware, IPS, web & application Filter (2) (3033 R)	IPC
17. IBM SPSS Modeler Premium (3049 R)	CSIS
18. Chem Draw 2010 (2977 R)	Chemistry
19. ExchgSvrEnt 2010 SNGL OLP NL Acdmc (4) (2975 R)	IPC
20. MS DsktpEdu ALNG LicSAPK (510) (2958 R)	Admission
21. SIMM Base Module (2858 R)	Mech. Engg.
22. Proteus VSM Software for 8086 (2503 R)	CSIS
23. Proteus VSM for ARM/LPC2000 (2503 R)	CSIS
24. Issue Management System (1921)	WILPD
25. Database maintenance and support System (1921)	WILPD
26. Moodle-Google Integration (1922)	WILPD
27. Molecular Modeling Software (1507 R)	Pharmacy
28. WE Embedded Development Suite (370 R)	EEE
29. Silvaco Tcad Omni Software (1408 R)	EEE
30. E-Views 7.0 Standard & Tibco Spot fire Software (2291 R)	Management
31. TECPLOT 360 Software (2252 R)	Maths
32. Umberto 5.6 Educational Software (2) (2175 R)	IPC
33. MATLAB (2083 R)	IPC
34. Linux Server Implementation (1427 R)	EEE
35. Random Software package (2313 R)	Civil Engg.
36. Oracle Database Enterprise & Standard Edition (247 R)	IPC
37. Peoplesoft license software (2452 R)	IPC
Electrical, Electronics & Instrumentation Engineering	
1. Kramer Switch (566 R)	Institute Functions
2. Amplifier QSC CX254 with Accessories (578)	Institute Functions
3. Sony Video Camera HXR-MC1500 (3097 R)	Institute Functions
4. Zed Board Zynq™ (2002)	Embedded system design Lab
5. Genesys™ Virtex (2002)	Thesis/Dissertation/Ph.D/Research

Name of Equipment	Used for Courses/Thesis/Dissertation Computational/Administrative Work
Mechanical Engineering	
<ol style="list-style-type: none"> 1. Metaplan-In Inverted Metallurgical Microscopes (920 R) 2. Hydraulic Trainer with storage (1038) 3. Thermal Imager (2024 R) 4. Surface EMG System (2859 R) 5. Digital Storage Oscilloscope (2) (2193 R) 6. LaboPol-5 Grinding / Polishing machine (740) 	<p>Material Science Lab</p> <p>MF C319 Mechatronics & Automation</p> <p>MF C314 Metal Forming Mechaining</p> <p>Thesis/Dissertation/Ph.D/Research</p>
Pharmacy	
<ol style="list-style-type: none"> 1. HPLC System with RF & PDA Detector (826 R) 2. Data Acquisition System two channel (1483 R) 3. Diffusion Cell Apparatus (1981) 4. Air compressors (1982) 5. Rotary Vane Pump Package (1946 R) 6. Fluid Multi-Processor (2000 R) 7. Spray Dryer (2000 R) 8. Lyophiliser (2198 R) 9. Elemental Analyzer (2199 R) 10. Video Tracking Version for Single Animal (556) 11. Balance (8) (2862 R, 2863 R) 	<p>PHA C391 Instrumental Methods of Analysis</p> <p>PHA F212 Dispensing Pharmacy</p> <p>PHA F243 Industrial Pharmacy</p> <p>PHA G611 Advanced Pharmacology</p> <p>PHA G632 Dosage Form Design</p> <p>Thesis/Dissertation/Ph.D/Research</p>
Physics	
<ol style="list-style-type: none"> 1. DSP Dual Phase Lock (261) 2. Motorized Translation Stage with Accessories (1331) 3. 1 KVA Transformer (1333) 4. Spectrophotometer (1625 R) 5. Cluster Node (1693 R) 6. Waveform Generator (2244 R) 7. XY Motorized Stage, Controller & Software (3089 R) 8. Laser Optics Lab (3099 R) 9. Optical Fiber Characterization Apparatus (3099 R) 10. Opto Electronics Kit (3099 R) 11. Ellipsometer (2957 R) 12. Monochromator (2957 R) 	<p>IMA Lab</p> <p>X-Ray Lab</p> <p>PHY F243 Mathematical Methods of Physics</p> <p>PHY F313 Computational Physics</p> <p>PHY C132 Physics-II</p> <p>Thesis/Dissertation/Ph.D/Research</p>

Name of Equipment	Used for Courses/Thesis/Dissertation Computational/Administrative Work
Others	
1. Xerox Machine Canon (282 R)	EMU
2. Air Cooled & Inverter Based Variable Refrigerant Volume Modular (470 R)	EMU
3. Centralized controller (470 R)	EMU
4. Split Unit Cassette Carrier (561 R)	EMU
5. EATON Online UPS (6) (699 R, 1131 R, 1568 R, 2288 R, 2454 R)	EMU, Pharmacy, Bio, CSIS
6. Electronic Weighing Balance (527 R)	WS,
7. ARC Discharge Oven and Accessories (1152 R)	WS
8. LG Refrigerator (930 R)	PRU
9. Aqua Soaker Handy-36" with pulling handle (1110)	SWD
10. Tray Dryer (1235 R)	DD's
11. Music Work Station (2187 R)	Humantics
12. Numeric 5 KVA UPS (3) (2248 R, 2082 R)	Math's, Chem. Engg.
13. Numeric 15 KVA UPS (2248 R)	Math's
14. Canon Camera EOS 60D(Kit) (2) (1950 R, 2487 R)	EEE, Language
15. Bio Systems A15 Auto Analyzer (1548 R)	Medical Centre
16. Injection molding machines (2412 R)	Workshop
17. Solar water heating System with Assistant tank (2023 R)	Workshop
18. Kitchen Equipments (650)	SWD
19. HTC Sensation 4G (2) (736 R)	CSIS
20. Samsung Galaxy S-III (2) (736 R)	CSIS
21. UPS 600VA (35) (2174 R)	IPC
22. Air Conditioners (46) (251 R, 665 R, 1278 R, 3043 R, 1983 R, 1289 R)	Chem. Engg., EMU
23. Sony Xperia Mobile (5) (668 R)	Placement
24. Décor Made modular cabin Table (8) (663 R)	WILPD

**CUMULATED LIST OF BOOKS PUBLISHED UNDER THE AUTHORSHIP OF BITS
FACULTY**

A. Text Books

S.No.	Author	Title	Publisher	Year
<i>Bio Sciences</i>				
1.	Rastogi, S.C.	An outline of Developmental Physiology	Rajasthan Hindi Granth Academy, Jaipur	1973
2.	Rastogi, S.C.	Essentials of Animal Physiology	Wiley Eastern, New Delhi	1977
3.	Rastogi, S.C.	Experimental Physiology	Wiley Eastern, New Delhi	1982
4.	Mitra, Sandhya	Elements of Molecular Biology	MacMillan	1982
5.	Rastogi, S.C.	Cell Biology	Tata McGraw Hill, New Delhi	1988
6.	Rastogi, S.C.	Biochemistry	Tata McGraw Hill, New Delhi	1993
7.	Rastogi, S.C., Sharma, V.N., Tandon, A.	Concepts in Molecular Biology	Wiley Eastern, New Delhi	1993
8.	Mitra, Sandhya	Essentials of Genetics	Tata McGraw Hill, New Delhi	1994
9.	Mitra, Sandhya	Business of Living	Wiley Eastern, New Delhi	1994
10.	Roy, U., Saxena V.	A Handbook of Genetic Engineering	Kalyani Publications	2007
11.	Ashish Runthala	Hunting Drugs for Potent Antigens in the Silicon Valley	IGI GLOBAL	2010
<i>Chemical</i>				
12.	Khan, F.I., Abbasi, S.A.	Risk assessment of chemical process industries: advanced techniques	Discovery Pub. House	1998
13.	Abbasi, S.A., Krishnakumari, Khan, F.I.	Hot topics: Global warming, acid rain, ozone hole, industrial disasters, dis-infection	Oxford India Pr.	1999
14.	Babu, B.V.	New Optimization Techniques in Engineering	Springer-Verlag, Heidelberg, Germany	2004
15.	Babu, B.V.	Process Plant Simulation	Oxford University Press, India	2004
16.	Babu, B.V.	One Chapter in the Book Advances in Computational Optimization and its Applications	Universities Press, Hyderabad	2007
17.	Babu, B.V., Angira, R.	One Chapter in the Book Soft Computing Applications in Industry	Springer Verlag	2007
18.	Babu, B.V., Angira, Rakesh	Optimization of Industrial Processes using Improved and Modified Differential Evolution	In Soft Computing Applications in Industry, Edited by Bhanu Prasad, Springer-Verlag, Heidelberg, Germany.	2008

S.No.	Author	Title	Publisher	Year
19.	Babu, B.V., Ramakrishna, V.	Water Crisis: Origin Identification and Management	In India's Water Crisis, Edited by K R Gupta, Atlantic Publishers, New Delhi	2008
20.	Babu, B.V., Gupta. S.	Removal of Heavy Metal Pollutants from Wastewater Using Low Cost Absorbents	In India's Water Crisis, Edited by K R Gupta, Atlantic Publishers, New Delhi	2008
21.	Ashish M. Gujarathi and B. V. Babu (contributed a chapter in Advances in Chemistry and Chemical Engineering)	Advances in Optimization and Simulation of Low Density Polyethylene (LDPE) Tubular Reactor	Nova Science Publishers, USA	2010
22.	Ashish M. Gujarathi and B. V. Babu (contributed a chapter in Handbook of Optimization)	Multi-objective Optimization of Low Density Polyethylene (LDPE) Tubular Reactor using Strategies of Differential Evolution	Springer, Germany	2010
<i>Chemistry</i>				
23.	Choudhari, Roy T.	Basic Engineering Thermodynamics	Tata McGraw Hill, Bombay	1973
24.	Choudhari, Roy T.	Applied Engineering Thermodynamics	Tata McGraw Hill, Bombay	1973
25.	Gupta, S.P.	Quantum Biology	New Age, New Delhi	1997
26.	Khan, F.I., Abbasi, S.A.	Risk assessment of chemical process industries: advanced techniques	Discovery Pub. House	1998
27.	Srivastava, R.C., Saha, S.K., Jain, A.K.	Thermodynamics- A Core Course	Prentice Hall, New Delhi	2004
28.	Gupta, S.P., Gupta, R.R.	QSAR & Molecular Modeling Studies in Heterocyclic Drugs II	Springer-Verlag, Berlin	2007
<i>Civil</i>				
29.	Gupta, Rajiv	Construction planning & technology	CBS New Delhi	1994
30.	Ghoshal, S.	Microprocessor based system design	Mecmillan	1996
31.	Ghoshal, S.	Computer-Aided analysis & design	PHI	1997
32.	Moondra, H.S., Gupta, Rajiv	Laboratory manual for civil engineering	CBS, New Delhi	2000
33.	Kumar, Kamlesh	Basic Geotechnical Earthquake Engineering	New Age International Publishers, Limited, New Delhi.	2006
34.	Raju, K.S.	Prediction in Ungauged Basins for Sustainable Water Resources Planning and Management	Jain Brothers, New Delhi	2007
35.	Kulkarni, D.M. & A.K. Sarkar	Engineering graphics with AutoCAD	PHI, New Delhi	2009

S.No.	Author	Title	Publisher	Year
36.	K. Srinivasa Raju, D. Nagesh Kumar	Multicriterion Analysis in Engineering and Management	PHI Learning Pvt. Ltd., New Delhi.	2010
37.	K. Srinivasa Raju, A. Vasani (Ed.)	Sustainable Water Resources Management and Impact of Climate Change	B.S. Publications, Hyderabad.	2010
<i>Computer Science</i>				
38.	Mathur, A.P., Arora K.S., Reddy U.S.	Introduction to Pascal	Tata McGraw Hill, New Delhi	1983
39.	Mathur, A.P.	Introduction to Microprocessors (Third Ed.)	Tata McGraw Hill, New Delhi	1989
40.	Sharan, S.N.	Fundamentals of Expert System	CBS, New Delhi	1993
41.	Banerjee, Rahul	Architecture and Conceptual Design of the Unix System	Khanna Publishers	1993
42.	Banerjee, Rahul	Internetworking Technologies: An Engineering Perspective	Prentice Hall of India	2003
43.	Ghosh, S.	Programming in C	Prentice Hall of India	2004
<i>Electrical & Electronics Engineering</i>				
44.	Maheshwari, L.K., Anand, M.M.S.	Laboratory Manual for Introductory Electronics Experiments	New Age International Publisher	1979
45.	Jain, R.P.	Modern Digital Electronics	Tata McGraw Hill, New Delhi	1984
46.	Jain, R.P., Anand, M.M.S.	Digital Electronics	Tata McGraw Hill, New Delhi	1984
47.	Ramanan, K.V.	Functional Electronics	Tata McGraw Hill, New Delhi	1984
48.	Iyer, T.S.K.V.	Circuit Theory	Tata McGraw Hill, New Delhi	1985
49.	Nagrath, I.J., Kothari, D.P.	Modern Power System Analysis (Second Ed.)	Tata McGraw Hill, New Delhi	1989
50.	Nagrath, I.J.	Basic Electrical Engineering	Tata McGraw Hill, New Delhi	1991
51.	Maheshwari, L.K., Kapoor, A.	Digital Electronics	McMillan India, New Delhi	1992
52.	Khare, R.P.	Analysis Instrumentation	CBS, New Delhi	1993
53.	Nagrath, I.J., Kothari, D.P.	Power Systems Engg.	Tata McGraw Hill, New Delhi	1994
54.	Nagrath, I.J., Kothari, D.P.	Theory and Problems of Electrical Machines (TMH outline series)	Tata McGraw Hill, New Delhi	1996
55.	Nagrath I.J., Kothari, D.P.	Electric Machines (Second Ed.)	Tata McGraw Hill, New Delhi	1997
56.	Nagrath, I.J.	Electronics: Analog and Digital	Prentice-Hall of India, New Delhi	1998
57.	Nagrath, I.J. Kothari, D.P.	Theory and Problems & Basic Electrical Engineering	Prentice-Hall of India, New Delhi	1998

S.No.	Author	Title	Publisher	Year
58.	Nagrath, I.J. Sharan, S.N. Ranjan, R. Kumar, S.	Signals and Systems	Tata McGraw Hill, New Delhi	2001
59.	Anand, M.M.S.	Electronics Instruments & Instrumentation Technology	PHI	2003
60.	Ghosh, S.	Fundamentals of Electrical and Electronics Engineering	Prentice Hall of India	2003
61.	Khare, R.P.	Fiber Optics and Optoelectronics	Oxford University Press	2004
62.	Bansal, R.C.	One Chapter in the Book Electric Vehicles	CRC Press	2005
63.	Ghosh, S.	Electrical Machines	Pearson Education	2005
64.	Maheshwari, L.K., Anand, M.M.S.	Analog Electronics	Prentice Hall of India, New Delhi	2005
65.	Maheshwari, L.K., Anand, M.M.S.	Laboratory experiments and PSPICE simulations analog electronic	Prentice-Hall of India	2006
66.	Bhattacharya, D.K., Sharma, Rajnish	Solid State Electronic Devices	Oxford University Press, New Delhi	2007
67.	Surekha Bhanot	Process Control-principles and applications	Oxford University Press	2008
68.	Khare, R.P., Dixit, R.K.	Rejuvenation without medicines [English translation of ' <i>Bina Aushadhiyon ke Kayakalp</i> ' (in Hindi) by Pt Shriram Sharma Acharya]	Shri Vedmata Gayatri Trust, Shantikunj, Haridwar	2008
69.	Shambhudass, Khare, R.P.	Companions in Solitude [English translation of ' <i>Sunsan ke Sahachar</i> ' (in Hindi) by Pt Shriram Sharma Acharya – Translation by V. A. Shivshankaran]	Shri Vedmata Gayatri Trust, Shantikunj, Haridwar	2008
<i>English</i>				
70.	Krishna Mohan, Manerjee, Meera	Developing Communication Skills	MacMillan India Ltd., New Delhi	1990
71.	Sharma, R.C. Krishna Mohan	Business Correspondence and Report Writing (2nd Ed.)	Tata McGraw Hill, New Delhi	1994
72.	Krishna Mohan, Raman, Meenakshi	Effective English Communication	Tata McGraw-Hill, New Delhi	2000
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82.	Pushp Lata and Sanjay Kumar	Communication Skills	Oxford Higher Education	2011
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1.	AAOC C212	Social Engineering II	Principles of Economics	V.P. Rao
2.	AAOC C312	Operations Research	Operations Research	S.Venkateswaran and others
3.	AAOC C322	Systems	Mode of Engg Systems by Bond Graph	R. Gupta
4.	AAOC C341	Numerical Analysis	An Introduction to Numerical Analysis	Devi Prasad
5.	AAOC C351	Instru Methods of Anal	Laboratory Manual for Instrumental Methods of Analysis	R. Mahesh and others
6.	BIO C241 PHA C241	Microbiology	Laboratory Manual for Microbiology	Saby John, S. Ramachandran
7.	BIO C331	Biophysics	Aspects of Biophysics	S.P. Gupta
8.	BIO C331 & CHEM C341	Biophysical Chemistry	Biophysical Chemistry	Nelashish Nandi
9.	BIO C341/ PHA C452	Microbiology	Laboratory Manual for Microbiology	Y. Shivaji, S.K. Verma, U. Roy
10.	BIO C414	Genetic Engineering	Laboratory Manual for Genetic Engineering	Suman Kapur, A.K. Das
11.	BIO G631	Membrane Liposome Technique	Liposome Technology	V.N. Sharma
12.	BIO G 641	Plant Cell and Tissue Culture Technology	Laboratory Manual for Plant Cell and Tissue Culture Technology	Jitendra Panwar, Rajesh Mehrotra, K. Krithika
13.	BIO G 642	Experimental Techniques	Laboratory Manual for Experimental Techniques	Vishal Saxena and Others
14.	BITS C319	Negotiation Skills and Techniques	Negotiation Skills and Techniques	Bhaskar Bose, S. Anitha
15.	BITS C488 MBA C488	Services Management System	Introduction to Outsourcing BPO and KPO	Usha Manjunath
16.	BITS G512	Object Oriented Programming	An Introduction to Object Oriented Programming	K.R.V. Subramanian
17.	BITS G619	Professional Practice	Professional Practice (Supp. Notes)	Krishna Mohan and others
18.	BITS G624	Comp. Base Simulation & Modelling	Comp. base Simulation & Modelling	K.R.V. Subramanian
19.	BITS G659	Technical Communication	Technical Communication	Meenakshi Raman and others
20.	CDP C323	Function & Work Stock Exchange	Stock Exchanges in India	H.R. Machiraju
21.	CE G531	Environmental Conservation	Environmental Conservation	S.K. Singh and others

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22.	CHE C351/ CHE C341/ CHE 441	Heat Transfer Operations/ Selected Chemical Engineering Operations/ Process Control	Chemical Engineering Lab. Manual	R.K. Gupta
23.	CHE C351/ CHE C441/ CHE C431	Heat Transfer Operations/ Process Control/ Selected Chemical Engineering Operations	Chemical Engineering Laboratory Manual	B.V. Babu and Others
24.	CHE C441	Process Control	Process Control	R.P. Vaid
25.	CHE C473	Advanced Process Control	Advanced Process Control	H. K. Mohanta & Others
26.	CHE G541	Process Plant Simulation	Process Plant Simulation	B. V. Babu & Others
27.	CHE G513	Environmental Management System	Environmental Management System	B.V. Babu, S.D. Manjare
28.	CHE G541	Process Plant Simulation	Process Plant Simulation	B.V. Babu
29.	CHE G551	Fluidisation Engineering	Advanced Separation Techniques	R.K. Gupta and others
30.	CS C321	Computer & Programming	Assembly Language Programming for MC68030 Based Computers	K.R.V. Subramanian
31.	CS C331	Computer Organisation	Digital Systems Design	P.S.V.S.K. Raju
32.	CS/EEE/ INSTR C391	Digital Electronics & Computer Organization	Lab Manual for Digital Electronics & Computer Organization	G. Raghurama, S. Gurunarayanan
33.	DE G611	Dynamics and Vibration	Advanced Dynamics for Engg.	N.N. Sharma
34.	EA C411	Robotics	Robotics & Control	I.J. Nagarath, R.K. Mittal
35.	EA C415	Introduction to MEMS	Introduction to MEMS NNMDC	N.N. Sharma
36.	EA C421	Genetic Engineering	Genetic Engineering: A Lab. Manual	Utpal Roy and others
37.	EA C422	Fibre Optics and Optoelectronics	Fibre Optics and Optoelectronics	R.P. Khare
38.	EA C451	Internetworking Technology	Internetworking Technology	Rahul Banerjee
39.	EA C452	Mobile Telecom. Networks	Mobile Telecom. Networks	J. Garrell
40.	EA C463	Neural Networks & Appl.	Neural Networks & Application	L. Behera
41.	EA C476	Power Apparatus and Networks	Laboratory Manual for Simulation Experiments on Power Apparatus and Networks	S. Roy
42.	EA C482	Fuzzy logic & Appl.	Introduction to Fuzzy sets & Fuzzy logic	M. Ganesh

S.No.	Course No.	Course Title	Title of Notes	Author(s)/Editor(s)
43.	ECON C312	Money Bank & Inter Trade	Monetary Economics	G.P. Avasthi
44.	ECON C321	Macroeconomics	Macroeconomics (Concept Methods & Models)	G.P. Avasthi
45.	EEE C364/ INSTR C364	Analog Electronics	Analog Electronics	L.K. Maheshwari
46.	EEE C371	EM Energy Conversion	Electric Machines-Lab. Manual	I.J. Nagrath
47.	EEE C372	Circuits and Signals	Signals and Systems (Pts I & II)	I.J. Nagrath
48.	EEE C382	Communication Systems	Laboratory Manual for Comm. Sys.	S. Balasubramanina and others
49.	EEE C383	Communication Systems	Lab Manual for Communication Systems	S. Balasubramanian and others
50.	EEE C391	Digital Electronics & Computer Orga.	Digital Electronics & Computer Orga.	G. Raghurama
51.	EEE C391	Digital Electronics & Computer Orga.	Introduction to Computer Org. (Supp. Notes)	G. Raghurama, TSB Sudarshan
52.	EEE C415	Digital Signal Processing	Laboratory Manual for Digital Signal Processing	Shikha Tripathi and Others
53.	EEE C433/ EEEG581	EM Field & Waves, RF & Microwaves	Smith Charts	Hema Singh
54.	EEE G 542	Power Electronics Converters	Laboratory Manual of Power Electronics	H.V. Manjunath Dheerendra Singh
55.	EEE G 546	Systems Simulation Laboratory	Laboratory Manual for Power Electronic Systems Simulation on PSCAD/EMTDC	S. Roy
56.	EEE G581	RF & Microwaves	Microwave Experiments	S. Balasubramanian and others
57.	EEE G581	RF and Microwave Engineering	Laboratory Manual for RF and Microwave Engineering	S. Balasubramanian, Hema Singh
58.	ENGG C212	Introduction to Systems	An Introduction to Systems	I.J. Nagrath and others
59.	ENGL C121	English Lang. Skills I	Developing English Language Skills	Krishna Mohan et. Al
60.	ENGL C342	Science Writings	Science Writings	M. Banerji
61.	ENGL C353	Effective Public Speaking	Effective Public Speaking	Pushplata, Meenakshi Raman
62.	ES C112	Thermodynamics	Thermodynamics Tables, Figures and Charts	Adopted from Book
63.	ES C222	Energy Conversion	Basic Electrical Engineering	I.J. Nagrath
64.	ES C241	Electrical Sciences-I	Basics of PSPICE (Suppl. Notes)	M.M.S. Anand
65.	ES C241	Electrical Science I	Sinusoidal Forcing Function Response and Rectifiers	M.M.S Anand
66.	ES C252	Electronics	Electronics – Analog & Digital	I.J. Nagrath

S.No.	Course No.	Course Title	Title of Notes	Author(s)/Editor(s)
67.	ES C263	Microprocessor Programming and Interfacing	Laboratory Manual for Microprocessor Programming and Interfacing	J.P. Mishra, S. Mohan, S. Gurunaryanan
68.	ET C311	Selected Technologies	Selected Technologies	Jessil A.C.
69.	ET C312	Tech. and Energy Assessment	Energy Efficiency and DSM application for Indian Industry	M. Ramachandran
70.	FIN C311	Merchant Banking	Merchant Banking (Principles & Practice)	H.R. Machiraju
71.	FIN C322	Project Finance	Project Finance	H.R. Machiraju
72.	HSS C 313	Critical Analysis of Literature and Cinema	Introduction to Film Appreciation	Geetha B.
73.	HSS C314	Print and Audio Visual Advertising	Print and Audio-Visual Advertising	Sangeeta Sharma
74.	HUM C321	App of Indian Music	An Approach to Sangeet	R. Roy
75.	HUM C341	Comp. Indian Literature	Comp. Indian Literature	S. Mitra and others
76.	HUM C342	Graphic Art	Graphic Arts	A.P. Rastogi
77.	HUM C382	Sankara's Thoughts	Sankara's Thoughts	S.D. Mishra
78.	INSTR C312	Industrial Instrumentation & Control	Process Control – Issue and Application	Surekha Bhanot
79.	INSTR C354	Instrumentation Technology	Electronics Instruments & Instr. Tech.	M.M.S. Anand and others
80.	INSTR C355	Electronics Instruments & Instrumentation Technology	Experiments in Instrumentation (Lab. Manual)	M.M.S. Anand, Rajesh Purohit
81.	INSTR C381	Transducers and Measurement Systems	Measurement Science- Concepts and Applications Vol. I and II	Surekha Bhanot
82.	INSTR C312	Industrial Instrumentation & Control	Process Control-Issues and Application Vol I & II	Surekha Bhanot
83.	IS C472	Geographical Information System	Computing Aspects of Geographical information system	Rajiv Gupta
84.	MATH C121	Finite Mathematics	Topics in Finite Maths	J.C. Pant
85.	MATH C131	Calculus	Calculus (Supplementary notes)	R.K. Patnaik
86.	MATH C151	Linear Algebra	Supp. Notes to Linear Algebra	V. Krishnamurthy and others
87.	MATH C211	Complex Variable	Laplace Transform	V.P. Mainra, B. Singh
88.	ME C331	Transport Phenomena II	Transport Phenomena II Lab. Manual	R.K. Mittal
89.	ME C331	Transport Phenomena-II	Data Book for Heat Transfer Applications (Supplementary Notes) Part I & II	M. Srinivas R.K. Mittal
90.	ME C332	Steam & Gas Turbine	Steam & Gas Turbine	G. Singh

S.No.	Course No.	Course Title	Title of Notes	Author(s)/Editor(s)
91.	ME C332	Prime Movers and Fluid Machines	Laboratory Manual for Prime Movers and Fluid Machines	S.S. Deshmukh M.S. Soni
92.	ME C342	Production Techniques	Lab. Manual for Production Technique	G. Harinarayana
93.	MEL G631	Physics and Modelling of Microelectronics devices	Lab. Manual for MOSFET characterization	Anu Gupta
94.	MF C314/ MFC 313	Metal forming & Machining	Metal Forming & Machining Lab Manual	P. Srinivas & A. digalwar
95.	MSE G531	Concurrent Engineering	Concurrent Engineering	K.S. Sangwan
96.	MSMS C311	History & Dev of Museums	History & Dev of Museums	P. Mandke
97.	MSMS C312	Museum Management	Museum Management	P. Mandke and others
98.	MSMS C321	Exhibits & Presentation	Exhibits & Presentation	M.K. Kashiramka
99.	MSMS C322	Profess Skills & Tech I	Profess Skills & Tech I	S. Kundu
100.	MSMS C331	Museum Edu & Ext Services	Museum Edu & Ext Services	S. Kundu
101.	MST G511	Nondestructive Testing Techniques	Nondestructive Testing Techniques	Ravi Pakash
102.	PHIL C221	Symbolic Logic	Intro to Symbolic Logic	B.K. Neema
103.	SOC C211	Dyna. Of Social Change	Dynamics of Social Change	N. Prakash and others
104.	STD C312	Science Communication	Science Communication	M. Banerji
105.	STD C322	R&D Management	Management of R&D (Supp. Notes) (Jan. 95)	T.S.K.V. Iyer
106.	TA C111	Engg. Graphics	Engg. Graphics & CAD	A.P. Rastogi and others
107.	TA C111	Engineering Graphics	Engineering Graphics with AUTOCAD	D.M. Kulkarni, A.K. Sarkar
108.	TA C112	Workshop Practice	Manual Workshop Practice	G. Harinarayana
109.	TA C112	Workshop Practice	Elements of Manufacturing Process	B.S.N. Parashar and others
110.	TA C112	Workshop Practice	Workshop Practice (Suppl. Notes)	B.S.N. Parashar and others
111.	TA C112	Workshop Practice	Practical Manual for Workshop Practice	R.K. Mittal, B.K. Rout
112.	TA C112	Workshop Practice	Practical Manual for Workshop Practice	K.S. Sangwan and others
113.	TA C152	Computer Programming I	Introduction to Comp. UNIX Algo. & Flowchart	Usha V. Subramanian and others
114.	TA C162	Computer Programming I	Computer Fundamentals	Usha V. Subramanian
115.	TA C211	Measurement Techniques I	Measurement Tech. I	Bioscience Faculty
116.	TA C211	Measurement Techniques I	Measurement Tech. I	Chemistry Faculty
117.	TA C211	Measurement Techniques I	Laboratory Manual for Chemistry Measurement Techniques I	Chemistry Group Faculty

S.No.	Course No.	Course Title	Title of Notes	Author(s)/Editor(s)
118.	TA C211	Measurement Techniques I	Measurement Tech. I	Physics Faculty
119.	TA C211	Measurement Techniques I (Physics)	Measurement Techniques I (Physics) Observations and Results	Physics Group Faculty
120.	TA C211	Measurement Techniques I	Laboratory Manual for Physics Measurement Techniques I: Observations and Results	Physics Group Faculty
121.	TA C 211	Measurement Techniques I	Laboratory Manual for Physics Measurement Techniques I: Theory	Physics Group Faculty
122.	TA C211	Measurement Technique-I	Lab Manual for Physics MT- I Observations and Results	Suresh Ramaswamy and others
123.	TA C222	Measurement Techniques – II	A Lab. Manual for Measurement Techniques-II	K.E. Raman and others
124.	TA C222	Measurement Techniques-II	Measurement Techniques-II (Supplementary Notes)	A. Sarkar & others
125.	TA C222	Measurement Techniques-II	Measurement Techniques-II (Supplementary Notes)	A. Sarkar and others
126.	TA C231	Business Communication	Business Communication	M. Raman and others
127.	TAC 211	Measurement Technique-I	Lab Manual for Physics MT-I	Suresh Ramaswamy and others
128.	TOC C215	Language Lab Practice	Language Lab Practice Lab Manual	Devika Sangwan
129.		Office Practices	Office Practices Lectures Notes for Work-integrated Trade Certificate Training Programme	M.M.S. Anand

SENIOR OFFICERS OF THE INSTITUTE

DIRECTOR

Prof. G. Raghurama

DEPUTY DIRECTORS

1. Prof. Ranendra N. Saha
2. Prof. G. Sundar

REGISTRAR

Prof. M.M.S. Anand

CHIEF FINANCIAL OFFICER

Mr. Manoj Fitkriwala

DEANS

I. University Wide:

(a) Pilani Campus

<u>DIVISION</u>	<u>NAME</u>
1. Academic Research (Ph.D. Programme) Division	Prof. Sanjay Kumar Verma
2. Academic and Resource Planning Division	Prof. S. Balasubramaniam
3. Admissions Division	Prof. Sudeept Mohan
4. Educational Development Division	Prof. Ranendra N. Saha
5. Faculty Affairs Division	Prof. R. Mahesh
6. Practice School Division	Prof. Niranjana Swain
7. Sponsored Research and Consulting Division	Prof. Ranendra N. Saha
8. Work Integrated Learning Programmes Division	Prof. S. Gurunaryanan

(b) Hyderabad Campus

1. International Programmes and Collaboration	Prof. Suman Kapur
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II. Campus Wide:

(a) Pilani Campus

1. Academic Registration & Counselling Division	Prof. Niti Nipun Sharma
2. Instruction Division	Prof. Ajit Pratap Singh
3. Student Welfare Division	Prof. Arya Kumar

(b) Hyderabad Campus

1. Administration	Prof. M.B. Srinivas
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ASSISTANT DEANS

<u>DIVISION</u>	<u>NAME</u>
1. Practice School Division	Dr. K.V.G. Chandrasekhar (Hyderabad Campus)
	Prof. Sutapa Roy Ramanan (K.K. Birla Goa Campus)
	Dr. (Ms.) S. Sindhu (Off-campus Centre at Bangalore)
	Dr. P. Srinivasan (Pilani Campus)
2. Work Integrated Learning Programmes Division	Dr. Raghunath Ratabole (K.K. Birla Goa Campus)
	Shri K. Venkatasubramanian (Pilani Campus)
	Dr. G. Venkiteswaran (Off-campus Centre at Chennai)

UNIT CHIEFS

<u>UNIT</u>	<u>NAME</u>
1. Centralised Purchases Unit	Dr. Ravi Kant Mittal
2. Computer Assisted Housekeeping Unit	Prof. S.C. Sivasubramanian
3. Entrepreneurship Development & Intellectual Property Rights Unit	Prof. Arya Kumar
4. Estate Management Unit	Dr. Anshuman
5. General Administration Unit	Prof. M.M.S. Anand
6. Information Processing Centre Unit	Prof. Janardan Prasad Misra
7. Instrumentation Unit	Prof. Surekha Bhanot
8. Placement Unit	Prof. Mani Sankar Dasgupta
9. Publications & Media Relations Unit	Dr. Ishwara Bhat M.
10. Software Development & Educational Technology Unit	Prof. Rahul Banerjee

HEADS OF DEPARTMENTS

<u>DEPARTMENT</u>	<u>NAME</u>
1. Biological Sciences	Dr. Jitendra Panwar
2. Chemical Engineering	Dr. Suresh Gupta
3. Chemistry	Prof. Subit Kumar Saha
4. Civil Engineering	Dr. Manoj Kumar
5. Computer Science & Information Systems	Prof. Navneet Goyal
6. Economics & Finance	Dr. Arvind Sudarsan
7. Electrical & Electronics Engineering & Instrumentation	Prof. Anu Gupta
8. Humanities & Languages	Dr. Geetha B
9. Management	Prof. Anil Kumar Bhat
10. Mathematics	Prof. Pradipkumar Haribhau Keskar
11. Mechanical Engineering	Prof. Kuldip Singh Sangwan
12. Pharmacy	Dr. Hemant Ramanlal Jaddhav
13. Physics	Prof. Debashish Bandyopadhyay

FACULTY-IN-CHARGE/OFFICIAL

<u>CENTRE/SECTION/ENTITY</u>	<u>NAME</u>
1. Medical Centre	Dr. R.P. Pareek (Medical Superintendent)
2. Accounts & Finance Section	Shri Mohan Lal (Budget Officer)
3. Transport Services Section	Dr. Abhijit K. Digalwar (Faculty-in-charge)
4. Workshop	Prof. Kuldip Singh Sangwan (Faculty-in-charge)
5. Library	Dr. Ishwara Bhat M (Librarian)
6. Reprography Section	Dr. Virendra Singh Nirban (Faculty-in-charge)
7. Publicity and Branding	Dr. G.S. Chauhan (Faculty-in-charge)
8. Pay roll processing (CAHU)	Dr. Yashvardhan Sharma (Faculty-in-charge)
9. Center for Entrepreneurial Leadership (EDIPRU)	Dr. Jyoti (Faculty-in-charge)
10. Network Administration (IPCU)	Mr. Vikas Singh (Faculty-in-charge)
11. Projection Systems and Instrumentation Services (IU)	Dr. Karunesh Kumar Gupta (Faculty-in-charge)
12. Admission Tests and Services (ADMD)	Dr. Hari Om Bansal (Faculty-in-charge)
13. Educational Technology Support (SDETU)	Mr. Virendra Singh Shekhawat (Faculty-in-charge)
14. Infant Care Center	Dr. Poonam Goyal (Faculty-in-charge)
15. Societal Development	Prof. Sangeeta Sharma (Faculty-in-charge)
16. Institute Functions	Dr. Leela Rani (Faculty-in-charge)

PROFESSOR-IN-CHARGE

<u>DIVISION</u>	<u>NAME</u>
(a) Pilani Campus:	
1. Academic Research	Dr. Hemant Ramanlal Jadhav
2. Faculty Affairs	Prof. Navneet Goyal
3. International Programmes and Colaborations	Prof. Dalip Kumar
4. Sponsored Research and Consulting	Dr. Champak Baran Das
(b) K.K. Birla Goa Campus:	
1. International Programmes and Colaborations	Dr. M. Srikanth
(c) Hyderabad Campus:	
1. Academic Research	Dr. Vidya Rajesh
2. International Programmes and Colaborations	Dr. Souril Banerjee
3. Sponsored Research and Consulting	Prof. P. Yogeeswari

CHIEF WARDEN

Dr. Sanjiv Kumar Choudhary

WARDENS

<u>BHAWAN</u>	<u>NAME</u>
1. Ashok Bhawan	Dr. Rajesh Prasad Mishra
2. Bhagirath Bhawan	Dr. Rajesh Prasad Mishra
3. Budh Bhawan	Dr. Kumar Neeraj Sachdev
4. Gandhi Bhawan	Dr. Hari Om Bansal
5. Krishna Bhawan	Dr. Sanjiv Kumar Choudhary
6. Malaviya Bhawan	Dr. Champak Baran Das
7. Meera Bhawan	Prof. (Ms.) Surekha Bhanot
	Prof. (Ms.) Kusum Lata
8. Ram Bhawan	Dr. Kumar Neeraj Sachdev
9. Rana Pratap Bhawan	Dr. R. Raghunathan
10. Shankar Bhawan	Dr. Srikanta Routroy
11. Vishwakarma Bhawan	Mr. Jitendra Singh Rathore
12. Vyas Bhawan	Mr. K. Vinayak

NON-RESIDENT WARDENS

<u>BHAWAN</u>	<u>NAME</u>
1. Ashok Bhawan	Dr. Anshuman Dalvi
2. Bhagirath Bhawan	Dr. Abhijeet K. Digalwar
3. Day Scholars	Dr. Ravi Kant Mittal
4. Gandhi Bhawan	Dr. Manojkumar Surajkararaji Soni
5. Krishna Bhawan	Dr. Sheth Pratik Nitinchandra
6. Malaviya Bhawan	Dr. Navneet Gupta
	Dr. Suresh Gupta
	Dr. Pintu Modak
7. Meera Bhawan	Dr. (Ms.) Poonam Goyal
8. Rana Pratap Bhawan	Mr. Virendra Singh Shekhawat
9. Shankar Bhawan	Dr. Jitendra Panwar
10. Vishwakarma Bhawan	Dr. Virendra Singh Nirban
11. Vyas Bhawan	Dr. Yashvardhan Sharma

LIBRARIAN

Dr. Ishwara Bhat M.

BUDGET OFFICER

Shri Mohan Lal

BITS Pilani

annual report

2012

Part B2: K K Birla Goa Campus

CONTENTS

	Page No.
B2.1 Senior officers, New appointments	B2-1
B2.2 Admissions	B2-1
B2.3 Dual degrees and Transfers	B2-1
B2.4 Academic calendar	B2-1
B2.5 Courses offered	B2-1
B2.6 Registration of students	B2-4
B2.7 Academic and Professional counseling	B2-4
B2.8 Award of Degrees and Medals	B2-5
B2.9 Campus Interviews and Placement	B2-5
B2.10 Department-wise reports	B2-6
B2.10.1 Biological Sciences	B2-6
B2.10.2 Chemistry	B2-10
B2.10.3 Chemical Engineering	B2-22
B2.10.4 Computer Science & Information Systems	B2-25
B2.10.5 Economics	B2-27
B2.10.6 EEE & E&I	B2-30
B2.10.7 Humanities and Management	B2-33
B2.10.8 Mathematics	B2-35
B2.10.9 Mechanical Engineering	B2-37
B2.10.10 Physics	B2-41
B2.11 Division/Unit/Center-wise activity highlights	B2-44
Community Welfare	B2-45
Practice School	B2-46
Publications Division	B2-47
Public Relations	B2-47
Research Consultancy Education Development	B2-48
Sponsored Research Projects	B2-48
Category-wise Distribution of Ph.D. Students	B2-56
B2.12 Central Facilities Report	B2-57
Central Library	B2-57
Computer Centre	B2-58
B2.13 Major Maintenance, Renovations or New Construction Reports	B2-62
B2.14 Major equipments acquired during the year	B2-63
B2.15 Students Activities, Achievements, Scholarships, Cultural and academic festivals	B2-64

List of Annexure

	Page No.
1. Annexure B2-1 - SENIOR OFFICERS OF THE INSTITUTE	B2: A-1
2. Annexure B2-2 - DETAILS OF ADMISSIONS MADE DURING THE YEAR 2012	B2: A-4
3. Annexure B2-3 - DUAL DEGREES AND TRANSFERS	B2: A-6
4. Annexure B2-4 - REGISTRATION OF STUDENTS	B2: A-7
5. Annexure B2-5 - AWARD OF DEGREES AND MEDALS	B2: A-10
6. Annexure B2-6 - DEGREES TO BE APPROVED	B2: A-12
7. Annexure B2-7 - CAMPUS INTERVIEWS AND PLACEMENT	B2: A-13

BITS PILANI - KK BIRLA GOA CAMPUS

B2.1 SENIOR OFFICERS

1. Prof. K. E. Raman (Acting Director)

New appointments

During the year, the following new administrative appointment was made:

1. Professor In-Charge, International Programmes and Collaborations Division.
2. Residential Warden, Hostel.

The names and designations of senior officers of Goa Campus are given in 'Annexure B2-1'.

B2.2 ADMISSIONS

The number of students admitted in each of the semester is given below.

	Integrated First Degree Programmes	Higher Degree Programmes	Doctoral Programmes (PhD)	Total
Second Semester 2011-2012	-	-	12(07)	12(07)
First Semester 2012-2013	592(101)	58(18)	19(10)	669(129)

The programme-wise details are given in Annexure B2-2 (Part B2).

B2.3 DUAL DEGREES AND TRANSFERS

(a) Dual Degree

During the Academic year 2011-2012, 183 students were permitted to work concurrently for two first degrees under the Dual Degree scheme. See Annexure B2-3 (Part B2) for details.

(b) Transfer

During the Academic year 2012-2013, 6 students ((i) Within same tier : 2; (ii) Integrated First Degree to Higher Degree : Nil, (iii) Higher Degree to Ph.D.: 4) was permitted to transfer.

B2.4 ACADEMIC CALENDAR

The Academic year of the Institute is divided into two semesters and a summer term.

	Starting Date	Ending date	Number of instruction days (excluding examination days)
Second Semester 2010-2011	5 Jan 12	14 May 12	85
First Semester 2011-2012	1 Aug 12	14 Dec 12	100
Summer Term 2010-2011	21 May 12	13 July 12	44

B2.5 COURSES OFFERED

The number of courses, offered during the year 2012 is as follows:

	Number of Courses offered
Second Semester 2011-2012	235
First Semester 2012-2013	278
Summer Term 2011-2012	2

During the year, the following new courses were introduced.

Sr.No	Comp code	Course No	Course Title
1	2009	BIO G523	ADVANCED AND APPLIED MICROBIOLOGY
2	2008	BIO G524	ANIMAL CELL TECHNOLOGY
3	2017	BIO G651	PROTEIN & ENZYME BIOENGG
4	2019	BIO G671	BIOCONVERSION TECHNOLOGY
5	2120	BITS E573	STUDY IN ADVANCED TOPICS I
6	2121	BITS E662	RESEARCH METHODOLOGY II
7	2003	BITS G540	RESEARCH PRACTICE
8	2002	CHE G523	MATH METHODS IN CHEM ENG
9	2084	CHE G528	INTO TO NANO SCI & TECH
10	1006	CHEM F110	CHEMISTRY LABORATORY
11	2034	CHEM G521	ENVIRONMENTAL CHEMISTRY
12	1008	CS F111	COMPUTER PROGRAMMING
13	2052	CS G523	SOFT FOR EMBED SYS
14	1009	EEE F111	ELECTRICAL SCIENCES
15	1011	MATH F112	MATHEMATICS II
16	1061	MUSIC N106T	WESTERN CLASS MUSIC II
17	1066	MUSIC N214T	IND CLASS MUSIC (INST) IV
18	1014	PHY F110	PHYSICS LABORATORY
19	2111	PHY G514	QUANTUM THEORY & APPLICATION
20	2113	PHY G516	STATISTICAL MECHANICS & APPLICATION
21	1002	BIO F111	GENERAL BIOLOGY
22	1112	BIO F211	BIOLOGICAL CHEMISTRY
23	1114	BIO F212	MICROBIOLOGY
24	1113	BIO F213	CELL BIOLOGY
25	1115	BIO F214	INTEGRATED BIOLOGY
26	2009	BIO G523	ADV & APPLIED MICROBIO
27	2007	BIO G525	ENVIR BIOTECH & WASTE MGMT
28	2015	BIO G532	BIOSTATISTICS & BIOMODEL
29	2101	BITS E661	RESEARCH METHODOLOGY I
30	2001	BITS F437	TECHNICAL COMMUNICATION
31	1069	CHE F211	CHEMICAL PROCESS CALCULA
32	1072	CHE F212	FLUID MECHANICS
33	1071	CHE F213	CHEM ENGG THERMODYNAMICS
34	1070	CHE F214	ENGINEERING CHEMISTRY
35	2080	CHE G524	INTRO TO MULTIPHASE FLOW
36	2081	CHE G525	CHEMICAL PRO & EQUIP DEG
37	2032	CHE G622	ADV CHEMICAL ENGG THERMO
38	1116	CHEM F211	PHYSICAL CHEMISTRY I
39	1117	CHEM F212	ORGANIC CHEMISTRY I
40	1118	CHEM F213	PHYSICAL CHEMISTRY II
41	1119	CHEM F214	INORGANIC CHEMISTRY I
42	1092	CS F213	OBJECT ORIENTED PROG

Sr.No	Comp code	Course No	Course Title
43	1090	CS F214	LOGIC IN COMPUTER SC
44	1093	CS F215	DIGITAL DESIGN
45	1091	CS F222	DISCR STRUC FOR COMP SCI
46	1023	ECON F211	PRINCIPLES OF ECONOMICS
47	1120	ECON F212	FUNDA OF FIN AND ACCOUNT
48	1121	ECON F213	MATHEMATIC & STAT METHOD
49	1145	ECON F214	ECONOMIC ENV OF BUSINESS
50	1553	ECON F415	NEW VENTURE CREATION
51	1590	ECON F416	REGIONAL ECONOMICS
52	1077	EEE F211	ELECTRICAL MACHINES
53	1078	EEE F212	ELECTROMAGNETIC THEO I
54	1080	EEE F214	ELECTRONIC DEVICES
55	1079	EEE F215	DIGITAL DESIGN
56	1256	EEE F434	DIGITAL SIGNAL PROCESS
57	1130	GS F211	MOD POLITICAL CONCEPTS
58	1169	GS F231	DYN OF SOCIAL CHANGE
59	1170	GS F232	INTRODUCTORY PSYCHOLOGY
60	1172	GS F234	DEVELOPMENT ECONOMICS
61	1160	GS F243	CURRENT AFFAIRS
62	1165	GS F245	EFFECTIVE PUBLIC SPEAK
63	1523	GS F325	JOURNALISM
64	1176	GS F332	CONTEMPORARY INDIA
65	1177	GS F333	PUBLIC ADMINISTRATION
66	1603	HSS F222	LINGUISTICS
67	1612	HSS F229	INTRO TO WESTERN MUSIC
68	1601	HSS F332	CINEMATIC ART
69	1599	HSS F334	SRIMAD BHAGAVAD GITA
70	1604	HSS F335	LITERARY CRITICISM
71	1605	HSS F336	MODERN FICTION
72	1606	HSS F337	ENG LIT FORM AND MOV
73	1607	HSS F338	COMPARATIVE INDIAN LITERATURE
74	1623	HSS F343	PROFESSIONAL ETHICS
75	1096	INSTR F211	ELECTRICAL MACHINES
76	1097	INSTR F212	ELECTROMAGNETIC THEO
77	1099	INSTR F214	ELECTRONIC DEVICES
78	1098	INSTR F215	DIGITAL DESIGN
79	1140	IS F213	OBJECT ORIENTED PROG
80	1138	IS F214	LOGIC IN COMPUTER SC
81	1139	IS F222	DISCR STRUC FOR COMP SCI
82	1526	IS F241	DIGITAL ELECTRO & MICRO
83	1011	MATH F112	MATHEMATICS-II
84	1022	MATH F211	MATHEMATICS III
85	1122	MATH F212	OPTIMIZATION

Sr.No	Comp code	Course No	Course Title
86	1123	MATH F213	DISCRETE MATHEMATICS
87	1124	MATH F214	ELEMENTARY REAL ANALYSIS
88	1125	MATH F215	ALGEBRA I
89	2012	MBA C431	MANAGERIAL COMMUNICATION
90	1083	ME F211	MECHANICS OF SOLIDS
91	1082	ME F212	FLUID MECHANICS
92	1081	ME F213	MATERIALS SCIENCE & ENGG
93	1084	ME F214	APPLIED THERMODYNAMICS
94	1265	ME F243	PRODUCTION TECHNIQUES I
95	2064	MEL G624	ADV VLSI ARCHITECTURES
96	1062	MUSIC N205T	WESTERN CLASS MUSIC III
97	1126	PHY F211	CLASSICAL MECHANICS
98	1127	PHY F212	ELECTROMAGNETIC THEO I
99	1128	PHY F213	OPTICS
100	1129	PHY F214	ELEC MAGNET & OPTICS LAB
101	2110	PHY G513	CLASSICAL ELECTRODYNAMICS
102	2111	PHY G514	QUANTUM THEORY & APPLI
103	2073	SS G554	DISTRIB DATA SYSTEMS

B2.6 REGISTRATION OF STUDENTS

The registration processes for both the semesters was completed on the first day of each semester.

	Number of students registered
Second Semester 2011-2012	2748
First Semester 2012-2013	2839
Summer Term 2011-2012	610

Details of Registration of students for the First Semester 2011-2012 are given in *Annexure B2-4*.

B2.7 ACADEMIC AND PROFESSIONAL COUNSELING

During the year, the Academic Counseling Board (ACB), estimated the extent to which students under its purview fell short of the minimum academic performance, drew up a time-frame within which afflictions were to be removed, determined the package of courses for their registration in each semester and laid down the necessary stipulations for achieving intermediate targets. It further monitored their progress and applied necessary mid-course corrections, wherever required. The statistical summary of the number of On-campus students under its purview during the year is given below:

		II Semester 2011-2012	I Semester 2012-2013
1.	Total number of students under the purview of ACB at the beginning of the semester	122	126
2.	No. of students declared out of its purview at the end of the semester	71	60
3.	No. of students who left the Institute during the semester	2	2
4.	No. of new students who came under the purview of ACB at the end of the semester	77	40
5.	Total No. of students under the purview of ACB during the next semester	126	104

Academic Counseling cell organized the counseling of students who were under the purview of ACB. It involved the involvement of faculty members as advisors and an external professional counselor whom the students could consult. The parents of students were also called to interact with the ACB.

B2.8 AWARD OF DEGREES AND MEDALS

(a) Award of Degrees

During the year, a total of 644 students graduated. The details on the award of degrees are given below.

	Number of degrees awarded
70 th Award (vide Board of Governors meeting held on 08.03.2012)	53(13)
71 th Award (vide Board of Governors meeting) 71.1 held on 29.6.12 71.2 held on 7.7.12)	693(126) 27(4)
72 th Award (subject to approval from vide Board of Governors meeting in its next meeting)	85(10)
Total:	858(153)

Statistical details of these degrees are given in 'Annexure B2-5, Annexure B2-6'.

(b) Award of Medals

For Academic Year 2011-2012

The list of students who were awarded various medals, for the students graduated at the end of First Semester, Second Semester and Summer Term of the academic year 2011-2012 in the following table:

S.N.	ID.No.	Name	Sex	CGPA Obtained	Position Obtained	Type of Medal to be Awarded
Integrated First Degree Programmes (No. of students: 575)						
1.	2008A7PS003G	PRACHETAA R	M	9.87	First	Gold
2.	2008A7PS161G	SOPARKAR KEDAR NAGESH	M	9.85	Second	Silver
3.	2008A7PS059G	MURTUZA KUTUB	M	9.81	Third	Bronze

B2.9 CAMPUS INTERVIEWS AND PLACEMENT

SEMESTER II, 2011-2012

Number of companies which conducted campus interviews	55
No of interviews	2141
No of offers made	296

SEMESTER I, 2012-2013

Number of companies which conducted campus interviews	43
No of interviews	1782
No of offers made	178

The statistics (discipline-wise) and the list of organizations which conducted campus interviews during the year is given in *Annexure B2-7 (Part B2)*.

B2.10 DEPARTMENT-WISE REPORT

In the following pages, a brief summary of the main activities and achievements of different departments of the campus is highlighted.

B2.10.1 Department: Biological Sciences

Number of faculty members (as on 31 December 2012) : 15

Senior Professors, Professors	00
Associate Professors	01
Assistant Professors	13
Lecturers	00
Visiting Faculty	01

Head of the Department: Dr. UTPAL ROY

Contact details: uroy@bits-goa.pilani.ac.in

Number of PhD Scholars: 28 (twenty eight)

Ph.D. Thesis Submitted during the year: 01

A. Sponsored Research activities:

Total number of Sponsored Projects in the department: 07. Details are given below.

(i) Ongoing projects:

- (i) Utpal Roy, UGC- funded project entitled "Biochemical and genetic characterization of antimicrobial (Candidacidal) Peptides Produced by the strain *E. faecalis* APR 210"(Ref. no 39-205/2010 (SR).
- (ii) Utpal Roy, DST Isolation and screening of microorganisms from extreme and unusual environment for new and novel antimicrobial peptides to combat some clinically important multidrug resistant fungal pathogens" (Ref. no SR/SO/HS – 137/2008).
- (iii) Dr. Sumit Biswas received BRNS (DAE) project titled "Structure elucidation of VCO_0395 protein from *Vibrio cholerae* (leading to an alternative way of tackling cholera), worth Rs. 23.4 lakhs
- (iv) Dr. Sumit Biswas DBT, North East Twinning Program project titled "Physicochemical characterization of Primary sigma factor of *Vibrio cholerae*", worth Rs. 31.7 lakhs.
- (v) Dr. Sumit Biswas received BITS Research Intitiation Grant for the project, "Expression, Purification and Characterization of GGEEF protein of *Vibrio cholerae*".
- (vi) Dr. Sumit Biswas received the DST Fast Track Project for Young Scientists for the project. "Studies on the Putative GGEEF protein from *Vibrio cholerae*", worth Rs. 22 lakhs

- (vii) Dr. Angshuman Sarkar received BITS Seed Grant: Effect of Cadmium toxicity on human neural cells and predict a potential candidate for recovering from Cadmium stress. Amt. 11.60 lacs.
- (viii) Dr. Angshuman Sarkar received BRNS (DAE, Govt. of India): Study the Effect of nanoparticles on protein synthesis and expression of small GTPases. (19.7 lacs).
- (ix) Dr. Dibakar Chakrabarty received the Seed-Grant Project in 2011" Studies on Anticoagulant and Disintegrins activities of Indian Snake Venoms". Amt. 13.80 lacs
- (x) Dr Anasuya Ganguly received ABST Project : Testing novel and existing materials for manufacturing Tissue Engineered Heart Valves (TEHVs). Sactioned on 17.10.2011. Amount 15 lakhs .
- (xi) VijayShree Nayak received project Funding Agency: BRNS-Title: Biodegradable scaffold for cartilage tissue engineering. Amount: Rs. 22,33,750/-
- (xii) VijayShree Nayak received the project Funding Agency: ABSTC
Title: To study the correlation between *S.typhi* infection and gall bladder cancer
Amount:Rs. 10,00,000/-.

In addition to the above individual projects, the department is supported by the DST under its FIST scheme.

(ii) Projects sanctioned during the year

1. DST Fast Track Project for Young Scientists for the project. "Studies on the Putative GGEEF protein from *Vibrio cholerae*", worth Rs. 22 lakhs
2. Project Title: "Protein-Ranking and Novel Intervention Strategies against *Mycobacterium tuberculosis* using Graph Theory and Bioinformatics Resources
Funding Agency: Department of Science & Technology (SERC), FAST TRACK PROJECT for YOUNG SCIENTISTS"
3. Analysis of metabolically active bacterial species in anaerobic digesters. Funded by Council for Scientific and Industrial Research (CSIR).

(iii) Projects completed this year

Purnima Singh (PI) and Utpal Roy (Mentor of the project) titled "Studies on extremophile isolates for antimicrobial substance: Biochemical and Genetic characterization of Antimicrobial substance produced by a selected wild-type extremophile isolate against multi-drug resistant clinical isolates. [14.92 lacs]

B. Publications:

The faculty of the department published 20 papers in international/national refereed journals during the year.

- 1 Kabilan M, Bhakti Salgaonkar, Deepthi Das and **Judith M. Braganca** (2012). *Community solar salt production in Goa, India. BMC Aquatic Biosystems*. 8:30 doi:10.1186/2046-9063-8-30
- 2 Kabilan M, Bhakti Salgaonkar and **Judith M. Braganca** (2012). *Culturable halophilic archaea at the initial and crystallization stages of salt production in a natural solar saltern of Goa, India. BMC Aquatic Biosystems* 2012, 8:15 doi:10.1186/2046-9063-8-15.
- 3 B. B. Salgaonkar, K. Mani, A. Nair, S. Gangadharan and **Judith M. Braganca**. (2012) Interspecific Interactions Among Members of Family Halobacteriaceae from Natural Solar Salterns. *Probiotics & Antimicro. Prot.* DOI: 10.1007/s12602-012-9097-8.
- 4 Role of Cyclodextrin Glucanotransferase Enzyme in Biodegradation C.Sivaraman, Anasuya Ganguly and Srikanth Mutnuri : *Advances in Environmental Research* (2012), Vol. 1, No. 2 pp97-108.
- 5 Manjuri K. Koley, Seshadri C. Sivasubramanian, **Sumit Biswas**, Periakaruppan T. Manoharan & Aditya P. Koley. Dioxygen binding and activation by a highly reactive Cr(II) compound containing S,N-donors derived from *o*-aminothiophenol. *Journal of Coord Chem*. Accepted author version posted online: 24 Jul 2012.
- 6 Rastogi A, **Biswas S**, Sarkar A, Chakrabarty D. Anticoagulant activity of Moon jellyfish (*Aurelia aurita*) tentacle extract. *Toxicon*. 2012 May 28;60(5):719-723

- 7 Vilas Desai, Bhanudas Naik, Narendra Nath Ghosh and **Meenal Kowshik** (2012) Functionalization of AgCl/titania nanocomposite with folic acid - a promising strategy for enhancement of antimicrobial activity, *Science of Advanced Materials* (Accepted and In Press)
- 8 Vilas Desai and **Meenal Kowshik** (2012) Synthesis and characterization of fumaric acid functionalized AgCl/titania nanocomposite with enhanced antibacterial activity, *Journal of Nanoscience and Nanotechnology*, (Accepted and In Press)
- 9 Sushma J, Ketaki Deshmukh, Sutapa Roy Ramanan, **Meenal Kowshik** (2012) Antimicrobial activity of hemocompatible silver doped hydroxyapatite nanoparticles by modified sol-gel technique, *Applied Nanoscience*, (Accepted and In Press).
- 10 Akriti Rastogi, Sumit Biswas, Angshuman Sarkar, Dibakar Chakrabarty: Anticoagulant activity of Moon jellyfish (*Aurelia aurita*) tentacle extract; *Toxicon* 60 (2012) 719–723.
- 11 .R. K. Sinha, K.P.Krishnan and **A Sarkar**, Heat shock response as a cue for phenotypic variability: A study from the psychrotrophic and mesophilic strains of *Cellulosimicrobium cellulans*; *Annals of Microbiology*, (DOI 10.1007/s13213-011-0411-6) 2012.
- 12 Cloning and expression of catechol 2, 3 dioxygenase and cyclodextrin glucanotransferase gene in *E.Coli* and its role in biodegradation “ C.Sivaraman, Anasuya Ganguly and Srikanth Mutnuri accepted in “International Journal of life Science and Pharma Research” Vol 2/Issue 3/Jul-Sept 2012 pp L10 – L19.
- 13 Role of Cyclodextrin Glucanotransferase Enzyme in Biodegradation C.Sivaraman, Anasuya Ganguly and Srikanth Mutnuri accepted in *Advances in Environmental Research* (2012), Vol. 1, No. 2 pp97-108.
- 14 P. Singh, Lisette D’ Souza L, **Utpal Roy** and S M Singh (2012). Chemical constituents & antioxidant activity of Arctic Mushroom *Lycoperdon molle*. *Polar Research*. Published 12th MARCH, 2012.
- 15 Veeky Baths and Utpal Roy (2012) Sequence analysis of Mycobacterial PE/PPE Proteins.
Citation: Sequence analysis of Mycobacterial PE/PPE Proteins. An Invited Book chapter in Introduction to Sequence and Genome Analysis (Edited by:). iConcept Press (USA) ISBN: 978-14775549-1-3.
16. Kumar, N., Ponnaluri, C.V.K., Putarjunan, A., Ranganathan, S., Roy, Utpal, **Das, A.**, ‘Characterization of temperature inducible promoters from a novel rolling circle replicating plasmid of *Enterococcus faecium* DJ1’. *PLASMID*, [May, 2012, 67(3):211-26].
17. Ganesh Chandra Jagetia and **Vijayashree Nayak** Activity by Accelerating Chromosome Damage in HeLa Cells Exposed to Different Doses of γ -Radiation, *Medicinal and Aromatic Plant Science and Biotechnology* ©2012 Global Science Books Accepted: 29 June, 2012
18. Krishnamurthy Nayak, **Vijayashree Nayak** and Deccaraman M. Article: Formulating a Mathematical Model for the E-Nose Application through Genetic Algorithm (GA). *International Journal of Computer Applications* 51(1):7-13, August 2012
19. Krishnamurthy Nayak¹, Supreetha B.S.², Deccaraman M, **Vijayashree Nayak**¹; E-Nose System to Detect E-Coli in Drinking Water of Udupi District; *International journal of Engineering Research and Development*, ISSN:2278:067X, Vol 1, issue 12 (July 2012), PP 58-64.
20. Mosa K.A. Kumar K.* Chikara S. Joseph, M. Liu, Z. Musante, C. White, J.C. and Dhankher, O.P. (2012) Members of rice plasma membrane intrinsic protein subfamily are involved in arsenite permeability and tolerance in plants. *Transgenic Research* 21:1265-1277(* Equal contribution).

C. Conferences attended/papers presented:

1. ‘Antimicrobial Prowess of a *Bacillus* soil isolate’ by **Ramya R**, Ram Lal and Utpal Roy, a paper presentation in 2nd ‘International Conference on Antimicrobial Research (ICAR- 2012)’ held at LISBON University, Portugal, 21 -23 rd Nov, 2012.
2. Akriti Rastogi, Sumit Biswas, Angshuman Sarkar and Dibakar Chakarabarty 17th World Congress of International Society on Toxinology, held at Honolulu, Hawaii from 8th -13th July, 2012
3. Chandrasekhar C and Dibakar Chakrabarty, 2nd National conference of the Toxinological Society of India, University of Mysore, 10th-12th December, 2012.

4. Veeky Baths attended International Schools on Networks in Biology, Science and Engineering, Indian Institute of Science Bangalore 2nd July-11th July'2012.
5. **Best Poster award-** Ram K and Sumit Biswas "Oncogenic signature in micro-RNA" BIOFEST at Hyderabad, Nov 2012.
6. **Best poster Award** - Subhasis Sahoo and Sumit Biswas 3rd World congress of Biotechnology Hyderabad best poster on "Complete screening of *M. oleifera* leaf for different therapeutic applications".
7. Bhakti S, Kabilan M and Judith Braganca poster presentation 9th International Congress on Extremophiles 2012 1-13 th Sept, 2012 Seville, Spain on topics, Accumulation of Polyhydroxybutyrate by Halophiles from Solar Salterns of India and Biodiversity of Haloarchaea in hypersaline environments of salt pans of India.
8. Oral presentation by M. Srikanth "Anaerobic digestion of septage and food waste – A waste to energy project in Nashik" at National Convention on "Current and Emerging Trends in Indian Biogas and Bio-fertilizer Development" during 15-16 September, 2012 at IIT Delhi.
9. Paper presentation M. Srikanth "Biomethanation potential of cashew apple waste" at International conference on Agricultural Biotechnology in Sustainable Development" Colombo, SriLanka from March 12 – 13th 2012.
10. Paper presentation by Kundan Kumar 10th International Symposium on Rice Functional Genomics at Chiang Mai, Thailand, 26-29th November 2012.

D. Books Published/Edited during the year: NIL

E. Conferences, seminars & workshops conducted

From RNA to protein: A Comprehensive Workshop, was organized from 3rd – 9th June, 2012 at the Department. Sponsored by Dept. of Science, technology and environment, Govt. of Goa; and BRNS, DAE, the workshop was inaugurated by Prof. Dileep Deobagkar, Vice Chancellor, Goa University and Shri Rasik Ravindra, Director, NCAOR. The workshop was conducted by the organizing secretaries, Dr. Sumit Biswas and Dr. Angshuman Sarkar, the workshop ran for seven days and was attended by participants – ranging from senior professors to industrial participants – from all over the country. After a successful seven days, the closing ceremony witnessed industrial interactions from Dr. N. Sriram, Director, Orchid group, and Sri I. Bose, Lupin Ltd.

F. Invited Talks given by BITS faculty:

1. Judith Braganca and **U.Roy (2012) Effect of Plastic Pollution in Marine Environments.** UGC-SPONSORED NATIONAL SEMINAR TO SAVE MARINE ANIMALS FROM PLASTIC POLLUTION IN THE MARINE ENVIRONMENT. 20 -21 January 2012. Department of Chemistry, S.N.College, Rajkanika, Orissa. **[Invited talk by Dr. Utpal Roy]**
2. **Invited Talk by Utpal Roy** in the World Congress of Microbes (WCM-2), on Antifungal Drug Discovery. **The speech title** "Antimycotic Substances from Wild-type *Enterococcus faecalis* APR 210 and *Bacillus subtilis* RLID 12.1" **in Guangzhou, China. 30th July to 1st August, 2012.**
3. **Dr. Meenal Kowshik** delivered an invited talk on "Biocompatible Silver Hydroxyapatite Nanoparticles based Thin Film Coatings with Good antimicrobial and antibiofilm activity" at 1st International Symposium on nanomedicine in drug delivery and cancer diagnosis, University of Delaware, USA.
4. **Prof. Dibakar Chakrabarty** on "Snake Bite and Antiserum : Scope for the Further research" at Natl. Sem. On Adv. In Zoology and Life processes, 9-11 Feb, 2012, Goa Univ.
5. **Dr. J. Braganca** on "Genome of Archae: Gene organization and operons" and "Archaeal viruses like particles and phages", Dept. of Microbiology, Goa Univ., March 2012.
6. **Dr. Sumit Biswas**, at the Young Scientists meet organized at BARC, Trombay, Nov. 26-28, 2012 as mentor.
7. **Dr. Sumit Biswas**, at Nagaland University, 24.09.2012, on the topic, "Frontiers in Structural Biology: Innovations and Challenges"
8. **Prof. D. Chakrabarty**, Univ. of Mysore, 10-12 Dec, 2012, on the topic, "Anticoagulant toxins from monocled cobra and Russell's viper venom"

9. **Dr. M. Srikanth** , IGCS at IIT Madras, 9-10 Oct, 2012, on the topic, "Biodegradation of Hydrocarbons by enhancing bioavailability using cyclodextrins" .
10. **Dr. Meenal Kowshik** UGC Sponsored National seminar on Nanomaterials: Synthesis, Characterization and Applications, 2-3 February 2012, Chowgule College of Arts and Science, Margao-Goa.
11. **Dr. Meenal Kowshik** UGC Sponsored National seminar on Nanomaterials and their Applications, 13 – 14 March 2012, KLE Society's Raja Lakhamangouda Science Institute, Belgaum-Karnataka

G. Invited talks arranged in the department:

1. **Prof. Anita Kar, Dir, School of health sciences, Pune Univ.** on the topic "molecular genetics to public health genetics: Haemophilia as a case study", 14.09.2012.
2. **Dr. Santanu Datta, Cellworks, Bangalore**, on topic "Drug Discovery: yesterday, today and tomorrow", 23.11.2012.

H. Awards and recognitions won by faculty and students

The following four students have been offered admission at universities mentioned against their names.

Pulkit Budhiraja --- University of Illinois, Urbana Champagne, USA

I. Faculty Development, International Collaboration & Industry Immersion

J. Significant new equipments/experimental facility added during the year:

K. Departmental association/club activities:Nil

B2.10.2 Department: Chemistry

Number of faculty members (as on 31 December 2012): 14

Senior Professors, Professors	01
Associate Professors	01
Assistant Professors	12
Lecturers	-
Visiting Faculty	-

Head of the Department: Dr. Sunil Bhand, Associate Professor

Contact details (email): sunilbhand@bits-goa.ac.in

Number of PhD Scholars: 17

Number of Project Fellows : 02

No. of Post Doctoral Scientists :02

Ph.D. Thesis awarded during the year: 02

1. Kanchanmala B Deshpande (Supervisor Prof. Sunil Bhand)
2. Bhanudas Naik (Supervisor Dr NN Ghosh)

Ph.D. Thesis Submitted during the year: 01

1. Rupesh Kumar Mishra (Supervisor Prof. Sunil Bhand)

A. Sponsored Research activities:

Total number of Sponsored Projects in the department: **15** (Details are given below.)

(i) Ongoing projects: 15

Name of the Investigator	Title of the project and duration	Amount sanctioned	Funding Agency
Prof. Sunil Bhand (Consortium Principal Investigator) Prof AP Koley & Dr NN Ghosh as Co-investigator from the department Partners: i) BITS, Pilani-KK Birla Goa campus (Consortium Leader) ii) IIT Delhi (CARE and Dept of Physics), iii) NDRI Karnal, iv) Punjabi Univ. Patiala	Development of Biosensors and Micro-techniques for analysis of pesticide residues, aflatoxin, heavy metals and bacterial contamination in milk NAIP/C4/C10125 Duration: Jan 2008-March 2012 (4 years) ongoing *(extension for up to March 2014 APPROVED with additional budget)	Revised approved cost from Rs. 7.298 crores to 26.26 crore (Department share Rs. 3.327 crores) *BITS additional extension grant of Rs. 83 lakh approved and additional 60 lakh applied for the year 2013-14.	National Agricultural Innovation Project NAIP funded by ICAR New Delhi and the World Bank.
Dr Sunil Bhand Consortium Co-Investigator BITS, Pilani=KK Birla Goa Campus IIT Roorkee (Consortium Leader) NDRI Karnal	Detection and mitigation of dairy pathogens and detection of adulterants using chemical Biology NAIP/Comp-4/C30032 Feb 2009-March 2012 (3 yrs) ongoing Duration: Jan 2008-March 2012 *(extension for up to March 2013 approved with additional budget)	Department share 63.00 lakhs (total 4.2 crores for the whole project) *Additional budget of Rs. 22 lakh approved for BITS	National Agricultural Innovation Project NAIP funded by ICAR and the World Bank
Dr. NN Ghosh (P.I.)	Development of a novel aqueous solution based "one pot" synthesis route for hard-soft-ferrite nano-composites and their properties." (ERIP/ER/0904500/M/01/1204) : May 2010, Duration 3 yrs (ongoing)	Rs 14.98lakhs	Defence Research and Development Organization (DRDO), New Delhi India
Dr. NN Ghosh (P.I.)	Title: Development of Nanostructured High Surface Area Alumina and Silica based adsorbent with Tailored Pore structure for Removal of Fluoride ions from Ground Water (Sanc no: 2010/37C/2/ BRNS/ 827) July 2010, Duration 3 yrs (ongoing)	Rs 29.0715 lakhs	Board of Research in Nuclear Science (BRNS), India
Dr.Halan Prakash (PI)	Chemical modification of some metal ion binding peptides with photoactive molecules, and investigations on their photochemical DNA damage, and photo enhanced antimicrobial activity BT/PR13316/GBD/27/251/2009 ongoing 3yrs	Rs. 21.24 lakhs	Department of Biotechnology DBT, N Delhi

Name of the Investigator	Title of the project and duration	Amount sanctioned	Funding Agency
Dr.Halan Prakash(PI)	Design of peptides, peptide conjugates and investigations on their antimicrobial activity. (October-2011, 2, years).	10.00 lakhs	BITS, Pilani, ABG funding
Dr. Anjan Chattopadhyay (PI)	Spectroscopic properties of some low-lying electronic states of alkali metal-rare gas and alkaline earth metal-rare gas molecules SR/FT/CS-52/2009 (3 yrs)	Rs. 5.46 lakhs	DST, N Delhi
Dr. Anjan Chattopadhyay (PI)	Spectroscopic investigation of the properties of low-lying electronic states of some chemopreventive retinyl nitrones and comparison of their light-induced properties with retinyl iminium ions (PI)	Rs. 14 lakhs	CSIR N Delhi
Dr Amrita Chatterjee (PI)	Development of turn-on type Chemodosimeter for Selective Recognition of Sulfhydryl-Containing Amino Acids and Peptides in aqueous media. For Three years	Rs. 19.86 lakhs	DST, N Delhi
Dr Mainak Banerjee (PI)	Redox-sensitive Vesicles of Cucurbit[7]urils as an Efficient Targeted Intracellular Drug Delivery Vehicle 3 yrs	Rs. 24.15 lakh	DST, New Delhi
Dr. Ranjan Dey	Prediction of thermodynamic, thermophysical, transport, thermoacoustical and excess properties for binary, multicomponent liquid mixtures and ionic liquids	Rs.12 lakhs	CSIR N Delhi
Dr. Arunashree Panda (PI) Research Associate & mentored by the department under Women in Science scheme	Novel Schiff base macro cycles containing Se-Se bonds and their reduced analogues: synthesis, characterization, comparative coordination chemistry and theoretical studies. (SR/WOS-A/CS-32/2010)	Rs.22.96 lakhs	DST New Delhi
Dr. Rabi Narayan Panda	Magnetic Properties of Metallic Nano-particles, 3 years	20.00 lakhs 01(2457)/11/EMR-II Date: 16-05-2011	CSIR, N Delhi
Dr. Rabi Narayan Panda	Synthesis and Characterization of binary and ternary transition metal nitrides , 3 years	18.95 lakhs SR/S1/PC/0063/2010 Date: 22-09-2011	DST, N Delhi
Dr Raghu Nath Behera	Study of Effective Interactions in Charged Colloidal Suspensions Duration 3 years.	10 lakhss (4.5 lakhs + one staff) 01(2513)/11/EMR-II of dated. 12/12/2011	CSIR N Delhi

Name of the Investigator	Title of the project and duration	Amount sanctioned	Funding Agency

(ii) Projects sanctioned during the year: 02

Name of the Investigator	Title of the project and duration	Amount sanctioned (Rs.)	Funding Agency
Dr Mainak Banerjee (PI)	Synthesis of Metal-Organic-Porous-Material Based Efficient Chiral Heterogeneous Catalysts by Post-Synthetic Modification and Their Applications in Asymmetric Reactions	22.53 lakhs	CSIR N Delhi
Dr. Bhavana P	An investigation on derivatives of meso tetrathienylporphyrin as dyes in dye sensitised solar cells (dsscs)		CSIR N Delhi

(iii) Projects approved during the year: 01 (International)

Name of the Investigator	Title of the project and duration	Amount sanctioned (Rs.)	Funding Agency
Dr. NN Ghosh (PI) Dr. Sunil Bhand (Partner) Prof Paul Millner, Univ of Leeds UK, Prof CK Mitra, Univ of Hyd.	Development and characterization of nanomaterials for biosensors and biocatalysts- 2 years	Approx 42 lakh	UKIERIUK and DST India

(iv) Projects completed this year: 01

Name of the Investigator	Title of the project and duration	Amount sanctioned (Rs.)	Funding Agency
Dr. Rashmi Chauhan (PI)	Development of novel initiators for controlled radical polymerization of N- substituted itaconamic acid/ itaconimide monomers SR/FT/CS-053/2009 ongoing 3yrs.	Rs. 19.866 lakh	DST, New Delhi

B. Publications: 36

The faculty of the department published **36** papers in international/national refereed journals during the year.

Authors	Title of the Publication	Journal	Vol	Pages
Maria Yakovleva, Sunil Bhand and Bengt Danielsson (accepted Dec. 2012).	"The Enzyme Thermistor - a Realistic Biosensor Concept (review article, featuring front page image of the issue)	Analytica Chimica Acta 2013	766	1-12
Rupesh K Mishra, George Istamboulie, Sunil Bhand, J-L Marty (2012).	Detoxification of organophosphate residues using phosphotriesterase and their evaluation using flow based biosensor.	Analytica Chimica Acta 2012	745	64-69
Gautam Bacher, Souvik Pal, Lizy Kanungo, Sunil Bhand	A label-free silver wire based impedimetric immunosensor for detection of aflatoxin M1 in milk	Sensor and actuators B Chemical 2012	168	223-230
Geetesh K. Mishra, Sunil Bhand	FIA-EQCN biosensor for analysis of sulphadiazine residues in milk	<i>Sensing Technology (ICST), 2012 Sixth International Conference.</i>	IEEE, 2012	pp. 672-676
Gautam Bacher, Lizy Kanungo, and Sunil Bhand.	Miniaturized label-free impedimetric immunosensor for analysis of aflatoxin B1 in peanut.	<i>In Sensing Technology (ICST), 2012 Sixth International Conference</i>	IEEE, 2012.	pp. 29-35.
Rupesh K. Mishra, Rocio B. Dominguez, Sunil Bhand, Roberto Muñoz, Jean-Louis Marty.	A novel automated flow-based biosensor for the determination of organophosphate pesticides in milk.	Biosensors and Bioelectronics 2012	32(1):	56-61
Manjuri K. Koley, Seshadri C. Sivasubramanian, Sumit Biswas, Periakaruppan T. Manoharan & Aditya P. Koley	Dioxygen binding and activation by a highly reactive Cr(II) compound containing S,N-donors derived from oaminothiophenol	Journal of Coordination Chemistry.	65	3329 – 3351

Authors	Title of the Publication	Journal	Vol	Pages
Manjuri K. Koley, Seshadri C. Sivasubramanian, Babu Varghese, Periakaruppan T. Manoharan & Aditya P. Koley	A paramagnetic octahedral trans-dihydroxy chromium (IV) complex with dianionic tetradentate Schiff base salophen, and crystal structure of its trans-diisothiocyanato analogue.	Journal of Coordination Chemistry.	65	3623–3640
Rabi N. Panda, Shankar B. Dalavi and J. Theerthagiri	Synthesis of High Surface Area W_2N and Co–W–N Nitrides by Chemical Routes	Adsorption Science & Technology	30 (4)	345-354
Amit Baising Rajput, Seikh Jiyaur Rahaman, M K. Patra, S R. Vadera, Gautam Sarkhel, and Narendra Nath Ghosh	Preparation, characterization and properties of flexible magnetic nanocomposites of $NiFe_2O_4$ -polybenzoxazine-LLDPE	Polymer-Plastics Technology and Engineering (Accepted 2012)		
A.B. Rajput., M. Sharifi , H V. Pol, M K. Patra, S R. Vadera, P M. Singru, N N. Ghosh	Preparation of flexible magnetic nanocomposites of linear low-density polyethylene-polybenzoxazine-magnetic nanoparticles and their mechanical and magnetic properties	<i>Journal of Nanoscience Letters</i>	3	26
Amit Baising Rajput, Seikh Jiyaur Rahaman, Gautam Sarkhel, M K Patra, S Vadera, P M Singru, Yusuf Yagci and Narendra Nath Ghosh	Synthesis, characterization and properties of flexible magnetic nanocomposites of $CoFe_2O_4$ -polybenzoxazine- LLDPE	<i>Journal of Applied Polymer Science</i> (Accepted 2012, DOI:10.1002/APP.38426		
Vilas Desai, Bhanudas Naik, Narendra Nath Ghosh and Meenal Kowshik	Functionalization of AgCl/titania nanocomposite with folic acid - a promising strategy for enhancement of antimicrobial activity	<i>Science of Advanced Materials</i> , (Publisher: American Scientific Publishers) (Accepted October 2012)		
Bhanudas Naik, Vadakkethonippurathu Sivankutty Prasad and Narendra Nath Ghosh	Preparation of Ag Nanoparticle Loaded Mesoporous γ -alumina Catalyst and its Catalytic Activity for Reduction of 4-nitrophenol	<i>Powder Technology</i>	232	1–6
S Hazra, M K Patra, S R Vadera and N N Ghosh	Preparation of $Mn_{0.2}Ni_xZn_{(0.8-x)}Fe_2O_4$ nanopowders by using a novel EDTA precursor method and their microstructure, DC resistivity and magnetic properties	<i>Optoelectronics and Advanced Materials – Rapid Communications</i>	6	451-455
R. N. Behera and A. Panda	“Nature of the Te...N intramolecular interaction in organotellurium compounds. A theoretical investigation by NBO and AIM methods”	<i>Computational and Theoretical Chemistry</i> , ,	999	215 – 224

Authors	Title of the Publication	Journal	Vol	Pages
R. N. Behera and A. Panda	"Effect of Chelate ring and rigidity on Se...N interactions: A computational study"	<i>RSC Advances</i>	2	6948 – 6956
R. Yogesh and R. N. Behera	"Molecular dynamics simulations of micellization of Alkyl Ethoxylate"	<i>Asian Journal of Chemistry</i>	24	5785 – 5788
R. Yogesh and R. N. Behera	"Comparison of Binding Affinities and ADMET Properties of Lysine Sulfonamide and Cyclic Urea Derivatives with Commercial HIV Protease Inhibitors for the MDR mutants"	<i>International Journal of Chemistry</i>	1	178-188
Kumar,V.; Banerjee,M.; Chatterjee,A.	A reaction based turn-on type fluorogenic and chromogenic probe for the detection of trace amount of nitrite in water	Talanta (2012),	99	610-615.
K. P. Jayadevan and T. Y. Tseng	Review: One-dimensional ZnO Nanostructures,	J. Nanosci. Nanotech (2012)	12	4409-4457.
,Anjan Chattopadhyay	A comparative spectroscopic study of the excited electronic states of potassium-neon and potassium-helium systems	, Eur.Phys. J. D	66	325
Anjan Chattopadhyay	Comparative study of spectroscopic properties of the low-lying electronic states of 2, 4-pentadien-1-iminium cation and its N-substituted analogues	,J. Chem.Sci.	124	985
Priyadarshini Parekh, Gokulakrishnan Subramanian, Halan Prakash	Visible light water disinfection using [Ru(bpy) ₂ (phendione)](PF ₆) ₂ .2 H ₂ O and [Ru(phendione) ₃]Cl ₂ .2H ₂ O complexes and their effective adsorption onto activated carbon	Separation and Purification Technology	Accepted Manuscript	
Gokulakrishnan Subramanian, Priyadarshini Parekh, Halan Prakash	Photodegradation of Methyl orange and photoinactivation of bacteria by visible light activation of persulphate using a tris(2,2'bipyridyl)Ru(II) complex	Photochemical and Photobiological Sciences	Accepted Manuscript	
Kshipra Naik, Amrita Chatterjee, Halan Prakash and Meenal Kowshik	Mesoporous TiO ₂ nanoparticles containing Ag ion with excellent antimicrobial activity at remarkable low silver concentrations	<i>Journal of Biomedical Nanotechnology</i>	Accepted Manuscript	
Gokulakrishnan Subramanian, Priyadarshini Parekh, Halan Prakash	Degradation of Malachite green by Potassium persulphate, its enhancement by 1,8-dimethyl-1,3,6,8,10,13-hexaazacyclotetradecane nickel(II) perchlorate complex, and removal of antibacterial activity	Journal of Hazardous Materials	213–214	19–27

Authors	Title of the Publication	Journal	Vol	Pages
Irudayam Maria Johnson, <u>Halan Prakash</u> , Jeyaguru Prathiba, Raghavachary Raghunathan, Raghunathan Malathi	Spectral Analysis of Naturally Occurring Methylxanthines (Theophylline, Theobromine and Caffeine) Binding with DNA	PLOS ONE	7	e50019
R. Prasath, P. Bhavana	β - functionalised meso tetrahalothien-2-ylporphyrins: synthesis, spectral and electrochemical properties	Journal of Heterocyclic Chemistry	49	1044-1049
R. Prasath, R. J. Butcher, P. Bhavana,	Nitrothienylporphyrins: Synthesis, crystal structure and the effect of position and number of nitro groups on the spectral and electrochemical properties	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	87	258-264
R. Prasath, P. Bhavana, Seik Weng Ng and Edward R. T. Tiekink,	[meso-5,10,15,20-Tetrakis(5-bromothiophen-2-yl)porphyrinato- K^a N,N',N'',N''']-nickel(II)	<i>Acta Crystallographica</i>	E68	m471–m472
R. Prasath, P. Bhavana and Ray J. Butcher,	(E)-1-(2,4-Dimethylquinolin-3-yl)-3-(4-methylphenyl)prop-2-en-1-one	<i>Acta Crystallographica</i>	E68,	o1501
R. Prasath, P. Bhavana,	Synthesis and, spectral and electrochemical properties of meso 5,10,15,20-tetrakis(2'-chlorobenzoquinolin-3'-yl)porphyrins	<i>Heteroatom Chemistry</i>	23	525-530
R. Prasath, P. Bhavana,	An improved protocol for the synthesis of 2-nitro-7,8,17,18-tetrabromo-5,10,15,20-tetraphenylporphyrin and its conformational aspects by electrochemistry and spectroscopy	<i>Journal of Heterocyclic Chemistry</i>	Accepted Manuscript	
R. Prasath, P. Bhavana, Seik Weng Ng and Edward R. T. Tiekink,	3-(4-Bromophenyl)-1-phenyl-1Hpyrazole-4-carbaldehyde.	Acta Cryst. (2011). doi:10.1107/S1600536811036841	E67	265
R. Prasath, P. Bhavana, Seik Weng Ng and Edward R. T. Tiekink,	3-(4-Methoxyphenyl)-1-phenyl-1H pyrazole-4-carbaldehyde.	Acta Cryst. (2011). doi:10.1107/S1600536811041808	E67	o2962-o2963

C. Conferences attended/papers presented: 15

Presenter	Title of Paper	Conference Name	Location	Date
Sunil Bhand and Bengt Danielsson	Enzyme thermistor based discriminative determination of pesticide residues	22 nd World Congress on Biosensors (organized by Elsevier UK).	Cancun, Mexico	15-18 May 2012
Rupesh K Mishra, Gustavo A. Alonso, Georges Istamboulie, Roberto. Muñoz, Sunil Bhand	Automated Flow based biosensor for determination and discrimination of pesticide mixtures using genetically modified enzyme	22 nd World Congress on Biosensors (organized by Elsevier UK).	Cancun, Mexico	15-18 May 2012
Geetesh K Mishra and Sunil Bhand	FIA-EQCN biosensor for analysis of sulphadiazine residues in milk	6 th IEEE International Conference on Sensing Technology, Special focus on sensors for agriculture and environmental monitoring ICST 2012 (organized by Massey Univ. New Zealand)	Kolkata India.	Dec 18-21, 2012
G. Bacher, L Kanungo and S. Bhand	Miniaturized label-free impedimetric immunosensor for analysis of Aflatoxin B1 in peanut	6 th IEEE International Conference on Sensing Technology, Special focus on sensors for agriculture and environmental monitoring ICST 2012 (organized by Massey Univ. New Zealand)	Kolkata India.	Dec 18-21, 2012
Vikash Kumar, Mainak Banerjee, Amrita Chatterjee	Sugar Based Bolaamphiphiles: From Morphological Studies to Catalytic Applications	International conference on global trends in pure and applied chemical sciences (ICGTCS 2012)	Asian Journal of Chemistry, Udaipur, Rajasthan,	3-4 March, 2012
Ranjan Dey	Oral presentation entitled "Prediction of ultrasonic Velocity, Thermoacoustical, Non Linearity Parameter and Viscosity for Binary, Ternary and Multicomponent Liquid Mixtures at 298.15 K"	7 th National conference on thermodynamics of chemical, biological and environmental processes	Dept of Chemistry, Sri Venkateshwara University, Tirupati, December.	10-12 December, 2012

Presenter	Title of Paper	Conference Name	Location	Date
Ranjan Dey		International conference on water security on sustainable basis	Japan Water Works Association (JWWA) in association with Indian Water Works Assoc.	24-25 August, 2012.
Subramanian Gokulakrishnan, Priyadarshini Parakh, Halan Prakash	Degradation of Malachite green by Potassium persulphate, its enhancement by 1,8-dimethyl-1,3,6,8,10,13-hexaazacyclotetradecane nickel(II) perchlorate complex and removal of antibacterial activity	Recent advances in Inorganic chemistry, (RAIC)	Bharathidasan University, Trichy, Tamilnadu.	22-24 March, 2012.
Subramanian Gokulakrishnan, Priyadarshini Parakh, Halan Prakash	Visible light Photoinactivation of bacteria by activation of persulphate with $[\text{Ru}(\text{bpy})_3]^{2+}$ complex using light emitting diode array	Second International Conference on Advanced oxidation Processes	Mahathma Gandhi University, Kottayam, Kerala.	5-8 October, 2012
Priyadarshini Parakh, Subramanian Gokulakrishnan, Halan Prakash	Visible Light Inactivation of Bacteria by Ruthenium(II) Polypyridyl Complexes and Effective Removal of Complexes by Environment Friendly Adsorbents	Second International Conference on Advanced oxidation Processes	Mahathma Gandhi University, Kottayam, Kerala.	5-8 October, 2012
P. Udaykumar, T. Khanna and R. N. Behera	Equilibrium Structure and Properties of model Colloidal suspensions	2 nd International Science Congress, 8 – 9 December, 2012, Mathura	Mathura (UP), India.	8 – 9 December, 2012
T. Khanna and R. N. Behera	Molecular Dynamics Simulations of Asymmetric Colloidal Binary Mixture	ESPResSo Summer School 2012 (Simulating Soft Matter with ESPResSo, ESPResSo++ and VOTCA	Institute for Computational Physics, Stuttgart University, Germany.	8 - 12 October, 2012
R. Yogesh and R. N. Behera	Molecular Dynamics Simulations of Micellization of Alkyl Ethoxylate	International Conference on Global Trends in Pure and Applied Chemical Sciences (ICGTCS-2012)	Udaipur (Rajasthan) India	3rd-4th March 2012
R. Prasath, R. J. Butcher, P. Bhavana	Synthesis and investigation on the effect of mixed substituents on electronic and spectral properties of beta- nitro tetrabromo porphyrin.	International Conference on recent trends in advanced materials (ICRAM-2012)	VIT University Vellore, Tamilnadu.	Feb 20-22, 2012

Presenter	Title of Paper	Conference Name	Location	Date
Narendra Nath Ghosh	Synthesis of nanoparticle incorporated mesoporous silica and alumina based materials and their applications	Symposium on Novel Materials for Sustainable Energy	Chemical and Biological Engineering Department at Drexel University, USA	10 th May 2012

D. Books Published/Edited during the year: Nil

E. Conferences, seminars & workshops conducted: Nil

F. Invited Talks given by BITS faculty: 11

Authors	Host	Collaborators	Title	Date
Halan Prakash	Recent advances in Inorganic chemistry, (RAIC)		Activation of Persulphate by nickel(II) azamacrocyclic complex: Toward effective degradation of persistent organic pollutants in environment	22-24 March, 2012.
Sunil Bhand	5th SERC School Synchrotron X-ray Lithography SRXL	Dr. G.S. Lodha, Raja Ramanna Centre for Advanced Technology RRCAT Indore (Dept of Atomic Energy)	"Microfluidic Lab on Chip Devices- Concepts and Applications"	Oct 29-Nov 02, 2012
Sunil Bhand	One day workshop on Micro nano technology	MGM Medical University, Mumbai	Miniaturized biosensor devices for bacterial detection and antibiotics	Dec 04 2012
Sunil Bhand	National Workshop on non destructive methods for quality evaluation of food	CIPHET, ICAR Ludhiana	Novel online biosensor for analysis of food contaminants	Feb. 9-10 2012
Sunil Bhand	First theme meeting on Micro Nano Engineering in service of Rural India	Dr VK Suri, Precision Engineering Group, BARC MMumbai	Miniaturised biosensor for water quality analysis	Jan 04, 2012
Halan Prakash	Second International Conference on Advanced oxidation Processes		Degradation of Dyes and Inactivation of Bacteria by Activation of Persulphate using Nickel(II) azamacrocyclic Complexes	5-8 October, 2012
Narendra Nath Ghosh	Chemical and Biological Engineering Department at Drexel University, USA	Prof. G. R. Palmese	Novel Synthetic Strategies for Preparation of Magnetic Nanoparticles, Polymer-Ferrite Nanocomposites and Mesoporous Advanced Catalysts	4th May 2012
Narendra	Department of	Prof. C. E. Barnes	Development of Novel	2nd April 2012

Authors	Host	Collaborators	Title	Date
Nath Ghosh	Chemistry at University of Tennessee, Knoxville, USA		but Simple Chemical Methodologies for Preparation of Magnetic Nanoparticles, Polymer-Ferrite Nanocomposites And Mesoporous Advanced Catalysts	
Narendra Nath Ghosh	Indira Gandhi Center for Advanced Research (IGCAR), Kalpakkam	Dr. P. Parameswaran	Development of novel techniques of preparation of magnetic nanoparticles and mechanically flexible ferrite-polybenzoxazine nanocomposites	21st December, 2012
Narendra Nath Ghosh	Vikram Sarabhai Space Research Center (VSSC), Trivandrum	Prof. C. P. R. Nair	Ferrite-Polybenzoxazine Nano-composites: Synthesis Challenges, Magnetic and Mechanical Properties	19th December, 2012
Jayadevan K.P.	Chowgule College, Margao, Goa	UGC sponsored National Seminar on Nanomaterials: Synthesis, Characterisation and Application	Resistive switching in Binary Transition Metal Oxide Thin Films	2-3 Feb. 2012

G. Invited talks arranged in the department:

H. Awards and recognitions won by faculty and students

1. Dr. Halan Prakash, Subramanian Gokulakrishnan and Priyadarshini Parakh Received Best Poster Award in national conference - Recent advances in Inorganic chemistry, (RAIC), March, 2012, for poster titled "Degradation of Malachite green by Potassium persulphate, its enhancement by 1,8-dimethyl-1,3,6,8,10,13-hexaazacyclotetradecane nickel(II) perchlorate complex and removal of antibacterial activity"
2. Dr. Halan Prakash, Priyadarshini Parakh and Subramanian Gokulakrishnan Received Best Poster Award in international conference Second International Conference on Advanced oxidation Processes, October 2012, for poster titled "Visible Light Inactivation of Bacteria by Ruthenium(II) Polypyridyl Complexes and Effective Removal of Complexes by Environment Friendly Adsorbents"
3. Dr. Rashmi Chauhan proceeded to University of California USA on sabbatical leave for one year to work in the field of Organic chemistry.
4. Prof Bhand was nominated as member of the National Advisory Committee of 5th SERC School at RRCAT Indaore
5. Dr. Narendra Nath Ghosh has been invited as committee member in CSIR SRF/RA Selection Committee in the area of "Material Sciences (CHEM/24)".
6. Dr. Narendra Nath Ghosh has become associate editor in the Journal of Nanoscience Letters
7. Prof. Sunil Bhand has been appointed associate Editor for The Journal Chemical Sensors.
8. Prof Bhand was invited to join as member for American Association for Advancement of r of AAAS USA.

I. Faculty Development, International Collaboration & Industry Immersion

Name of Investigator	Title	Collaborators	Funding Agency
Dr. NN Ghosh (P.I.) Prof Sunil Bhand (Partner)	Development and characterization of nanomaterial for biosensors and biocatalysts	Prof. Paul A Milner, University of Leeds	DST- UKIERI

J. Significant new equipments/experimental facility added during the year:

1. FT-IR with ATR and CHNS/O Analyzer (by end of March 2013).
2. Tubular Furnace (2), Jupiter Engg. India
3. Rotary Evaporator, Super Fit India.
4. miVac centrifugal vacuum concentrator, miVac.
5. Laminar Air flow, AirFlow Sys

K. Departmental association/club activities: Department seminars delivered by students and faculty delivered after attending the conferences outside the institute**B2.10.3 Department: Chemical Engineering**

Number of faculty members (as on 31 December 2012):11

Senior Professors, Professors	Nil
Associate Professors	2
Assistant Professors	4
Lecturers	4
Visiting Faculty / Consultant R & D	1

Head of the Department: Prof. Srinivas Krishnaswamy

Contact details (email): srinivas@goa.bits-pilani.ac.in

Number of PhD Scholars: 1

Ph.D. Thesis Submitted during the year: Nil

A. Sponsored Research activities:

Total number of Sponsored Projects in the department: **5**

Details are given below:

(i) Ongoing projects:**1. Coke reduction and Selectivity increase in allyl chloride process**

PI: Dr. Srinivas Krishnaswamy

Amount Sanctioned: Rs. 10,00,000/-

Funding agency: ABG Group

2. Studies on an enhanced efficiency contactor and once-through aqueous ammonia process based flue gas CO₂ capture process for reuse in fertilizer production

PI: Dr. Srinivas Krishnaswamy
Amount Sanctioned: Rs. 10,00,000/-
Funding agency: ABG Group

3 Studies on separation and purification of rare earth metals from red mud / used catalyst

PI: Dr. S. S. Baral
Budget: Rs.2.00,000/-
Funding agency: BITS Pilani K K Birla Goa campus

4 High - efficiency energy conversion in steam boilers using unmixed combustion

PI: Dr. Srinivas Krishnaswamy
Budget: Rs. 31,05,000 (from DST)
Collaborators: Thermax Limited, Pune (funding Rs. 4,00,000/-)

5 Sea water desalination using Liquefied Natural Gas (LNG) refrigeration

PI: Dr. Srinivas Krishnaswamy
Budget: Rs. 3,82,21,000/-
Funding agency: GAIL India Ltd.

(ii) Projects sanctioned during the year: 2

1. High - efficiency energy conversion in steam boilers using unmixed combustion

PI: Dr. Srinivas Krishnaswamy
Budget: Rs. 31,05,000 (from DST)
Collaborators: Thermax Limited, Pune (funding Rs. 4,00,000/-)

2. Sea water desalination using Liquefied Natural Gas (LNG) refrigeration

PI: Dr. Srinivas Krishnaswamy
Budget: Rs. 3,82,21,000/-
Funding agency: GAIL India Ltd.

(iii) Projects completed this year: Nil

B. Publications:

The faculty of the department published 6 papers in international/national refereed journals during the year

Authors	Title of the Publication	Journal	Vol.	Pages
Zubeda Aga and Sutapa Roy Ramanan	Electrical and structural characterization of PTCR pure barium titanate nanopowders synthesized by sol-gel emulsion technique	J. of Electro ceramics	28(2)	109-117
S. Krishnaswamy, S. M. Nazir, P. V. K. Srikanth & K. N. Ponnani	Process Condensate Stripper performance in ammonia plants	Nitrogen + Syngas	Issue 315	50 - 54
N. Das, S. S. Baral, P. S. Mahapatra, T. Das, G. R. Chaudhury, S. N. Das	Trend in chemical composition of precipitation during 2005–2009 at a rural station of Bhubaneswar, eastern India	Theoretical and Applied Climatology	110	55-63

Authors	Title of the Publication	Journal	Vol.	Pages
Manjuri K. Koley, Seshadri C. Sivasubramanian, Sumit Biswas, Periakaruppan T. Manoharan and Aditya P. Koley	Dioxygen binding and activation by a highly reactive Cr(II) compound containing S,N-donors derived from o-aminothiophenol	Journal of Coordination Chemistry	65	3329–3351
Manjuri K. Koley, Seshadri C. Sivasubramanian, Babu Varghese, Periakaruppan T. Manoharan, and Aditya P. Koley	A paramagnetic octahedral trans-dihydroxy chromium(IV) complex with dianionic tetradentate Schiff base ligand salophen, and crystal structure of its transdiisothiocyanato analogue	Journal of Coordination Chemistry	65	3623–3640
Manjare S D, Mohite R J	Application of Life Cycle Assessment to Diammonium Phosphate Production	Advanced Material Research	354-355	256-265

C. Conferences attended/papers presented: Total: 04

Presenter	Title of paper	Conference Name	Location	Date
Sutapa Roy Ramanan	Effect of Lanthanum Doping on Barium Titanate Nano-Powders Synthesized by Sol-gel Emulsion Technique	National Seminar NANOMATERIALS: SYNTHESIS CHARACTERISATION AND APPLICATIONS	Goa	2 nd – 3 rd Feb 2012
Sutapa Roy Ramanan	Prevention of bacterial biofilm using silver doped hydroxyapatite nanoparticles coating for medical implant	National Seminar NANOMATERIALS: SYNTHESIS CHARACTERISATION AND APPLICATIONS	Goa	2 nd – 3 rd Feb 2012
Deshmukh K, Ramanan S R, Kowshik M	Biocompatible Silver Hydroxyapatite Nanoparticles Based Thin Film Coatings With Good Antimicrobial And Antibiofilm Activity	1st International Symposium on nanomedicine in drug delivery and cancer diagnosis	University Of Delaware	16-17th August, 2012
Srinivas Krishnaswamy	Research in Engineering	Seminar on Research Methods and Data analysis	Goa	4 th Feb 2012

D. Books Published/Edited during the year: Total: Nil

E. Conferences, seminars & workshops conducted

1. Dr. K. N. Ponnani was invited to conduct a one day workshop on “The art of preparing research proposals and IPR management” on 3rd November 2012 at Erode Sengunther College, Erode Tamil Nadu
2. Dr. K. N. Ponnani was invited to a session on “Recent Developments in Renewable Energy Sector” in the Faculty Development Programme organized at MIT academy of Engineering, Alandi Pune on 4th December 2012

F. Invited Talks given by BITS faculty:

Authors	Host	Title	Date
Dr. Krishnaswamy N. Ponnani,/ Dr. Srinivas Krishnaswamy	Aramco Overseas company B.V (Tech-Quest Downstream R & D Symposium 2012)	Direct conversion of heavy fractions / coal / biomass to Syngas with molten salt systems	19 th – 20 th Nov. 2012

G. Invited talks arranged in the Department:

Dr. Alope Kumar Ghoshal visited the Department from 22nd to 25^h October 2012 and presented the following talks:

- Plant data reconciliation and Gross Error Detection
- Insight into role of Thermodynamics in Process Simulation
- Advances in Petroleum Industry with particular reference to India

H. Awards and recognitions won by faculty and students**I. Faculty Development, International Collaboration & Industry Immersion****J. Significant new equipments/experimental facility added during the year:**

- Facility to study kinetics of unmixed combustion
- Rotary vacuum evaporator
- Novel wetted wall column for mass transfer studies
- Thermodynamic phase equilibrium test rig
- Gas chromatograph

K. Departmental association/club activities: Nil**B2.10. 4 Department: Computer Science & Information Systems**

Number of faculty members (as on 31 December 2012):16

Senior Professors, Professors	00
Associate Professors	02
Assistant Professors	04
Lecturers	10
Visiting Faculty	00

Head of the Department: Dr. B. M. Deshpande

Contact details: *bmd@bits-go.a.ac.in*

Number of PhD Scholars: 11

Ph.D. Thesis Submitted during the year: 00

A. Sponsored Research activities:

Total number of Sponsored Projects in the department: 02. Details are given below.

(i) Ongoing projects:

- a. Dr. Biju R., "A Modeling and Design Framework for Social Networking Infrastructure on Mobile Devices using P2P overlays".
ABG sponsored project
Faculty member(s) proposing research
Principal Investigator: Shanmugasundaram Balasubramaniam
Co-investigator(s): (i) Biju K. Raveendran, (ii) Murali Parameswaran
- b. Dr. S.K. Sahay is Member of the Indian Gravitational Wave Observatory (IndiGO) Consortium also known as LIGO-India.

(ii) Projects sanctioned during the year

- a. "Condition based monitoring of pipeline using wireless sensor network"
GAIL sponsored project
Faculty member(s) proposing research
Principal Investigator: K. R. Anupama
Co-investigator(s): (i) Lucy Gudino, (ii) Neena Goveas
- b. **Design and Implementation of High Performance Energy Efficient Scheduling Algorithms for Multiprocessor / Multicore Hard Real – Time Systems**
Institute Seed Grant
Faculty member(s) proposing research
Principal Investigator: Biju K R
Co-investigator(s): B.M. Deshpande

(iii) Projects completed this year: Nil**B. Publications: (Journals)**

The faculty of the department published 14 papers in international/national refereed journals during the year.

1. Joseph Rodrigues, **Lucy J. Gudino** and K.R. Pai, "Sharp Transition Multiband Filter in Speech Processing Scheme for Hearing Impaired", American Journal of Engineering and Applied Sciences, Feb. 2012, pp. 42-49.
2. R.K. Roul and S.K. Sahay, "An effective information retrieval for ambiguous query"
Journal-ref: AJCSIT, 2012, Vol. 2, No. 3, p. 26
3. R.K. Roul and S.K. Sahay, "An effective web document clustering for information retrieval."
Journal-ref: IJCSMR, 2012, Vol. 1, No. 3, p. 481
4. R.K. Roul and S.K. Sahay, "An effective approach for web document classification using FP-growth and naive bayes techniques," Journal-ref: IJCSET, 2012, Vol. 3, No. 10, p. 483

C. Conferences attended/papers presented:

1. G.S. Raghavendra, presented a paper in International Conference on Bio-Inspired Computing Theories and Applications. ABV-Indian Institute of Information Technology and Management Gwalior, India Dec 14-16,2012
2. V Sreejith, published a paper titled "*Testbed Based Throughput Analysis in a Wireless Sensor Network*" in NCC-2012 held at IIT Kharagpur, March-2012
3. Aruna Govda and S.K. Sahay, presented a paper titled "An effective distributed data mining for Astronomical Data" in Twenty first International Conference of Forum for Interdisciplinary Mathematics on Interdisciplinary Mathematics, Statistics and Computational Techniques, Dec. 15-17, 2012, Panjab University, Chandigarh.

4. R.K. Roul and S.K. Sahay, presented a paper titled "An effective approach for web document clustering" in Twenty first International Conference of Forum for Interdisciplinary Mathematics on Interdisciplinary Mathematics, Statistics and Computational Techniques, Dec. 15-17, 2012, Panjab University, Chandigarh.
- D. Books Published/Edited during the year:**
- E. Conferences, seminars & workshops conducted**
Department of Computer Science & Information Systems Organized BITS-IUCAA Workshop on Gravitational Waves Data Analysis, BITS, Pilani, K. K. Birla Goa campus during December 17-21, 2012. Convener: Dr. Sanjay Sahay
- F. Invited Talks given by BITS faculty:**
- G. Invited talks arranged in the department:**
Dr. Anand Deshpande, CEO Persistent Systems, India, delivered a talk on "Cloud computing" in November 2012.
- H. Awards and recognitions won by faculty and students**
The following four students have been offered admission at universities mentioned against their names.
1. Kedar Soparkar --- Stanford University
 2. Pracheeta Raghavn ---- Stanford University
- I. Faculty Development, International Collaboration & Industry Immersion**
- J. Significant new equipments/experimental facility added during the year:**
- K. Departmental association/club activities: Nil**

B2.10.5 Department: Economics

Number of faculty members (as on 31 December 2012): 07

Senior Professors, Professors	-
Associate Professors	1
Assistant Professors	3
Lecturers	2
Visiting Faculty	1

Head of the Department: Mridula Goel

Contact details (email): mridula@goa.bits-pilani.ac.in

Number of PhD Scholars: 0

Ph.D. Thesis Submitted during the year: 0

A. Sponsored Research activities:

Total number of Sponsored Projects in the department: 1.

ICSSR Project for Rs.4.89 lacs: Tourism in Goa and its Impact on Socio-Economic Conditions and Sustainable Development in the State , Principal investigator: **Mridula Goel**.

B. Publications:

The faculty of the department published papers in international/national refereed journals during the year:

1. **Mridula Goel : Economic Regulations: Effect on Growth and Stability in Brazil and India** in Procedia - Social and Behavioral Sciences (Vol.30,2011), Elsevier Ltd., available on Science Direct.(Co-author: Aman Asija)
2. **Mridula Goel :‘Tourism: the depth of its meaning,’** International Journal of Research in Commerce , Economics and Management, Vol.No.2(2012), issue No.10(Oct.)(First author: Ms P.Pawaskar ,Faculty in Management)
3. **Mridula Goel: Tourism and Acculturation ,Atna - Journal of Tourism Studies, ISSN 0975-3281,Vol.7, No.1, Jan.-june 2012.**(First author: Ms P.Pawaskar ,Faculty in Management)
4. **Debasis Patnaik: “Application of Markovitz in Indian Stock Markets”** in International Journal of Financial Management Vol.1,Issue No.1, published in Aug.2012
5. **A. K. Mishra: ‘Exchange Rate Behaviour and Management in India: Issues and Empirics’,** International Journal of Economics, Commerce and Research (IJECR), 2(4), 9-16 (2012) (Second author: Rahul Yadav)
6. **A. K. Mishra: ‘Investigating the Causal Relationship between Saving, Investment and Economic Growth for India’,** International Journal of Financial Management (IJFM), 1 (1), 15-23 (2012) (Second author: Mohit Jain).
7. **A. K. Mishra: ‘Analyzing Soundness in Indian Banking: A CAMEL Approach’,** Research Journal of Management Sciences, an e-journal 1 (3), 9-14 (2012) (Other authors: G. Sri Harsha, Shivi Anand and Neil Rajesh Dhruv)
8. **A. K. Mishra: ‘Planned Development and Social Security Measures for Unorganised Workers: Retrospect and Prospects in India’** accepted for publication in journal IASSI Quarterly: Contributions to Indian Social Science. It will appear in Vol. 31 No. 2 (April-June 2012).
9. **N. Kubendran: ‘Structural Reforms and External Sector Vulnerability in India’,** Asian-African Journal of Economics and Econometrics, Vol.12. No.2, pp. 343-359 (2012)
10. **Indranil De: ‘What Ails Access to Safe Drinking Water and Sanitation for the Urban Poor? A Study of Issues and Linkages in Slums of Kolkata’,** Project Report Submitted to South Asia Network of Economic Research Institutes (SANEI) (2013) (Co-author: Tirthankar Nag)
11. **Debdulal Thakur: ‘Municipal Finance Matters: India Municipal Finance Report’** Project Report Submitted to Asian Development Bank (2013) (Co-author: Om Prakash Mathur, S.Chowdhury & A.K.Halen , NIPFP, New Delhi)

C. Conferences attended/papers presented:

1. **Mridula Goel: ‘Regulation and Bank Performance: Evidence from India’** (with Shivam Salhotra) at International Conference on Banking and Finance (bfscon) organized jointly by IMI, Delhi and ESCP Europe.Dec.13-15, 2012.
2. **Debasis Patnaik: Self esteem and risk Preference: Impact on Risk perception and risk Propensity** at 12th Annual Behavioral Finance Conference , New York University, USA, 19-21 September2012.
3. **A. K. Mishra: ‘Is Sustainable Mining in Goa Possible? Some Issues and Empirics’** (with Sadhana Satpathy & Biswabas Patra) presented in the National Seminar on Mining: Economic, Environmental and Social Implications organised by the Department of Analytical and Applied Economics, Utkal University, Bhubaneswar, Odisha during March 23-24, 2012
4. **A. K. Mishra: ‘Linkages between Growth and Infrastructure Investment in India’** (with Kunapareddy Narendra, Bibhu Prasad Kar & Biswabas Patra) presented in the 48th Annual

Conference of the Indian Econometric Society (TIES), organized by the Department of Economics, Pondicherry University, Puducherry during January 9-11, 2012.

5. **Debasis Patnaik:** Presented and Participated in Poster Presentation (Joint authorship) on **“Nursing Work Force Issues and Trends Affecting Total Patient Care”** in KLE Society’ Institute of Nursing Sciences, Belgaon, Karnataka on 10 Nov 2012
6. **Debasis Patnaik:** **‘Preference formation for Effective Economic Decision Making involving Micro Finance Institutions in Goa’** sent to International Conference at Royal Thimpu College, Thimpu-Bhutan for Conference on Politics-Society and Economics on 15-17 Oct2012. Status-Accepted. In absentia.
7. **Swagat Mishra:** **‘Emissions Trading and Carbon Finance’**, Istituto di Studi Economici e per l’Occupazione (I.S.E.O), Italy, 23rd to 30th June, 2012, In absentia.

D. Books Published/Edited during the year:

1. **Mridula Goel** **‘Gender Bias and Economic Development: with reference to education: A study of most populated state of India: Uttar Pradesh.’** Lambert Academic Publishing, 2012.
2. **Debasis Patnaik:** **“Developing a Dynamic Input Output Frame for Indian Sectors’ to be Published** as Chapter in Book on Economic Reforms by Prof V V. N Somayajulu , under publication by Himalayan Publishing House in 2012-13. **Status- Accepted.** (co-author: Mr Dushyant Tiwari
3. **Debasis Patnaik:** **“Finite Dynamic Modelling’ Sectors’ to be Published** as Chapter in Book on Economic Reforms by Prof V V. N Somayajulu , under publication by Himalayan Publishing House in 2012-13. **Status- Accepted.** (co-author: Aalap Tripathy)
4. **A. K. Mishra:** **‘Demographic Dividends and Economic Growth across the States in India- A Panel Data Analysis’** in Tripathy, Trilochan, Bhattacharya, Poulomi and M. Aruna (eds.) **A Compendium of Essays in Applied Econometrics**, Hyderabad: IBS (2012) (First author: Jigar N Gadhia)

E. Conferences, seminars & workshops conducted: Nil

F. Invited Talks given by BITS faculty:

1. **Mridula Goel:** Resource person for UGC, , Ministry of HRD, Govt. of India sponsored Teachers Training Workshop, Academic Staff College, Calicut University , March 14-15,2012
2. **Debasis Patnaik:** Guest Lecture and Resource Person for Japanese Students’ **workshop** on ‘Indian economy’ from 10-12 Dec2012 conducted by Department of Economics and Sociology, Goa University
3. **Debasis Patnaik:** Keynote Speaker in Conference on Current Rupee Depreciation in Indian Markets Organized by Federation of Indian Exporters’s Association (FIEO) under Ministry of ommerce, New Delhi on 26 May,2012.
4. **Debasis Patnaik:** **“Self Esteem and Risk Preference’** at Reddy Women’s College, Narayanguda, Hyderabad, as Invited Lecture on Oct 22 ,2012
5. **Debasis Patnaik:** **“Management Information System (MIS) and Self Awareness”** on 6,Dec2012 in Institute of Nursing Education, Bambolim, Goa under Directorate of Health Services

G Invited talks arranged in the department:

Round Table on International Taxation with Prof.Tomas Balco, Director of Central Asian Tax Research Center and his team on 11 December 2012 .

H. Awards and recognitions won by faculty and students:

Saurabh Nayak: RBI Young Scholar Award

I. Faculty Development, International Collaboration & Industry Immersion:

Mridula Goel: Participated in SPSS workshop, conducted by SPSS trainer at SIMS, Pune Sept. 13-15,2012

J. Significant new equipments/experimental facility added during the year: Eviews computational software, indiastat database.

K. Departmental association/club activities:

Swagat Mishra: Presented a seminar on 8th December, 2012 on Renewables and Carbon Market Research.

B2.10.6 Department: EEE and E&I

Department: Electrical, Electronics and Instrumentation Engineering

Number of faculty members (as on 31 December 2012): 21

Senior Professors, Professors	02
Associate Professors	01
Assistant Professors	06
Lecturers	12

Head of the Department: Prof. K R Anupama

Contact details: anupkr@goa.bits-pilani.ac.in

Number of PhD Scholars: 11

Ph.D. Thesis Submitted during the year: 01

A. Sponsored Research activities:

Total number of Sponsored Projects in the department: 04. Details are given below.

(i) Ongoing projects:

1. Wireless Sensor Networks for Inaccessible Terrains, UGC major project
2. Design and Development of condition based monitoring of Pipelines using Wireless sensor Networks, GAIL
3. Hardware Implementation of time frequency distribution of Mirnov oscillations in Tokamak using the Hilbert-Huang Transform, BRFST
4. Investigation of Schokkty contacts to SiC using I-V and C-V techniques, UGC Major project

(ii) Projects sanctioned during the year

1. Design and Development of condition based monitoring of Pipelines using Wireless sensor Networks, GAIL
2. Hardware Implementation of time frequency distribution of Mirnov oscillations in Tokamak using the Hilbert-Huang Transform, BRFST

(iii) Projects completed this year–None

The department has received the DST-FIST grant of Rs. 40 Lakhs for VLSI software

B. Publications:

The faculty of the department published 5 papers in international/national refereed journals during the year.

1. Venkateshvaran, A. and Prince, A.A. "A novel MEMS based current sensor design for smart grid applications", Journal of Sensors and Transducers, vol. 138 (3), pp. 2-13, 2012.
2. Prince, A.A., Jose, I. and Agrawal, V.P. "A new optimal design and analysis method based on MADM for MEMS Products Development", International Journal of Advanced Manufacturing Technology, DOI: 10.1007/s00170-012-3969-7, 2012.
3. Gautam Bacher, Souvik Pal, Lizy Kanungo and Sunil Bhand, "A label-free silver wire based impedimetric immunosensor for detection of aflatoxin M1 in milk", Sensors and Actuators B: Chemical, In Press, Accepted Manuscript, and 11 April 2012.
4. Nitin Sharma, Anand K Tarcar, Varghese Antony Thomas and K R Anupama, "On the use of Particle Swarm Optimization for Adaptive Resource Allocation in OFDMA Systems with Proportional Rate Constraints", Information Sciences Volume 182, Issue 1, Pages 115-124. (Impact factor 3.291), 1 January 2012.
5. Dr K.R. Anupama, "Design and Implementation of a Cross Layered Protocol Stack for Sensor Networks in an Indoor Environment" - IEEE WOCN 2012

C. Conferences attended/papers presented: Nil**D. Books Published/Edited during the year: Nil****E. Conferences, seminars & workshops conducted**

1. Tektronix provided the training on programming capabilities of Arbitrary function generators, Digital signal Oscilloscopes, Multimeters with the help of MATLAB and LabView softwares. The hands-on demonstration was conducted in Digital Communication laboratory "A-201" during 22nd to 23rd August 2012.
2. 4 Days training program was conducted on "ANSYS HFSS" and "ANSYS MAXWELL" tools from 25th August to 28th August 2012. This training was given by engineers from "Innovent Engineering solutions pvt. Ltd" at computer center of BITS Pilani K K Birla Goa campus.
3. MATLAB provided the hands-on demonstration for the advance embedded tools like MATLAB Coder, Simulink Coder for programming TMS320C6713 DSK and Virtex 7 Kits. This training was provided by Mathworks Engineer in computer center on 15th October 2012.
4. Tetcos, Bangalore provided the 2 days training on NETSIM products (Academic and Standard licenses) during 25-27th July 2012.
5. Cadence conducted the training on analog and digital tools on 5th and 6th November 2012.
6. Silvaco provided the TCAD demonstration and training in February 2012
7. Coreal technologies provided Vx-works theory and demo session on 24th August 2012.
8. Coreal technologies provided the training on partial reconfiguration tool during 3rd and 4th October 2012

F. Invited Talks given by BITS faculty:

1. Prof K.R. Anupama delivered the talk on "Wireless Sensor Networks" at Goa Engineering college, Dept. of Information and Technology, on 10th February 2012.
2. Prof K.R. Anupama delivered the talks on "Curriculum Bench marking and redesign" and "Course planning" on 14th December 2012, at 'Higher Education summit 2012' –an event organized by Confederation of Indian Industries.

G. Invited talks arranged in the department: Nil**H. Awards and recognitions won by faculty and students: Nil****I. Faculty Development, International Collaboration & Industry Immersion: Nil**

J. Significant new equipments/experimental facility added during the year:

Following new and modern equipments were added in the year 2012 under various laboratories

1. Digital Storage Oscilloscope, 100 Mhz, 2GS/s, 2Ch, traceable calibration (Model: TDS 2012C)
2. Digital Storage Oscilloscope, 100 Mhz, 2GS/s, 4 Ch, traceable calibration (Model: TDS 2014C)
3. Arbitrary function generator, 25 MHz, 1 Channel, GPIB & LAN ArbExpress software, NI Signal express-LE edition (Model: AFG 3021B)
4. Arbitrary function generator, 25 MHz, 2 Channel, GPIB & LAN ArbExpress software, NI Signal express-LE edition (Model: AFG 3022B)
5. Programmable Digital multimeters, 5.5 digits, 0.015% accuracy (Model: DMM 4020)
6. TMS 320C6713 DSP STARTER KIT
7. XUP V5 boards
8. AES-K7DSP-325T-G (XILINX KINTEX 7 FPGA DSP KIT W/HIGH SPEED ANALOG)
9. VIRTEX-7 FPGA VC707 EVALUATION KIT
10. Trainer Kits for Communication systems
11. Acoustic modem set-up

Along with the above hardware facilities the following softwares were also added

1. Tetcos – NETSIM
2. ANSYS Academic Teaching EM (Maxwell Includes RMxpvt, Simplorer, PExprt, MACD Translators)
3. ANSYS Academic Teaching HF (HFSS, Q3D Extractor, Designer (RF and SI), Slwave, Ansoft links, Optimetrics)
4. CadenceOrcade PSPICE, Caputre and Layout Plus
5. Xilinx system edition ver 14.1
6. Xilinx Partial reconfiguration
7. CoventorWare Turbo, Extended Analyzer Bundle (MemPZE, MemPZR, MemHenry, MemPackage)
8. MEMS+
9. Full TCAD Omni bundle
10. Prodigy's Spectrum analysis and Frequency response analysis software
11. Red Hat (RHEL) licenses
12. MATLAB/ Simulink (R- 2012 b) Licenses for control system, communication system, DSP etc.

K. Departmental association/club activities:

- (i) EEE and E & I Association

B2.10.7 Department: Humanities and Management

Number of faculty members (as on 31 December 2012): 14

Senior Professors, Professors	1
Associate Professors	0
Assistant Professors	9
Lecturers	4
Visiting Faculty	0

Head of the Department: Meenakshi Raman

Contact details(email): mraman@goa.bits-pilani.ac.in

Number of PhD Scholars: 7 (including 5 lecturers)

Ph.D. Thesis Submitted during the year: NIL

A. Sponsored Research activities:

Total number of Sponsored Projects in the department: 02 Details are given below.

(i) **Ongoing projects:** NIL

(ii) **Projects sanctioned during the year:**

(a) ICSSR (6.58 Lacs)

Topic: Exploring Spiritual Quotient and Analyzing its Impact on the Research Performance of University Teachers

Principal Investigator: Dr. Shalini Upadhyay

(b) **Seed Grant : BITS Pilani (7.5 Lacs)**

Topic : A study on usage and impact of ICT in secondary schools

Principal Investigator : Dr. VVS NV Prasad

(iii) **Projects completed this year:** NIL

B. Publications:

The faculty of the department published **17 papers** in international/national refereed journals during the year. (Details are given under Research at BITS)

C. Conferences attended/papers presented:

The following faculty members presented papers at national and international conferences (details are given under Research at BITS) Details of papers not given

1. Prof. Meenakshi Raman: 01 international
2. Dr. RP Pradhan : 01 national
3. Dr. Basavadatta Mitra: 01 international; 02 national
4. Dr. Shalini Upadhyay: 03 international ; 01 national
5. Dr. Ch. V V S N V Prasad: 04 national
6. Dr. Gyan Prakash : 01 international
7. Mr. Solano Jose da Silva : 01 national
8. Dr. Rayson K Alex : 01 international

D. Books Published/Edited during the year: 1 + 2 (chapters in books)**Book**

Meenakshi Raman and Prakash Singh, Business Communication, Second Edition, New Delhi:OUP, 2012

Chapters in Books

- (a) Alex, Rayson K. "A Critical Call for the Second Wave in Indian Ecocriticism." Ed. Suresh Frederick. *Contemporary Contemplations of Ecoliterature*. New Delhi: Authorpress, 2012. (ISBN: 978-81-7273-642-2)
- (b) Alex, Rayson K. "Ecological Representation in Video-documentaries on Tribal Communities in South India." *Problematics on Ethnicity, Identity & Literature*. Eds. Barua, Anooradha Chakrabarty & Nath, Hemanta Kr. Assam: The Sibsagar College, 2012. (98-104). (ISBN 81-924140-5-1)

E. Conferences, seminars & workshops conducted : 2

The department organized one seminar and one workshop

1. **Seminar** on Research methods and Data Analysis for the faculty and research scholars of BITS Pilani, K K Birla Goa Campus, 4 February 2012 (80 participants) Resource Persons: VVSNA Prasad, Debasis Patnaik, Srinivas Krishnaswamy, Srikanth M, K. Ponnani
2. **Workshop** on Cross Cultural Behavioural Simulation for the faculty of Goa Campus on 2 March 2012
(Resource persons : Khushwant Pittenger, Shikha Sahai) 20 participants

F. Invited Talks given by BITS faculty: 11

- 1 Prof. Meenakshi Raman: 3 invited lectures; 1 Plenary Talks 2 workshops
- 2 Dr. RP Pradhan : 2 invited talks
- 3 Dr.Rayson K Alex : 1 invited talk
- 4 Dr.Reena Cheruvalath : 1 invited talk
- 5 Dr.Basavadatta Mitra : 1 workshop

G. Invited talks arranged in the department: 1

Dr.V B Tharakeshwar, EFLU Hyderabad delivered a series of talks on "Modernity, City and Gender" during 30-31 August 2012

H. Awards and recognitions won by faculty and students: 1

Dr.Gyan Prakash was awarded "Excellence in Research Award 2012" by IIT Bombay for his PhD thesis.

I. Faculty Development, International Collaboration & Industry Immersion: NIL**J. Significant new equipments/experimental facility added during the year: NIL****K. Departmental association/club activities: NIL**

B2.10.8 Department: Mathematics

Number of faculty members (as on 31 December 2012): 15

Senior Professors, Professors	00
Associate Professors	00
Assistant Professors	11
Lecturers	03
Visiting Faculty	01

Head of the Department: Dr Prasanna Kumar N

Number of PhD Scholars: 03

Ph.D. Thesis Submitted during the year: nil

A. Sponsored Research activities:

Total number of Sponsored Projects in the department: 01. Details are given below.

(i) Ongoing projects:

- Project Title: Mathematical modeling and simulation of crack in smart materials
Principal Investigator: Dr. Amit Setia
Funding Agency: BITS, Pilani under Research Initiation Grant, Mission budget
Amount: Rs. 2 Lakhs
- Project Title: Portfolio Optimization and its Implementation in Financial Markets
Principal Investigator: Dr Mayank Goel
Funding Agency: Research Initiation Grant, Mission Budget (2 Lakh)

(ii) Projects sanctioned during the year

Project Title: Portfolio Optimization and its Implementation in Financial Markets
Principal Investigator: Dr Mayank Goel
Funding Agency: Research Initiation Grant, Mission Budget (2 Lakh)

(iii) Projects completed this year: NA**B. Publications:**

The faculty of the department published 7 papers in international refereed journals during the year.

- Prasanna Kumar, A note on the inequalities for a polynomial and its derivative, *Acta Mathematica Vietnamica*, 37 (1), 63-70, 2012.
- Alpesh M. Dhorajia, Symplectic modules over overrings of polynomial rings, *Indian Journal of Pure and Applied Mathematics*, 43(4), 371-390, 2012.
- Paul Prabal, M. N. Chintamani, B. K. Moriya, W. D. Gao and R. Thangadurai, New upper bounds for the Davenport and for the Erdos-Ginzburg-Ziv Constants, *Archiv der Mathematik*, 98, 133-142, 2012.
- Amit Setia and Rajesh K Pandey, Laguerre Polynomials based numerical method to solve a System of Generalized Abel Integral Equations, *Procedia Engineering*, 38, 1675 – 1682, 2012.
- G. Panda and S. Jaiswal: Some duality results for fuzzy nonlinear programming problem, *Journal of Fuzzy Set Valued Analysis*, Volume 2012, Year 2012 Article ID jfsva-00112, doi:10.5899/2012/jfsva-00112.

6. Alpesh M. Dhorajia and M. K. Keshari, A note on cancellation of projective modules. *J. Pure and Applied Algebra* 216, 126-129, 2012.
7. G. C. Samanta and S. Debata, Five Dimensional Bianchi type-I String Cosmological Models in Lyra Manifold, *Journal of Modern Physics*, Vol. 3, 180-18, 2012.

C. Conferences attended/papers presented:

1. Prasanna Kumar N, presented a paper on A Note on the Applications of Topology in GIS, GEOMATRIX'12, held at IIT Bombay during 26-29 February, 2012.
2. Gauranga Charan Samanta, Bulk viscous cosmology in five dimensional LRS bianchi type -I space time, presented a paper in an International Conference on Mathematical Sciences held at S. S. E. S. Amt's Science college, Nagur during Dec. 28-31 -2012.
3. T. Singh, Jessica Pereira and S.B. Rao, k-Hypergraceful Complete Graphs Paper presented in 21st International Conference of FIM on Interdisciplinary Mathematics, Statistics and Computational Techniques (IMSCT 2012-FIM XXI) held at Department of Statistics, Panjab University, Chandigarh, India. during December 15-17, 2012.
4. T. Singh and Jessica Pereira, Additively Graceful Signed Graphs, Paper presented in 21st International Conference of FIM on Interdisciplinary Mathematics, Statistics and Computational Techniques (IMSCT 2012-FIM XXI) held at Department of Statistics, Panjab University, Chandigarh, India, during December 15-17, 2012.
5. T. Singh and Siddharth Gupta, Distance Magic Graphs authors: T. Singh Paper presented in 21st International Conference of FIM on Interdisciplinary Mathematics, Statistics and Computational Techniques (IMSCT 2012-FIM XXI) held at Department of Statistics, Panjab University, Chandigarh, India. during December 15-17, 2012.
6. *Tentu Appala Naidu, Prabal Paul, Vadlamudi China Venkaiah*, Ideal and Perfect Hierarchical Secret Sharing Schemes based on MDS Codes, Paper presented in International Conference on Applied and Computational Mathematics (ICACM), held at Institute of Applied Mathematics, Ankara, Turkey, during October 3-6 2012.
7. Vineet Kumar Singh (2012), Presented a paper entitled 'Numerical wavelets method for system of singular volterra integro-differential Equation' in International Conference on Wavelets and Applications held at The Euler International Mathematical Institute, Voronezh State University, Saint Petersburg, Russia during July 8-15, 2012.
8. A. Setia, R.K. Pandey, Laguerre Polynomials based numerical method to solve a System of Generalized Abel Integral Equations, at International Conference on Modeling Optimization and Computing, NICHE, Kumarakoil, Tamil Nadu during April 10-11, 2012.
9. Bijil Prakash, Gunveer Gujral, Jyotiranjan Harichandan "Computing hand gestures using computer vision to control cursor movements". International conference on Recent Technologies, IOK COE Pune, 9-11 Feb 2012.

D. Books Published/Edited during the year: 1

Prasanna Kumar and Subarna Kar, Affine Algebraic entities and Their Applications in Robotics; An Introductory Monograph, *Lambert Academic Publishing GmbH & Co, Germany*, March 2012.

E. Conferences, seminars & workshops conducted:

1. National Workshop on Advanced School on Graph Algorithms sponsored by NBHM during July 23-27, 2012.
2. Introductory Workshop on Scilab during July 9-10, 2012.

F. Invited Talks given by BITS faculty:

1. T Singh, delivered 2 lectures on 'Handling projects in mathematics for 11th and 12th class students-Guidelines for teachers of Goa State Board' held at Goa Science centre organized by State council for educational research and training, Goa, on September 6 2012.
2. Jessica Pereira, delivered a lecture on 'Handling assignments in mathematics for 11th and 12th class students-guidelines for teachers of Goa State Board' held at Goa Science centre organized by State council for educational research and training, Goa, on September 6 2012.

3. Dhanumjaya P delivered series of lectures on Scilab and its applications in National Workshop on Differential Equations: Theory, Computation & Applications, UG-Level Workshop at IMA Bhubaneshwar during 17-27 May, 2012.
4. Dhanumjaya P, delivered a talk on Mixed Finite Element Methods for the extended Fisher-Kolmogorov (EFK) equation in the Conference on "New Vistas in Computational Fluid Dynamics in Engineering" held at National Institute of Technology, Warangal (NITW) during 27-29th January, 2012.
5. Dr Anil Kumar delivered a series of lectures on numerical computation using Matlab in the workshop on "Scientific computing: Theory and Practices" at Gurukul Kangri Vishwavidyalaya Haridwar, Uttarakhand during 8-13 October 2012.
6. Dr Anil Kumar delivered a series of lectures on computations of steering controls in Mat lab in the workshop on "Mathematical Theory of Control and Numerics" held at Department of Mathematics, Indian Institute of Space Science and Technology, Tiruvananthapuram, during 21-30 November 2012.

G. Invited talks arranged in the department:

1. Prof. A K Nandakumaran, Department of Mathematics, IISc, Bangalore gave a talk on Computational Partial differential equations on 27/02/12
2. Prof Eugene B Postnikov, Theoretical Physics Department, Kursk State University, Russia delivered a lecture on Local spectral analysis via the continuous wavelet transform on 04/08/2012.

H. Awards and recognitions won by faculty and students

Dr Vineet Kumar Singh, Assistant Professor was awarded BOYSCAST Fellowship from DST India.

I. Faculty Development, International Collaboration & Industry Immersion:

Started research collaboration with Theoretical Physics Department, Kursk State University, Russia

J. Significant new equipments/experimental facility added during the year: Nil

K. Departmental association/club activities:

Infiniti-A student association conducted national level competitions during QUARK-12.

B2.10.09 Department: Mechanical Engineering

Number of faculty members (as on 31 December 2012) : 17

Senior Professors, Professors	00
Associate Professors	01
Assistant Professors	06
Lecturers	09
Visiting Faculty	01

Head of the Department: Dr. Pravin Singru

Contact details: pmsingru@goa.bits-pilani.ac.in

Number of PhD Scholars: 06

Ph.D. Thesis Submitted during the year: 03

A. Sponsored Research activities:

Total number of Sponsored Projects in the department: 06. Details are given below.

Ongoing projects:

A project is ongoing under Dr. P M Singru since Feb 2011 "National MEMS Design Center" from NPMASS, Rs. 30 lacs

Projects sanctioned during the year

1. Dr. P M Singru, Dr. Shibu Clement and Dr. Sachin Waigaonkar received grant under DST –FIST for dynamics and vibration, thermal science and engineering lab and polymer & composite engineering lab. Amount Rs. 80 lacs
2. Mr. A C Kulkarni (PI) and Dr. D M Kulkarni (PI) received INR 48 lacs from DUCON Instruments, Bangalore for the project titled "**Experimental Investigation of Friction and Wear Mechanism for Hip Prosthesis Material using Multi-Station Tribometer**"
3. Mr. A C Kulkarni (PI) and Dr. D M Kulkarni (PI) received INR 8 lacs from ABST, DUCON Instruments and DST for the project titled "**Experimental Wear Analysis of an Artificial Hip Implant Materials using Advanced Tribometer Customized for Bio-Tribological Studies**"
4. Dr. Sachin Waigaonkar received a grant of INR 15.84 lacs under DST-Fast track for Experimental Investigations of Rotational Moulding Process Using Nano-Scale Fumed Silica Composites.
5. Dr. Sachin Waigaonkar received a grant of INR 6 lacs under UGC/MHRD Start up Grant.

Projects completed this year: NIL

B. Publications:

1. Kulkarni D. M. and Chaudhari Vikas. (2012). '*Failure Analysis and Prevention*' a Course for Undergraduates. Bulletin of Marine Science and Technology. Vol. 7, pp. 27-29.
2. R.D. Naik and P. M. Singru "Stability and Hopf bifurcation of a Nonlinear oscillator with multiple time-delays" Chaos, Solitons & Fractals, Chaos, Solitons & Fractals Volume 45, Issue 11, November 2012, Pages 1387-139
3. Mali K.D. and Singru P.M. "An analytical model to determine fundamental frequency of free vibration of perforated plate by using unit step functions to express non homogeneity", Journal of Vibro-Engineering, Vol 14, Issue 3, pp 1292-1296, September 2012.
4. Dillip Kumar Mohanty and P M Singru" Numerical method for heat transfer and fouling analysis of a shell and tube heat exchanger using statistical analysis", Korean J. Chem. Eng., Springer, 29(9), 1144-1150, 2012
5. Kiran D. Mali and Pravin M. Singru "Determination of The Fundamental Frequency Of Perforated Plate With Rectangular Perforation Pattern of Circular Holes by Negative Mass Approach for the Perforation "International journal of Advanced Materials Manufacturing and Characterization. ,Vol 1, issue 1, March 2012, PP 105-109
6. Kiran C.P., Shibu Clement and Agrawal V.P. (2012) Mechatronic system reliability modeling and analysis, *International Journal of Reliability and Safety* (Accepted for publication). (Inderscience publishers)
7. Kiran C.P., Shibu Clement and Agrawal V.P. (2012): Quality modeling and analysis of a mechatronic system, *International Journal of Industrial Systems*, Vol. 12, No. 1, pp.1-28. (Inderscience publication)
8. Raghav Bansal and Sachin Waigaonkar (2012): Thermal Analysis of Rotational Moulding Process: An Application to Multilayer Moulding, Journal of Manufacturing Engineering, Vol.7 (3), pp 158-163
9. G. Karthikeyan, J. Ramkumar and R. Balasubramaniam (2012), A study on machinability of B-modified Ti-6Al-4V alloys by EDM, Indrani Sen, International Journal of Materials and Manufacturing Processes (IJMMP), Taylor & Francis, vol. 27, Issue 3, pp. 348-354.

10. Karthikeyan, Anuj K. Garg, J. Ramkumar and S. Dhamodaran (2012), A microscopic observation of machining behavior in μ ED-milling process, *G. Journal of Manufacturing Processes (JMP)*, SME - Science direct (Elsevier), vol. 14, Issue 3, pp. 297-306.
11. G. Karthikeyan, J. Ramkumar, Shalabh and S. Aravindan (2012), Performance analysis of μ ED-milling process using various statistical techniques, *International Journal of Machining and Machinability of Materials (IJMMM)*, Inder science, vol. 11, no. 2, pp. 183-203.
12. Karthikeyan, K. Sambhav, D. Santhosh and J. Ramkumar (2012), CAD based modeling and prediction of tool wear in μ ED-milling, *G. International journal of manufacturing technology research (IJMTR)*, Nova publications, vol. 4, Issue 1/2, pp. 3.
13. R.G. Mote, H.S. Chu, Ping Bai and E.P. Li, Compact and efficient coupler to interface hybrid dielectric-loaded plasmonic waveguide with silicon photonic slab waveguide, *Optics Communications*, Vol. 285, No. 18, pp. 3709–3713 (2012).

C. Conferences attended/papers presented:

1. P L Ramkumar, D M Kulkarni (2012): Mechanical and Fracture Characterization of Linear Low Density Polyethylene (LLDPE) using Rotational Moulding Technology. 2nd International Conference on Nanotechnology - Innovative Materials, Processes, Products and Applications (Nanocon 012). 18-19-Oct-2012, Pune, India. pp: 22-31
2. Prasad, Ch.V.V.S.N.V., Kulkarni, D.M. (2012) 'A Conceptual Framework For Implementing Supply Chain Management', International Conference On Advances In Manufacturing Technology, Chennai Institute of Technology, Chennai, 15-17, June, pp.326-330.
3. Raghavendra D. Naik, Pravin M. Singru, "Heteroclinic bifurcation of a nonlinear oscillator with multiple time-delays", International Conference on Automation, Mechatronics and Robotics (ICAMR'2012) that will take place on August 11-12, 2012 in Phuket (Thailand).
4. Kiran D. Mali and Pravin M. Singru, "Free Vibration Analysis of Perforated Plate by using Unit Step Functions to Express Non homogeneity", 15th International Conference on Experimental Mechanics Porto, 22-27 July 2012 (accepted for publication and presentation)
5. Raghavendra D. Naik, Pravin M. Singru, "Stability of a Nonlinear 2 Degree-of-Freedom Vehicle System with Multiple Time-delays", 15th International Conference on Experimental Mechanics Porto, 22-27 July 2012
6. Kareti V.R.B. Prasad and Pravin M. Singru "Optimum Design of Turbo-Alternator Using Modified NSGA-II Algorithm", accepted for presentation & publication in Seventh International Conference on Bio-Inspired Computing: Theories and Application, December 14 - 16, 2012 to be held at ABV IITM, Gwalior
7. Kiran D. Mali, Parth S. Joshi, Pravin M. Singru, "Free vibration analysis of simply supported square plates with square perforation pattern of square holes" accepted for 57th ISTAM Congress an International meet to be held in DIAT, Pune on December 17-21-2012.
8. Pravin M. Singru & D. Srivastava "Design and Computational Analysis of MEMS based Direct Methanol Fuel Cell", COMSOL Conference Bangalore, 3-4, November, 2012
9. Kiran D. Mali and Pravin M. Singru, "An Analytical Model to Determine Fundamental Frequency of Free Vibration of Perforated Plate by Using Greatest Integer Functions to Express Non Homogeneity", 3rd International Conference on Manufacturing Science and Technology - ICMST 2012, August 18 - 19, 2012, New Delhi, India (accepted for publication and presentation)
10. Kiran C.P., Shibu Clement and Aneet S.R. (2012): Experimental investigation for surface quality of turbine blade material, *All India Manufacturing Technology, Design Research, AIMTDR 2012*, Kolkata, Dec 14-16, pp. 822-827.
11. M.S. Babu, S. Clement and N.K.S.Rajan (2012) "A Parametric Study on Biomass Fuelled Producer Gas Engine", National conference on Energy and Sustainable Development, 28-29 Feb, College of Engineering, Pune, India.
12. Sachin Waigaonkar and BJC Babu (2012): Compression Moulding Technique for FRP fasteners and Sectional Panel Tanks. International Conference on Wind Energy: Materials,

Engineering and Policies, organized by Technical University of Denmark (DTU) and BITS Pilani Hyderabad Campus pp.23-30.

- 13 Kulkarni A C, Kulkarni D M "Current Experimental trends in tribological testing of hip prosthesis materials and proposed novel method for Experimental testing" 8th International conference on Industrial Tribology, 7-9 Dec 2012, Pune, India.

D. Books Published/Edited during the year: Nil

E. Conferences, seminars & workshops conducted

Dr. Pravin Singru organized Faculty Development Program for Engineering and Technical courses in collaboration with Confederation of Indian Industry on 27 and 28 September 2012

F. Invited Talks given by BITS faculty: Nil

G. Invited talks arranged in the department: Nil

H. Awards and recognitions won by faculty and students

Prof. D M Kulkarni, Mechanical Engineering received Prof. S. Venkateswaran Faculty Excellence Award 2012 for excellence in teaching, research and contribution to institution development.

I. Faculty Development, International Collaboration & Industry Immersion

1. Dr. P M Singru received letter of intent for collaboration from M/s Bigtec Labs, Bangalore for development of Low Pressure and CO2 Sensor to be used in endotracheal tube
2. A memorandum of understanding is signed between a world known Tribometer manufacturing company, Ducom Instruments Pvt Ltd and BITS Pilani K K Birla Goa campus. The persons involved in this MOU are Dr. D.M. Kulkarni and Mr.A.C.Kulkarni. This MOU is signed for mutual cooperation in the field of Biotribology and a mutually collaborative project on Multistation Tribometer.

J. Significant new equipments/experimental facility added during the year:

Significant equipment added during this year is as follows: Electro Magnetic Yoke

1. UV Black Light System
2. ASTM Test Bar Y-7 Yoke
3. Digital Ultrasonic Flaw Detector
4. Universal Strength Machine (Mechanical and Digital with Computer Interface) for Casting Mould Testing
5. Sand rammer
6. Electric Sand Permeability tester
7. Infrared Moisture Tester for moulding sand
8. CI plate with AI pattern and wooden gating system
9. Sand Siever with sieves and timer
10. Mould Hardness tester
11. Ericson Cupping Machine

K. Departmental association/club activities:

Mechanical engineering students association (MESA) has arranged different activities under following categories

(ii) ASME

1. Conducted ProEngineer workshop: 21st Sept - 24th Sept, 2012
2. Conducted AutoCAD 2013 lecture series: 8th Oct - 10th Oct, 2012
3. Arranged a workshop on Computational Fluid Dynamics between 2nd Jan - 5th Jan, 2013

(iii) SAE

Following is an overview of the club activities since its inception:

Activities / projects undertaken till date:

1. SAE Introduction session was arranged on 1 October 2012

2. Orientation session on projects like BAJA (All-Terrain Vehicle), SUPRA (Formula-style racing car), and solar powered vehicle were organized on 14 October 2012.
3. Lecture series on CATIA were arranged between, 12-14 November 2012

(iv) Aerodynamics club

1. Designed Tricopter V2.1 won the open showcase at QUARK 2012
2. Nirmaan Joy of giving week: Aero Club had a tiny air show for the underprivileged children. They flew a YAK 54 doing amazing tricks, the Debonair and the tricopter (flown in the auditorium)
3. Designed Flyzyme: A 2.6 metre wingspan unique V-tail Glider which can go up to dizzying heights.
4. In association with the RC Club, Pilani Campus conducted a workshop in Pilani Campus

B2.10.10 Department: Physics

Number of faculty members (as on 31 December 2012): 15

Senior Professors, Professors	01
Associate Professors	01
Assistant Professors	12
Lecturers	00
Visiting Faculty	01

Head of the Department: P. Nandakumar

Contact details: nandan@goa.bits-pilani.ac.in

Number of PhD Scholars: 7

Ph.D. Thesis Submitted during the year: 0

A. Sponsored Research activities:

Total number of Sponsored Projects in the department: 05. Details are given below.

(i) Ongoing projects:

1. **Project title:** Aspects of some astrophysical systems like supernovae and neutron stars in the light of new physics

Principle Investigator(PI): Prasanta Kumar Das

Co-PI: Dr. Tarun Kumar Jha and Dr. Chandradew Sharma

Funding agency: DAE, BRNS, Govt. of India

2. **Project title:** Probing Space-Time Noncommutativity at High Energy Experiments

Principle investigator(PI): Prasanta Kumar Das

Funding agency: BITS-PILANI, India

3. **Project title:** Studies on the optical nonlinearity of gold nanoparticle embedded BaTiO₃ thin films

Principle investigator(PI): P. Nandakumar

Funding agency: DRDO, Govt. of India

(ii) Projects sanctioned during the year

1. **Project Title:** Magnetotransport in magnetic tunnel junctions
Principal Investigator: Dr. Ram Shanker Patel
Co-investigator: None
Funding Agency: Department of Science and Technology, Govt. of India, under Nanomission program
Funding amount: Rs. 52.65 Lakh
Project Duration: 36 months
2. **Project Title:** Development of low temperature magnetization measurement set-up
Principal Investigator: Dr. Ram Shanker Patel
Co-investigator: Dr. Teny John, Dr. Halan Prakash
Funding Agency: Council of Scientific and Industrial Research, Govt. of India.
Funding amount: Rs. 13.55 Lakh
Project Duration: 24 months
3. **Project Title:** Probing new physics at high energy colliders
Principle Investigator(PI): Prasanta Kumar Das
Funding agency: CSIR, Govt. of India
4. **Project Title:** Detectable continuous Gravitational Waves from Rapidly rotating Neutron Stars.
Principle Investigator(PI): Tarun Kumar Jha
Funding agency: BITS Pilani, India
5. **Project Title:** Photoluminescence Studies on Undoped and transition Metal Doped ZnO Nanoparticles
Principal Investigator : Teny Theresa John
Funding Agency: Department of Science & Technology, Govt. of India

(iii) Projects completed this year

1. **Project title:** Photothermal Imaging of Nuclear Transport
Principle investigator(PI): P. Nandakumar
Co-PI: Meenal Kaoushik, Geetha K. Varier
Funding agency: Department of Biotechnology, Govt. of India
Date of completion of the project: 31 Novemebr, 2012.
2. **Project title – Title:** Radion contribution to various flavour changing neutral current processes in B meson decay
Principle Investigator(PI): Prasanta Kumar Das
Funding agency: SERC, DST (Fast Track), Govt. of India

B. Publications:

The faculty of the department published 5 papers in international/national refereed journals during the year.

1. **Chandradew Sharma** Phys.Rev. D85 (2012) 015021 Radiative neutralino production in low energy supersymmetric Models. II. The Case of beam polarization
2. In-yeal Lee, Jianwei Wang¹, Gil-Ho Kim, Jin-Hong Park, **E. S. Kannan**, Ji-Hoon Jang, Young-Uk Kwon, J. Appl. Phys. **112**, 033701 (2012)
3. **E. S. Kannan**, I. Bisotto, L. Jalabert, T. J. Beck, and J.-C. Portal, Applied Physics Letters **101**, 143504 (2012).
4. **Prasanta Kumar Das** (BITS-Pilani, Goa), Abhishodh Prakash (SUNY, Stonybrook, USA), **Laboratory frame analysis of $e^+ e^- \rightarrow \mu^+ \mu^-$ scattering in the Noncommutative Standard Model** Journal Ref.: **IJMPA**, **27** (2012) **1250141**.
5. **Prasanta Kumar Das** (BITS-Pilani, Goa.), **The inclusive semi-leptonic $\bar{B} \rightarrow X_s \mu^+ \mu^-$ and leptonic $\overline{B}_s \rightarrow \mu^+ \mu^-$ decays in the presence of a light stabilized radion in Randall-Sundrum model**, Journal Ref.: **Mod. Phys. Lett. A** **27** (2012), 1250043.

C. Conferences attended/papers presented:

1. Tarun Kumar Jha, Workshop on Gravitational Wave Data Analysis at BITS Pilani K K Birla Goa Campus (17-21 Dec 2012), "Neutron stars as a potential Gravitational Wave emitter".
2. Dr. Ram Shanker Patel, 57th DAE Solid State Physics Symposium, IIT Bombay, Mumbai
3. Prasanta Kumar Das: International Workshop on the High Energy Physics Phenomenology, Mahabaleswar, Pune, 2nd January to 15th January, 2012
4. Prasanta Kumar Das: Workshop – TopHiggs-2012, Centre for High Energy Physics, IISc, Bangalore, 24th August to 26th August, 2012

D. Books Published/Edited during the year:**E. Conferences, seminars & workshops conducted****F. Invited Talks given by BITS faculty:**

1. Tarun Kumar Jha, National Conference on Nuclear Physics at Sambalpur University (1-3 March 2013).
Invited Talk: "Neutron Stars: New Window to understand Nuclear Interactions".
2. Tarun Kumar Jha, SURROGATE-2013 at M S University, Baroda (24-25 Jan 2013)
Invited Talk: "Astrophysics with surrogate nuclear reactions".
3. Tarun Kumar Jha, Physical Research Laboratory, Ahmedabad (TPSC Visit 23-30 Dec 2012),
Invited talk Talk Title: "Neutron Stars as potential Gravitational Wave emitter to be detected by LIGO".

E. Invited talks arranged in the department:

SPEAKER: Prof. Hiranmaya Mishra, Physical Research laboratory, Ahmedabad, India.
TALK TITLE: Matter under extreme condition and chiral symmetry breaking in quark matter.
DATE: 26th July 2012

H. Awards and recognitions won by faculty and students: Nil**I. Faculty Development, International Collaboration & Industry Immersion: Nil****J. Significant new equipments/experimental facility added during the year: Nil****K. Departmental association/club activities:**

- (i) Physics Association
- (ii) Astroclub

B2.11 DIVISION / UNIT/ CENTRE-WISE ACTIVITY**A) AUDIO VISUAL**

A new sound system was installed in the Auditorium, with an expense of almost 35 Lakhs. The sound system that was installed was from the company called "Electro-voice" (www.electrovoice.com). A line-array consisting of 8 speakers (4 on each side), 1 pair of sub-woofers and 4 center-fills were installed. Apart from that, a few vocal microphones, 32-channel mixer, podium-mikes, were also installed. The sound control room was also shifted to face the stage, for better management.

B) **BITSAAD**

Distinguished Alumnus Award 2012

"BITS Pilani Distinguished Alumnus Award" in 2012 to the following alumni:

- Prof. Krishna Saraswat, Stanford University, Stanford, CA.
- Prof. Narendra Ahuja, University of Illinois, Urbana Champaign, Illinois
- Dr. Surendra Pal, Dr. Satish Dhawan Professor and Advisor, Satellite Navigation Program, ISRO, Bangalore, and
- Mr. Prem Jain, Senior Vice President, Cisco Systems, San-Jose, CA.

This is in recognition of their significant and outstanding contributions to Professional management of businesses, entrepreneurship or academic teaching and/or research.

Alumni Advisory Council Meeting 2012

The 2nd Alumni Advisory Council meeting was organized at the Hyderabad campus on Aug 13, 2012. Based on the discussion the proposed actions-are

- (i) To prepare a scoping document based on the issues listed above, for a study aimed at presenting a comprehensive view of the subject, and enabling the development of a growth strategy. This document will be prepared in four weeks time.
- (ii) To hire an agency which will conduct the study based on the scoping document, and present a report on the market needs, the needs and expectations of students, and on the operations and strategies of the competition.
- (iii) To engage a group of faculty which, based in part on the scoping document, and on the knowledge of the capabilities and interests of the Departments, will come up with proposals for directions of development.

Embryo Lectures

BITS Alumni Affairs Division has organized 14 Embryo talks during the year 2012. Details are as follows

Name of the Alumnus	Topic	Date
Mr. Vishnu Manakapati	Visualization and compression of 3D data	9 th February 2012
Mr. Launce Moses	Career in Banking	9 th March 2012
Mr. Manoj Thota	How did I use the Knowledge/ opportunities gained at BITS in my career	13 th March 2012
Mr. Abhishek B.K.	A transition from LAN gaming to Ph.D.	13 th March 2012
Prof. S.P. Kothari	Financial crisis in U.S. and Europe	4 th April 2012
Mr. Navneeth K.P.	Selection procedures for premium Management institutes	16 th April 2012
Mr. Naveen Bopanna	Discussion on Solar Energy and its uses	16 th April 2012
Mr. Angad Gill	PS-2 in cypress semiconductor	18 th April 2012
Mr. Harshad Deshmukh	BITS2MSPHD	9 th September 2012
Mr. Tejas Chapekar	Career options in interdisciplinary	21 st September 2012

Name of the Alumnus	Topic	Date
	fields	
Mr. Yash Gandhi	BITS2MSPHD	29 th September 2012
Mr. Satya Gunampalli	Education system in India and Abroad	6 th October 2012
Mr. Daniel M	Balancing Career, life and Fun	16 th October 2012
Mr. Amit Kumar Sarangi	Google summer of code	18 th November 2012

On-campus lecture

By Abhishek Humbad, Founder of NextGen on 01-09-2012 at LT-1 on `Career Paths for BITSians: Making the most of Time on Campus`

Marathon

BITS Alumni Affairs Division arranged the 4th Edition of BITS2Marathon on behalf of BITSAA International. The BITS2Marathon run was **dedicated to Prof. Suresh Ramaswamy's memory**. **Date:** September 30, 2012, Sunday, 7:00 AM.

Regular Activities

Other regular activities like the bi-annual `Director's Tea Party`, batch snap sessions, BITS AAD registrations, souvenir distributions, bringing out the yearbook `Melange` for out-going students, hosting visiting alumni on campus, etc.

COMMUNITY WELFARE

During the calendar year 2012, following activities have been facilitated for community welfare:

Medical centre has been providing OPD services as well as 24 x 7 emergency medical services to all the campus residents. An in house pharmacy is available at the medical center and a lab collection point to provide diagnostic facilities has been functional with a tie-up with a local diagnostic laboratory, Ranbaxy and Thyrocare. Over the years the medical centre has procured equipments like Dental Chair, Digital X-ray machines along with Tread mill (TMT), ECG machine, Lung function test, X-ray, Multiparameter monitors, Defibrillator, Syringe pumps.etc

A Cashless Medical Reimbursement Scheme has been operational to provide easily accessible medical care to the residents of the campus. The Scheme can be accessed through a health card, which can also be used to receive treatment for various medical and surgical ailments from the Specialists from Goa. Following are the specialties available for routine and on call basis for out-patient care – Gen. Medicine / Gen Surgery / Orthopaedics / Dermatology.

Periodic testing of water is carried out for all the water coolers installed in food outlets, hostels and administrative buildings to ensure that they are maintaining good hygienic standards.

A Children's Activity Centre is being run which operates as a playschool for infant children in the morning and a Day Care in the afternoon for providing invaluable support and care to the children of BITS faculty and staff. The center is provided with all necessary facilities (toys, activities, educational material, infrastructure etc.). Drawing, dance, karate, music and mental arithmetic classes by professionals are being conducted for the children of campus residents.

A room in the student activity center has been designated as prayer hall. It is being used by all the campus community for various activities such as yoga and meditation, chanting of Vishnu Sahastranama, Sunderkand Path, Conducting of Holy Mass and choir practice. Classes for Hindustani music, Carnatik music, Western classical Music, Veena, Harmonium and Violin are also being conducted.

National and religious festivals like Republic day, Independence day, Lohri, Gokul Ashtami, Ganesh Chaturti, Durga Pooja, and Christmas were celebrated with active participation of all the campus residents and students. During these festivals cultural performances of campus children and students were organized.

Quark 2013 Quantum Leaps, a National level technical festival of BITS Pilani Goa Campus was held from 1st February to 3rd February. It was inaugurated by Mr. Ravi Gomatam the Director of Bhaktivedanta Institute (Berkeley and Mumbai) and the newly formed Institute for Semantic Information Sciences and Technology (Berkeley and Mumbai) and an ex BITSIAN. This year the aim was to keep it a purely technical oriented

festival. Talks by Dr. Chris Phillips, better known as the Invisible Man, a professor at the prestigious Imperial College, various other renowned guests and a great line-up of technical events, workshops and exhibitions surely set the momentum going in taking the Quantum Leap forward.

Waves 2012, the three day annual cultural festival held in November from 2nd to 4th was inaugurated by "AGAM the Band", the founding members of the band who are ex BITSIANS. With performances such as Sunburn, Dead Letter Circus and Strings the festival for the first time reached an international level drawing participation from about 5000 students from all over the country.

PRACTICE SCHOOL:

During SEM II, 2011-12 and SEM I, 2012-13 703 first degree students and 38 higher degree students from Goa went for PS-II from Goa campus. The faculty members who were involved as PSII Instructor for stations in Goa were Prof. Babu, Dr. Sumit Biswas, Mr. Raghavendra Datta, Mr. Sridhar Babu, Dr. P.V. Rao and Dr. Angshuman Sarkar.

During summer term 2012, total of 613 students went to 138 PS-1 stations from the Goa campus. A total number of 28 faculty members & 08 students' co-instructor accompanied the students for PS-1. Total no. of stations opened by Goa campus students are 42.

PS 1-2012 Faculty members

SR.NO	PSRN	FACULTY NAME
1	23	Basavadatta Mitra
2	81	Raghavendra G S
3	82	Veeky Baths
4	85	Anjan Chattopadhyay
5	197	C. Balakrishna Moorthy
6	199	Dilip Kumar Mohanty
7	207	Mitaxi P.Mehta
8	226	Gautam G. Bacher
9	296	Aruna Govada
10	327	N Kubendran
11	334	Pravin Mane
12	337	K.Chandram
13	363	Mainak Banerjee
14	364	Amrita Chatterjee
15	366	Mahadev Gawas
16	403	Ch. S. Sankhar Reddy
17	410	Tarun Kumar Jha
18	430	R Femi
19	434	Muslim
20	452	Hemanta Kumar
21	478	Dhishna P
22	481	Gauranga Charan Samanta
23	482	Ranjit S Patil
24	485	Swagat Kishor Mishra
25	486	Indranil De
26	487	Parul Sahu
27	489	Pragayan Barik
28	492	Sukanta Mondal

PS-1-2012 Student Co-instructors

Sr.No	ID	NAME
1	2009A8PS266G	VEERABHADRA SATYA DEEPAK AYYAGARI

2	2009B1A8319G	BONAGIRI SRIMAN
3	2009B4A1530G	RAYAVARAPU SAI SRI HARSHA
4	2009B4A7516G	SIDDHARTH GUPTA
5	2009B4A7606G	AGARWAL CHIRAG RAMAWTAR
6	2009B4A8312G	ASHWIN REDDY KONDAPALLI
7	2009B4A8625G	PranavPrakash
8	2009B4A8673G	THOMAS ABU C

PUBLICATIONS DIVISION:

The Publications Division published the BITScan Semester Newsletter Issue 4 and 5 and the Convocation Proceedings 2012 in this year. The division also regularly sent Press Releases to National and International media after every Campus event. The website Banner News and Latest News was also updated regularly with current events.

PUBLIC RELATIONS:

Public Relations office coordinated following events :

S.No.	Guest Name/Event Name	Topic	Date	Requested by
1	MrAnshu Gupta & Mr Anand Bang	Nirmaan NGO Conference	15 th Jan.12	Prof. Meenakshi Raman
2	Wipro Team	Wipro – WASE, WILP Meeting	2 nd Feb 12	Dr. Raghunath Rathabole
3	Mr. Baba Kalyani, Chief Guest Quark 2012	Quark 2012	2 nd Feb 12	
4	Prof. Piyush Triwedi (VC RGTU MP)	Campus visit	2 nd Feb 12	Dean Admin
5	Prof. V Lakshminarayan Memorial Lecture	Prof. V Lakshminarayan Memorial Lecture	16 th Feb 12	Directors' office
6	Dr. PK Baboo, IIT Delhi	Lecture	9 th March12	Prof. S. Krishnaswami
7	Lord Meghnad Desai	Lecture	3 rd April 12	Director's office
8	Mr.Hari Prasad Chaurasiya & team	SPIC MACAY	5 th April 12	Dr. Radhika V
9	Prof. R N Saha, Deputy Director, RED, Pilani	Meeting with HODs	24 th April 2012	Prof. S. Ramaswamy
10	Know India Programme	35 NRI People Visit campus	09 th May 2012	Dr. R P Pradhan
11	Shiv Yog Shivr	Shiv Yog Shivr	20 th May 2012	
12	RNA To Protein workshop	RNA To Protein workshop	03 rd -10 th June 12	Biology Dept.
13	Dr. Rajendra Pachauri, Chief Guest	Convocation 2012	05 th August 2012	Director
14	National Advanced School on Graph Algorithms Workshop	National Advanced School on Graph Algorithms Workshop	21 st -27 th July 2012	Mathematics Dept.
15	Spicmacay 2012	Spicmacay 2012	24 th August 2012	Dr. Radhik V.
16	Cross Campus review Committee	Cross Campus review Committee	1 st -4 th October 2012	Director
17	Reflection 2012	Reflection 2012	20 th 22 nd Nov 2012	Director
18	BITS- IUCAA, Workshop	BITS- IUCAA, Workshop	16 th 22 nd Dec 2012	Dr.SK Sahay

RESEARCH CONSULTANCY EDUCATION DEVELOPMENT DIVISION**FINANCE AND FUND SUPPORT****ONGOING SPONSORED RESEARCH PROJECTS**

S.No.	Title of the project	Name of Principal Investigator/ Co-investigator	Funding Agency	Sanctioned amount of the project (Rs)	Duration
1	Development of biosensors and micro-techniques for analysis of pesticide residues, aflatoxin, heavy metals and bacterial contamination in milk	Dr. Sunil Bhand	ICAR (Under NAIP)	[3,32,02,880 revised] (Total Rs. 929.1661 lakhs for consortium project)	4.16 years
2	Detection and mitigation of dairy pathogens and detection of adulterants using chemical biology	Dr. Sunil Bhand	ICAR (under NAIP)	[51.34613 revised] (BITS-Goa share out of 464.0294 lakhs)	3 years
3	Chemical modification of some metal ion binding peptides with photoactive molecules, and investigations on their photochemical DNA damage, and photoenhanced antimicrobial activity	Dr. Halan Prakash Dr.Meenal Kowshik	DBT	21,24,000	3 years
4	Development of turn-on type chemodosimeter for selective recognition of sulfhydryl-containing amino acids and peptides in aqueous media	Dr. Amrita Chatterjee	DST	19,86,600	3 Years
5	Spectroscopic properties of some low-lying electronic states of alkali metal-rare gas and alkaline earth metal-rare gas molecules	Dr. Anjan Chattopadhyay	DST	5,46,000	3 years
6	Development of a novel aqueous solution based "one pot", synthesis route for hard-soft-ferrite nano-composites and their properties	Dr. N. N. Ghosh	DRDO	16,63,600	3 years
7	Redox sensitive vesicles of Cucurbit(7)urils as an efficient targeted intracellular drug delivery vehicle	Dr. Mainak Banerjee	DST	24,15,000	3 years
8	Development of Nanostructured High Surface Area Alumina and Silica based adsorbent with Tailored Pore structure for Removal of Fluoride ions from Ground Water	Dr. N N Ghosh	BRNS	29,07,150	3 years
9	Novel Schiff base acrocyclic containing Se-Se bonds and their reduced analogues: Synthesis, characterization, comparative coordination chemistry and	Dr. Arunashree Panda	DST (WOS)	21,96,000	3 years

S.No.	Title of the project	Name of Principal Investigator/ Co-investigator	Funding Agency	Sanctioned amount of the project (Rs)	Duration
	theoretical studies				
10	Screening of extremophile isolates for novel antimicrobial substances: Cloning and characterization of selected antimicrobial substances against multi-drug resistant human pathogens.	Dr. Utpal Roy Dr. K. Prakash	DST	11,38,000	1.5 years
11	Biological Synthesis of metal sulfide and metallic nanoparticles using Halophilic Archaeobacteria.	Dr. Meenal Kowshik Dr. Sutapa Roy R.	ORMD, Ministry of Earthsciences	17,13,810	3 Years
12	Photoluminescence Studies on Undoped and Transition Metal Doped ZnO Nanoparticles	Dr. Teny Theresa John	DST-FT	23,34,000	3 Years
13	Investigation of Schottky contacts to Silicon Carbide (SiC) using I-V and C-V techniques	Dr. C. K. Ramesha 39-453/2010(SR)	UGC	[10,77,800]	3 years
14	Wireless Sensor Network Design for inaccessible terrains	Dr. K. R. Anupama 39-893/2010(SR)	UGC	[5,38,000]	3 years
15	Synthesis and characterization of binary and ternary transition metal nitrides	Dr. R. N. Panda SR/S1/PC/0063/2010	DST	[18,95,000]	3 years
16	Structure elucidation of VC0395_300 protein from Vibrio cholera (leading to an alternate methodolerae epidemics)	Dr. Sumit Biswas 2010/37B/51/BRNS	BRNS, DAE	[21,97,850]	3 years
17	Biochemical and genetic Characterization of Antimicrobial (Candidacidal) peptides produced by the antarctic strain Enterococcus faecalis APR 210	Dr. Utpal Roy Dr. Angshuman Sarkar Dr. Sumit Biswas 39-205/2010(SR)	UGC	[7,33,800]	3 years
18	A new novel biodegradable polymer scaffold for cartilage tissue engineering	Dr. Vijayashree Nayak 2011/37B/04/BRNS	BRNS, DAE	[21,02,500]	3 years
19	Aspects of some astrophysical systems like supernovae and neutron stars in the light of new physics	Dr. Prasanta Das 2011/37P/08/BRNS	BRNS, DAE	[17,51,000]	3 years
20	Magnetic properties of metallic nano particles	Dr. R N Panda 01(2457)/11/EMR-II	CSIR	20,00,000	3 years
21	Study the effect on nanoparticles on protein synthesis and expression of small GTPases	Dr. Angshuman Sarkar 2011/37B/25/BRNS	BRNS	[19,07,000]	3 years
22	Physicochemical	Dr. Sumit Biswas	DBT	[7,97,000]	3

S.No.	Title of the project	Name of Principal Investigator/ Co-investigator	Funding Agency	Sanctioned amount of the project (Rs)	Duration
	characterization of the primary sigma factor of Vibrio cholera	BT/210/NE/TBP/2011	(under Twinning Program for the NE)		years
23	Study of effective interactions in charged colloidal suspensions	Dr. Raghunath Behera 01(2513)/11/EMR-II	CSIR	12,00,000	3 years
24	Development of low temperature magnetization measurement set-up	Dr. Ram Shankar Patel 03(1204)/12/EMR-II	CSIR	[13,85,000]	3 years
25	Studies on Putative GGEEF/Sensory Box Domain Protein of Vibrio Cholerae	Dr. Sumit Biswas SR/FT/LS-122/2010	DST	[21,80,000]	3 years
26	Magnetotactic bacteria: Bioresource of nanomagnets (Magnetosomes)	Dr. Nimali N Prabhu SR/FT/LS-120/2011	DST	[25,00,000]	3 years
27	Tissue engineering of human placental stem cells into a functional pancreas	Dr. Anasuya Ganguly SR/FT/LS-137/2011	DST	[22,14,000]	3 years
28	Hardware implementation of time frequency distribution of Mirnov oscillation in Tokamak using the Hilbert Huangtransform	Dr. Amalin Prince Prof. K.R.Anupama Mrs. Femi. R. BRFST/NFP/2012/AUG/N/03	Board of research in fusion science and technology (BRFST)	[22,04,000]	2 years
29	Magnetotransport in magnetic tunnel junctions	Dr. Ram Shankar Patel SR/NM/NS-1002/2010(G)	DST	[52,65,000]	3 years
30	Design and development of condition based monitoring of pipelines using wireless sensor networks	Dr. K.R. Anupama Dr. Arun Kumar Jalan Dr. Lucy J Gudino Dr. K. N. Ponnani Dr. Sharad Srivastava Dr. Neena Goveas GAIL/NOIDA/R&D/BITS/WSN/2012/01	GAIL	[71,36,000]	2 years
31	Seawater desalination using liquefied natural gas (LNG) refrigeration	Prof. K. Srinivas GAIL/NOIDA/R&D/BITS-GOA-LNG/2012/01	GAIL	[3,82,21,000]	3 years
32	Bio-Catalytic Production of a Commercial Textile Dye Indigo	Dr. M. Srikanth 8-136-2009/STE-DIR/Acct/Part/738	DSTE, Goa.	[5,11,200]	1 year
33	Tourism in Goa and its impact on socio-economic conditions and sustainable development in the state	Dr. Mridula Goel Pinky Pawaskar 02-34/2011-RP	ICSSR	[4,89,125]	1 year

S.No.	Title of the project	Name of Principal Investigator/ Co-investigator	Funding Agency	Sanctioned amount of the project (Rs)	Duration
34	Exploring spiritual quotient and analyzing its impact on the research performance of university teachers in India	Dr. Shalini Upadhyay 02-167/2011-RP	ICSSR	[6,57,900]	2 years
35	Prediction of thermodynamic, thermophysical, transport, thermoacoustical and excess properties of binary, multicomponent liquid mixtures and ionic liquids (RTIL's)	Dr. Ranjan Dey 01(2682)/12/EMR-II	CSIR	[5,17,000]	3 years
36	High-efficiency energy conversion in Steam boilers using unmixed combustion	Prof. K. Srinivas SR/S3/CE/031/2011	DST	[31,05,000]	3 years
37	Experimental wear analysis of an artificial hip implant materials using an advanced tribometer customized for bio-tribological studies	Prof. D. M. Kulkarni Mr. A. C. Kukarni Dr. Hemant Kumar Mrs. Jyotsna Kulkarni SR/S3/MERC/0077/2011	DST	[20,50,000]	2 years
38	An Investigation on Derivatives of meso Tetrathienylporphyrin as dye sensitized Solar cells	Dr. P. Bhavana 02(0076)/12/EMR-II	CSIR	[11,60,000] Sanctioned	3 years
39	Protein-ranking and novel Intervention strategies against mycobacterium tuberculosis using graph theory and bioinformatics resources	Dr Veeky Baths Dr. Utpal Roy SR/FT/LS-83/2012	DST-FT	[8,60,000] Sanctioned	3 years
40	Experimental investigations of rotational moulding process using nano-scale fumed silica composites	Dr.Sachin D Waigaonkar SR/FTP/ETA-61/2012	DST-FT	[15,84,000] Sanctioned	3 years
41	Spectroscopic investigation of the properties of low lying electronic states of some chemopreventive retinyl nitrones and comparison of their light-induced properties with retinyl iminium ions	Dr. Anjan Chatopadhyay Dr. Mainak Banerjee 01(2681)/12/EMR-II	CSIR	[7,57,000] Sanctioned	3 years
42	Synthesis of metal-organic-porous material based efficient chiral heterogenous catalysts by post synthetic modification and their applications in asymmetric reactions	Dr. Mainak Banerjee 02(0075)/12/EMR-II	CSIR	[16,50,000] Sanctioned	3 years
43	Analysis of metabolically active bacterial species in anaerobic digesters	Dr. M. Srikanth 37(1555)/12/EMR-II	CSIR	[13,10,000] Sanctioned	3 years

S.No.	Title of the project	Name of Principal Investigator/ Co-investigator	Funding Agency	Sanctioned amount of the project (Rs)	Duration
44	Probing New Physics at high energy colliders	Dr. Prasanta Das 03(1244)/12/EMR-II	CSIR	[7,66,000] Sanctioned	3 years
45	Development of efficient bioleaching process for the metal recovery from spent catalysts	Dr. S. S. Baral Mr. P. Venkateswara Rao	DBT	Approved Proposed amount Rs. 22,32,960	3 years
46	Investigating the effect of co digestion and advanced sludge pretreatment methods on the anaerobic conversion potential of the organic waste	Dr. P. Venkateswara Rao Dr. S. S. Baral	DBT	Approved Proposed amount 25,86,960	3 years

Ongoing Departmental Projects

Title of the Project	Name of the Department	Funding Agency	Sanctioned Amount (Rs)	Duration
Fund for improvement of S&T Infrastructure in Universities and Higher Educational Institutions (FIST)	Biological Sciences	DST	29,00,000	5 years
Fund for improvement of S&T Infrastructure in Higher Educational Institutions (FIST)	Physics	DST	49,25,000	5 years
Fund for improvement of S&T Infrastructure in Universities and Higher Educational Institutions (FIST)	Mechanical Engineering	DST	40,00,000	5 years
Fund for improvement of S&T Infrastructure in Higher Educational Institutions (FIST)	Chemistry	DST	35,00,000	5 years
Fund for improvement of S&T Infrastructure in Universities and Higher Educational Institutions (FIST)	EEE &IE	DST	20,00,000	5 years

First Degree Thesis students OFF campus List- Second semester 2011-2012

S.No	Name of the student	ID No	Place of thesis work
1	Suramya Munshi	2007B5A4532G	Institute of Plasma Research,Gujarat
2	Abhishek Agarwal	2007B3A8632G	Nanyang University, Singapore
3	Akshay Walia	2007B1A7526G	University of Pennsylvania, USA
4	Aarthi M.Sundaram	2007B4A7542G	Indian Institute of Science, Banglore
5	Nesar S.R	2008B5TS041G	Indian Institute of Astrophysics, Bangalore
6	Achintya Prakash	2008A7PS105G	Bell Labs Research, Bangalore
7	Samyuktha Subramanian	2008A8PS288G	Philips Innovation Campus, Bangalore
8	Abhinav Gupta	2008A3PS082G	Tata Institute of Fundamental Research (TIFR),Bangalore

First Degree Thesis students ON campus List- Second semester 2011-2012

S.No	Name of the student	ID No	Supervisor
1	Devika	2007B3A7417G	Prof. Mridula Goel
2	Adit Chaudhary	2007B1A8510G	Dr.Judith Branga
3	Abhijeet Gautham	2007B5A8455G	Dr.Sumit Biswas
4	Rohit Reddy	2007B3A4346G	Dr.Debasis Patnaik
5	Kshamank Shyamsundar Soni	2007B3A4625G	Prof. Mridula Goel
6	Mohamed Rameez	2007A4B5292G	Prof.Suresh Ramaswamy
7	Vaidya Pankaj Sham	2007B1A4454G	Dr.Sachin Waigaonkar
8	Sai Teja Rayala	2007B3A4599G	Dr.Debasis Patnaik
9	Aabhas Babbar	2007B2A4620G	Mr.Abhishek Kumar
10	Avinash Raju	2008B5TS454G	Prof.Suresh Ramaswamy
11	Rangarajan	2008A4PS313G	Dr.Shibu Clement
12	Prachi Shukla	2008C6PS530G	Dr.Biju Raveendran

First Degree Thesis off Campus list first Semester 2012-2013

S.No	Name of the student	ID No	Place of thesis work
1	Sneha Choudhary	2009A1PS495G	Tata Institute of Fundamental Research, Mumbai
2	Varad Gunjal	2009A3PS146G	Institute of Neuroinformatics, Zurich, Switzerland
3	Ritesh Ranjan	2009A8PS336G	Centre for Artificial Intellegience and Robotics (CAIR), Bangalore
4	Surbhi Khetrpal	2009B5PS566G	RRI, Bangalore
5	Nisheeth Bandaru	2008A3B5029G	Bhabha Atomic Research Centre, Hyderabad
6	Chetan Bansal	2008B1A1690G	INRIA, Paris & Imperial College, London
7	Rajat Goyal	2008B1A8701G	EPFL,Switzerland
8	Shah Jinal Nirenbbhai	2009A3PS010G	University of Michigan, USA
9	Aditya Khandekar	2008B1A4672G	University of Applied Sciences, Switzerland
10	Nehil Jain	2008B4A3560G	McGill University, Canada
11	Bharath .B.R	2008B2A3614G	Institute of Energy and Climate Research (IECR), Germany

S.No	Name of the student	ID No	Place of thesis work
12	Apoorva C Deshpande	2008B4A7139G	INRIA, France
13	Gaurav Misra	2008B3A8616G	Centre National d'Etudes Spatiales (CNES), France
14	Basant Sharma	2009A4PS152G	IIIT ,Hyderabad

First Degree Thesis on Campus list first Semester 2012-2013

S.No	Student Name	ID No	Faculty Name	Organization
1	Vivek D.P.S.V	2009A4PS082G	Dr.Shibu Clement	DRDO, Hyderabad
2	Nithin S.Poduval	2009A4PS217G	Dr.Shibu Clement	VSSC, Trivandrum
3	V.Apuroop Sai	2009A4PS203G	Dr.Sachin Waigaonkar	DRDO, Hyderabad
4	Mr. Prathamesh Dalvi	2008 B5A4549G	Dr. Tarun Kumar Zha	IUCAA Pune
5	AmanAsija	2008B2A4649G	Dr.Patnaik	On campus
6	Shasank Saurav	2008B2A8563G	Prof Meenakshi Raman	On campus
7	Mr. Mudit Raj Gupta	2008B2A8585G	Mr.Ram Prasad Joshi	On campus
8	Mr.Ankit Asati	2008B3A8600G	Dr.R.P.Pradhan	On campus
9	Kunal Bhatia	2008B3A1464G	Prof. Mridula Goel	On campus

Second Semester 2011-2012 ON CAMPUS M.E. (BITS G629T) "DESSERTATION"

S.No.	IDNO	Name of Student	Topic	Supervisor	Place
1	2010H101016G	MANDHA PRASAD	Extraction of Nimbin from Neem seeds by using Supercritical CO ₂ : Theoretical Investigation Study	Dr. S.D. Manjare	BITS-Goa
2	2010H112034G	AKHIL MOHAN	EMBEDDED WEB SERVERS FOR WEB BROWSERS	Dr. Mangesh Bedekar	BITS - Goa
3	2010H112035G	BADARVADA G K VARMA	Prevention of ARP Spoofing using Cryptographic Techniques	Dr. S.K. Sahay	BITS-Goa
4	2010H112036G	SIVA SAI RAM PRASAD KODALI	A STUDY ON MULTI-PROGRAMMING WITH PROCESSES AND THREADS IN LINUX OPERATING SYSTEM	Dr. Biju K. Ravendran	BITS-Goa
5	2010H129001G	PEREIRA CLARICE GENEVIVE	AN α -FIBRINOGENASE FROM RUSSELL'S VIPER VENOM	Dr. Dibakar Chakrabarty	BITS-Goa
6	2010H129008G	DEEPTHI DAS	A STUDY OF THE PHOTO PROTECTIVE EFFECTS OF HALOARCHAEAL PIGMENTS AGAINST UV- RAYS ON HUMAN KERATINOCYTE (HaCaT) CELL LINE	Dr. Judith B.	BITS-Goa
7	2010H129010G	SIBANI PRASAD DASH	STUDY OF ANTICANCER ACTIVITY OF Vitex nigundo	Dr. Anushya Ganguly	BITS-Goa

S.No.	IDNO	Name of Student	Topic	Supervisor	Place
8	2010H129011G	KETAKI RAMESH DESHMUKH	ANTIBIOFILM, CYTOTOXIC AND CYTOCOMPATIBLE PROPERTIES OF SILVER HYDROXYAPATITE NANOPARTICLES COATING FOR MEDICAL IMPLANTS	Dr. Meenak Kowshik	BITS-Goa
9	2010H141023G	ASHWIN K P	A STUDY ON THE DYNAMICS OF ELECTROSTATICALLY ACTUATED MICRO-RESONATOR CONSIDERING SQUEEZE FILM DAMPING EFFECTS	Mr. Raghavendra D. Naik	BITS - Goa
10	2010H141026G	ALLEN ANILKUMAR	Hysteretic seat design and control of passenger vibrations in a quarter car model	Dr. Praveen Singru	BITS-Goa

First Semester 2012-2013 OFF CAMPUS M.E. (BITS G629T) "DESSERTATION"

S.No.	ID No.	Name of student	Topic	Supervisor	Place
1	2010H112441G	SHAILENDRA PATHAK .	Iphone application development using –x- code web app v/s native app as library application	Mr. Venkata Ramasamy	Soursebit s, Hyderabad
2	2010H141030G	T KRISHNAKUMAR .	DESIGN AND FABRICATION OF WEATHER PROTECTION ACCESSORY FOR MOTORCYCLES	Dr. Chen David	Roof for two, New Delhi
3	2010H129410G	PATIL MAKARAND PRADEEP	Inhibitory Effect of various co receptor antagonists on in-vitro infection of Human Immune Deficiency Syndrome Virus (HIV-1)	Dr. Madhuri R. Thakar	NARI - Pune

First Semester 2012-2032 ON CAMPUS M.E. (BITS G629T) "DESSERTATION"

S.No.	ID No.	Name of student	Topic	Supervisor	Place
1	2010H112442G	SUDHIR KUMAR .	Implementation of Ad-hoc network via Wireless Technologies using Android platform to control electrical appliances	Dr. Mangesh Bedekar	BITS-Gao
2	2010H129002G	GANESHKUMAR A .	ANALYSIS OF p53 MUTATION AND DNA METHYLATION STATUS OF hsa-miR-145 GENE IN A549 AND HaCaT CELL LINES AND MECHANISM OF ANTICANCER ACTIVITY OF ETHANOLIC EXTRACT FROM Vitex negundo IN A549 CELL LINE	Dr. Anushya Ganguly	BITS-Goa

S.No.	ID No.	Name of student	Topic	Supervisor	Place
3	2010H129403G	ASWATHY N. NAIR	Study on Diurnal Activity Patterns in Swallowtail Butterflies, <i>Papilio polytes</i> (Lepidoptera : Papilionidae)	Dr. Anushya Ganguly	BITS - Goa
4	2010H129405G	MANSI BAVEJA .	PURIFICATION AND CHARACTERISATION OF AN ANTICOAGULANT TOXIN FROM RUSSELL'S VIPER VENOM AND DEVELOPMENT OF A NOVEL SPECTROPHOTOMETRIC ASSAY FOR QUANTIFICATION OF FIBRINOLYSIS BY VENOM FROM VARIOUS SOURCES	Dr. Dibakar Chakrabarty	BITS-Goa
5	2010H129408G	SUBHASISH SAHOO .	Purification and Identification of Therapeutic Components of Leaf Extract from <i>Moringa oleifera</i>	Dr. Sumit Biswas	BITS-Goa
6	2010H140416G	KAMDAR NISHAD NARESH	DESIGN AND DEVELOPMENT OF CROSS-LAYERED PROTOCOL STACK FOR CONDITION BASED MONITORING OF PIPELINES USING WIRELESS SENSOR NETWORKS	Dr. K.R. Anupama	BITS-Goa
7	2010H101014G	Swethapadmini P.B.	Coke reduction and selectivity increase in allyl chloride process reactor design and engineering studies	Prof. Srinivas Krishnaswamy	BITS-Gao
8	2010H101043G	Deepak Kumar Ojha	Commissioning of Pilot plant To Study The Aqueous Ammonia based CO ₂ Absorption System	Prof. Srinivas Krishnaswamy	BITS-Gao

CATEGORY-WISE DISTRIBUTION OF Ph.D. STUDENTS ON ROLLS DURING THE YEAR 2012

S.No.	CATEGORY	NO. OF STUDENTS ON ROLL	
		II Sem 2011-2012	I Sem 2012-13
1.	Staff	37	41
2.	Staff (Pre-Ph.D course work)	0	0
3.	Research Fellow Students	47	59
	GRAND TOTAL	84	100

STATISTICS OF Ph.D. QUALIFYING EXAMINATION**Statistical information for Ph.D. Programme**

Sem	Permitted to appear in Qual. Exam	Appeared	Passed	Failed	Did not Appear & Dropped
II Sem 2011-12	10	10	10	0	0
I Sem 2012-13	14	14	9	5	0
Total	24	24	19	5	0

Analysis of Candidates permitted to appear in Ph.D qualifying examination

(i) BITS faculty (Total) = 05

Discipline wise Break-up.

Computer	01
Electrical/Electronics	03
Hum & Mgmt.	01

(ii) Full time students = 19

Discipline wise Break-up.

Biology	09
Physics	04
Chemistry	03
Hum & Mgmt.	02
CS&IS	01

WORK INTEGRATED LEARNING PROGRAMME

BITS Pilani has embarked on an ambitious project of content development for courses offered as a part of its degree programs, in particular those courses which are of relevance to WILP. To support such an activity, a state of the art recording studio has been setup to record lectures rich in animation and multimedia content. This development may the very nature of the model of instruction in courses, particularly those with substantial enrollments. The studio is spacious to accommodate video recording of experimental setups and demonstrations.

The studio is equipped with an interactive whiteboard, document camera, writing panel, projector and a Sony HD camera that can record at 1080p. The studio also has a high-end Mac Pro system used to process and render the captured video. The studio can comfortably seat up to thirty students if the instructor wishes to have them present during the recording. The studio annex has five acoustically-isolated webcast classrooms that are used to conduct the WILP lecture sessions via CISCO Webex.

BITS, Pilani has partnered with Google to provide email services across all of the university campuses for faculty and students. As every individual associated with the university will have an official Google email id, we would like to leverage this by integrating other campus-wide and university-wide applications through Google Directory authentication. Google-Moodle integration is the pilot project that will integrate the WILP Learning Management System (Taxila) based on Moodle with the Google email system for WILP students and faculty. All users will login into a unified portal only once using their bitsmail (google based) credentials and will be authenticated through single sign-on to access their email Inbox and Taxila account through an ape-like interface.

B2.12 CENTRAL FACILITIES REPORT**(I) CENTRAL LIBRARY**

The Library complex comprises of a spacious building covering an area of 50000 sq ft. It is designed to provide several reading halls, an exhibition room, a digital library with 11 public access internet terminals for convenient internet reference, apart from a large area earmarked for books storage. The Library has been provided with a wireless network whereby users can access the internet using their laptops. The Central Library is equipped with modern furniture well designed taking into consideration the future growth of the Library collection and the needs of the users. Presently, it has a sitting capacity of 450 which is likely to be expanded in the coming years.

The Library remains open throughout the year (except on 5 public holidays) from 09.00 am to 11.00 pm on all working days, from 9.00 am to 8.00 pm on Saturdays and from 10.00 am to 8.00 pm on Sundays and other holidays.

The Library site has been linked with the Institute home page for external access. The home page was designed and developed by the students. The Library has been using LIBSYS Library Management Software to automate all its housekeeping activities. The Library internet site has got the web OPAC (Web enabled online public access catalogue). Services of Libsys Web OPAC include advanced search options for books and journals. Old question papers can be accessed through Library site.

The Library rendered standard services like issuing of books, attending to reference queries etc.

Acquisition and circulation

The Library collection has reached 30057 volumes. Acquisition activities like request for purchase of new books, status of new books requested, checking of duplication, ordering, receiving of books has been processed through LIBSYS during the reported year. The Library is fully automated and circulation activities like check-out / check-in, renewal, reservation and charging of overdue fine are done using barcode scanning.

Reference Section

During this year, many encyclopedias were added to the existing collection of the Library; Cambridge Encyclopedia of Language, Encyclopedia of Small business, etc. Handbooks in various disciplines were also added to the collection. To quote a few, Handbook of Logic in computer, Gas Turbine Handbook, Oxford Handbook of entrepreneurship etc. Dictionaries pertaining to language/literature and other subjects were procured.

The Library subscribes to 99 Indian Journals and 23 Foreign Journals of different disciplines. Online databases like IEL, ASME, Science Direct, AEA Journals and ProQuest are also available. Apart from this there is online access to more than 3000 journals through INFLIBNET. A list of journals subscribed by the library can be accessed from the Library home page. Useful articles, news, newspaper clippings are displayed from time to time on the notice board for the information of readers.

Other services

The Library has a collection of 35 educational video cassettes and 1140 CDs. The Library keeps the readers informed of all the books added to the Library through a regular display of New arrivals. A list of these editions is also made available to readers on Library web site. From time to time display of books by publishers are arranged to facilitate faculty members selecting books for the library.

(II) COMPUTER CENTRE

(A) Computer Hardware

No.	Make	Configuration	Number	Area of utilization
01	DELL Desktops	2 GB 250 GB HDD	300	Central Computing Labs
02	HP Desktops	1 GB RAM 80 GB HDD	215	Central Computing Labs
03	IBM Desktops	500 MB RAM & 40 GB HDD	300	Offices and Laboratories
04	DELL Laptops	4 GB RAM, I3 Processor 500 GB HDD	180	Faculty members are given laptops to carry out their academic as well as research work.

Nod-32 Antivirus software is utilized across the LAN as well as for servers and client machines.

(B) Servers

Sl. No.	Server	Make	Qty	Configuration	OS
Network servers					
1	DNS	IBM HP	2	[IBM Desktop P4 2.8GHZ, 1GB RAM, 40GB HDD] [HP Desktop, Core 2 Duo 1.86GHZ, 1GB RAM, 80GB HDD]	Windows 2003
2	DHCP	DELL(Also 2 IBMs as standby)	2	[DELL Optilex 755,Core 2 Duo 2.33GHZ, 2 GB RAM,160GB HDD]	Windows 2003

Sl. No.	Server	Make	Qty	Configuration	OS
3	Proxy	DELL	2	[DELL Optilex 755,Core 2 Duo 2.33GHZ, 2 GB RAM,160GB HDD]	Cent OS
4	Cisco Works	DELL	1	[DELL Optilex 755,Core 2 Duo 2.33GHZ, 2 GB RAM,160GB HDD]	Windows 2003
Communication Servers					
1	Web Server	DELL	1	[DELL PowerEdge T410, Quad Core 2.26 GHz 8 GB RAM, 500 GB HDD]	Windows 2003
2	Bits E-Group	DELL	1		Windows 2003
3	Call Manager	Cisco	2	1 GB RAM, 40 GB HDD	Windows 2000
Academic Servers					
1	Academic FTP	HP Workstation	1		Windows 2003
2	Staff/ Faculty FTP	IBM	1	[IBM Desktop, P4 2.8GHZ, 512 MB RAM, 40GB HDD]	Fedora Core 7
3	EEE(SPICE 1&2)	Wipro & IBM	2	[Wipro Desktop, P4,2.66 GHZ , 512 MB RAM 40 GB HDD] [IBM Desktop P4 2.8GHZ, 1GB RAM, 40GB HDD]	Windows XP2
4	Mech (Ansys & Pro-E)	IBM	1	[IBM Desktop, P4 2.8GHZ, 512 MB RAM, 40GB HDD]	Windows XP2
5	MATLAB	IBM	1	[IBM Desktop, P4 2.8GHZ, 512 MB RAM, 40GB HDD]	Windows XP2
6	Course Management (Moodle)	DELL	1	[DELL PowerEdge T410, Quad Core 2.0 GHz,8GB RAM, 500 GB HDD]	Windows XP2
7	BITSAT	DELL	2	[Dell Poweredge SC1420 , Xeon™ 2.8GHz, 1GB RAM, 36GB HDD]	Windows 2003

(C) Computing Facilities in Electrical, Electronics and Instrumentation

LOCATION	Hardware & Configuration	Qty	OS and Software
Electrical, Electronics & Instrumentation	IBM Desktops Pentium @ 4 CPU 2.80 GHz,760 MB RAM,40GB HDD,15" Colour Monitor	26	WindowsXP2, Office2007
	Wipro Desktops Pentium @ 4 CPU 2.40 GHz, 760 MB RAM, 40 GB HDD, 15" Colour Monitor	01	
	Dell Desktops Core™ 2 Duo CPU E8400@3.00GHz,2GB RAM,180GB HDD,17"LCD Monitor	03	KEIL PK51-ED Network Simulator 2 Xilinx ISE 8.2
	HP Desktops Core™ 2 CPU 6300@1.86GHz,1GB RAM,160GB HDD,15"Colour Monitor	15	
COMPUTER CENTER (Central Facility)			

LOCATION	Hardware & Configuration	Qty	OS and Software
Central Computing Lab, Zone I	IBM Desktops Pentium ® 4 CPU 2.80 GHz, 248 MB RAM, 40GB HDD, 15" Colour Monitor	54	Windows XP2, Office 2007
	Wipro Desktops Pentium ® 4 CPU 2.40 GHz, 248 MB RAM, 40 GB HDD, 15" Colour Monitor	46	AutoCAD NOD 32 Antivirus
Central Computing Lab, Zone II	Dell Desktops Core™ 2 Duo CPU E8400@3.00GHz, 2GB RAM, 180GB HDD, 17" LCD Monitor	18	Windows XP2, Office 2007
	HP Desktops Core™ 2 CPU 6300@1.86GHz, 1GB RAM, 80GB HDD, 15" Colour Monitor	78	AutoCAD NOD 32 Antivirus Matlab
Central Computing Lab, Zone III	Dell Desktops Core™ 2 Duo CPU E8400@3.00GHz, 2GB RAM, 180GB HDD, 17" LCD Monitor	100	Windows XP2, Office 2007 AutoCAD NOD 32 Antivirus Matlab PROE ANSYS
Language Lab	Dell Desktops Core™ 2 Duo CPU E8400@3.00GHz, 2GB RAM, 180GB HDD, 17" LCD Monitor	22	Windows XP2, Office 2007 Language Lab Study Skills
Microelectronics Lab	Dell Desktops Core™ 2 Duo CPU E8400@3.00GHz, 2GB RAM, 180GB HDD, 17" LCD Monitor	17	Windows XP2, Office 2007
Center for Software Development	Dell Desktops Core™ 2 Duo CPU E8400@3.00GHz, 2GB RAM, 180GB HDD, 17" LCD Monitor	24	Windows XP2 & Linux

(D) Network Facilities

Campus Local Area Network

The Campus LAN Project of BITS Pilani – Goa Campus is a state of the art, completely switched, voice enabled LAN infrastructure. LAN is able to provide 100 Mbps network connectivity to all faculty cubicles, offices, library, Labs, lecture theatres, workshop, auditorium all hostel rooms, staff quarters, visitors' guest house, shopping complex, student activity center & other public facility locations in the campus. There are 3000+ nodes across the campus.

The network is a three-layer network, namely core, distribution and access. The core & distribution layer is connected through gigabit fibre optic backbone, while the access layer is using enhanced CAT5 cabling. The network is designed to provide link level and device level redundancy.

Wi-Fi Network

The Institute building, Visitors' Guest House, Student Activity Center and Medical Center are provided with secured Wi-Fi network facility. The Wi-Fi solution is from RUCKUS.

Cloud Based Services (e-mail and File Storage)

University e-mail solution is supported by Google for 30,000 users of BITS campuses and WILP students. This solution is an integrated solution covering e-mail with 25 GB space, file storage with 5 GB space, collaboration tool, file sharing, personal web-pages, calendaring system, etc

LAN Security

The LAN security is upgraded with high availability of firewalls. The facility also supports high availability of internet lines and support on demand bandwidth at any location.

Voice Communication

All faculty members have been provided with a computer and VoIP telephone facility in their chambers. The VoIP facility facilitates receiving of incoming call directly on the individual telephone.

Video Communication

Multi-point video conferencing facility is made available using POLYCOM HDX machine. This facility is utilized for online meetings of research groups in India as well as across the world apart from the administrative meetings.

Internet Bandwidth

No.	Area	Bandwidth Allocated	Service Provider
01	Hostels, Guest House, Staff Quarters,	100 Mps	RELIANCE
02	Institute Building	45 Mbps	
02	Multi-Point Video Conferencing	4 Mbps	Pull from RELIANCE
03	Cross Campus Teaching and Lectures/talks from BITS Alumni using web-based technology	2 Mbps X 2 slots	Pull from RELIANCE

Cross Campus Connectivity

No.	Area	Bandwidth Allocated	Service Provider
01	MPLS Connectivity connecting Pilani, Hyderabad, Goa campus with the Data center co-hosted at Mumbai for the ERP applications.	5 MBps	Tata Tele Services
02	MPLS Connectivity connecting Pilani, Hyderabad, Goa campus with the Data center co-hosted at Mumbai for the BITS Connect 2.0 applications.	30 MBps	Tata Tele Services

Virtual Class Room (BITS Connect 2.0)

Virtual classroom is set up at Goa campus. This facility will enable faculty to deliver lectures to all four BITS campuses simultaneously; alumni and experts to remotely deliver lectures and conduct workshops or panel discussions to multiple BITS campuses simultaneously, with recording and streaming of lectures.

Telepresence Conferencing Room (BITS Connect 2.0)

Telepresence conference room of 18 capacity have been set up at Goa campus to facilitate virtual meetings for academic and administrative decisions at University level. Licenses for webex (web conferencing software) have been provided to all the faculty to facilitate discussions related to course work and research. This facility will also open up avenues of multimedia collaboration with anybody outside the campus. High end (CISCO EX 90) desktop systems are set up on the desk of Director.

(III) Workshop

The central workshop is equipped with following equipments purchased through mechanical engineering department Capex BUDGET. : Significant equipment added during this year is as follows:

- Electro Magnetic Yoke
- UV Black Light System
- ASTM Test Bar Y-7 Yoke
- Digital Ultrasonic Flaw Detector

- Universal Strength Machine (Mechanical and Digital with Computer Interface) for Casting Mould Testing
- Sand rammer
- Electric Sand Permeability tester
- Infrared Moisture Tester for moulding sand
- CI plate with AI pattern and wooden gating system
- Sand Siever with sieves and timer
- Mould Hardness tester
- Ericson Cupping Machine

(iv) Central Facilities & Monitoring:

The central facilities on campus include central water receiving and distribution facility, central electric power receiving distribution center, Sewage Treatment plant, Diesel Generator, and central Air-conditioning plant. The details of these facilities are as follows:

Central Facilities	Installed Size/Capacity
PWD Water Connection	500cumec
Water Storage Sump	1200 cumec
Overhead Water Tank	150 cumec
No. of Bore Wells	7 Nos. / 84 cumec
GEB Electricity Supply	3000KVA (standby 2000 KVA) at 33 KV substation. A separate 11 KV line connected at PCC2 for AC plant with 1000 KVA transformer
Transformer	500/1500/750/750 KVA
Diesel Generator	2X500/62.5/62.5/750 KVA
AC Plant	660 TR
Sewage Treatment Plant	600 cumec

B2.13 MAJOR MAINTENANCE, RENOVATIONS OR NEW CONSTRUCTION REPORTS

Incubator: The prefabricated construction of Incubator is completed.

Residential Quarters

Children park is developed with 7 no of Solar street lights are added to residential street..

Main Building

Extension to existing workshop building is completed and occupied.

Additional 16 cubicles are extended in mainbuilding area of A and C wing

Studio room constructed in mainbuilding for recording WILPD courses.

Tele presence room and Class room are constructed as part of BITS connect 2.

Additional collection cum treatment tank is built at STP as augmentation to existing capacity.

Auditorium sound system is renovated with new system.

Two labs of chemical Engineering and SWD room are extended/renovated.

B2.14 MAJOR EQUIPMENTS ACQUIRED DURING THE YEAR

S.No.	Name of the Equipment	Location	Date of Purchase	Cost of Equipment
1	Digital X Ray machine	Medical Centre	02.01.12	693000
2	Spectroquant pharo 300	Chemistry Lab	17.01.12	250,000
3	PH Meter cyber scan PH 700	Chemistry Lab	17.01.12	100,000
4	Complete Rotation system	Physic lab	20.01.12	330,158
5	Laws if collsion demonstration track with 4-4 timer	Physic lab	24.01.12	567,117
6	Low voltage meter	Physic lab	01.03.12	200,000
7	Tuch Point VMS	Security Office	15.03.12	108645
8	Indoor colour dome camera	Security Office	15.03.12	100376
9	Digital Communication Training system kits	Lab A 201	26.07.12	1449,745
10	Channel function generator	EEE A 201 & A 202	18.09.12	6583,992
11	Stiring vibrator	Physics Lab B 113	03.10.12	388,758
12	Magnetic field inside a conductor etc.	Physics Lab B 113	03.10.12	1371,816
13	Experimental kits & accessories	Physics B 108	18.10.12	221,008
14	Laws of collision	Physics Lab B 113	22.10.12	554,707
15	Wave machine	Physics B 108	02.11.12	540,713
16	Acoustic model starter set & miniature acoustic model	EEE A 201	07.11.12	643,040
17	Opto Mechanical Components	Optics Physic Lab	08.11.12	316,428
18	Digital ultrasonic flow detector	Workshop	08.11.12	341,865
19	7 FPGA evaluation kit & DSP Kit	EEE A 205	16.11.12	865,100
20	Matlab license software systems	EEE Lab	22.11.12	1069,425
21	Aplab regulated bench, rack	EEE A 203	20.12.12	245,731
22	Stiring vibrator 220V	Physics Lab B 113	18.01.13	366,107
23	Magnetic force accessories	Physics Lab B 113	21.01.13	636,570
24	Smart sorb 93, surface area analyser etc.	Chem. Engg A 105	08.02.13	592,525

B2.15 STUDENTS ACTIVITIES, ACHIEVEMENTS, SCHOLARSHIPS, CULTURAL AND ACADEMIC FESTIVAL

Students Activities

SAC promotes the student sports activities in following – Cricket, Football, and Tennis, Volley ball, Basket Ball, Badminton, Chess, Carom, Pool and Table tennis. SAC also promotes the extra-curricular activities to students and also to faculty and their dependents in the campus.

Gymnasium is now works strictly under the guidance of Trainer for the safety.

Tennis court has seen an up gradation with synthetic rebound ace technology.

Our Cricket Team won the National Level Sports meet “SPREE 2011” and also qualified for A – Division of Goa Cricket Association for the year 2011-12.

Foot ball team also played the C- Division of Goa Foot ball Association and qualified for the higher division in coming year.

Daily Yoga classes have been conducted at the SAC under the guidance of Yoga Guru.

As per the MOU signed between BITS Goa and GCA state matches are conducted in cricket ground like, Ranji One dayers, and many BCCI junior tournaments.

Also at the football ground Salgaocar Sports club does their training.

Up gradation of Gym also have been done following this year.

SAC Timing Daily Morning 5.30am to 8.30am, Evening 5.30pm to 9.30pm

Award of Scholarship to Students

Scholarships	No. of Students	Amount
INSTITUTE'S MERIT-CUM-NEED SCHOLARSHIP	538	22184011
STUDENT AID FUND FINANCIAL ASSISTANCE	5	40000
GE FOUNDATION SCHOLARSHIP	1	330206
NATIONAL TALENT SEARCH EXAMINATION	15	90000
PRATIBHA SCHOLARSHIP	1	20000
OTHER SCHOLARSHIP	17	642978
Total	577	23307195

Students also in receipt of INSPIRE and KVPY Scholarship.

*Annexure 'B2-1'
(3 Pages)
Ref. AR 2012, Page No.B2-1*

NAME AND DESIGNATION OF SENIOR OFFICE BEARERS OF GOA CAMPUS

S.No.	GPSRN	Name	Department/ Facility	Activity	Designation
1	3	Aditya P. Koley	Chemistry/Instru ction Division	FIC	Professor
2	6	D. M. Kulkarni	Mech Engg/Computer Centre	FIC	Associate Professor
3	7	M. K. Deshmukh	EEE/Faculty Affairs	FIC	Professor
4	9	Anand K. Patil	Maintenance	FIC	Assistant Professor
5	10	Neena Goveas	CS & IS/ ARC	FIC	Assistant Professor
6	77	Prassanna Kumar	Mathematics	HOD	Assistant Professor
7	26	Utpal Roy	Biological Sciences	HOD	Assistant Professor
8	33	Meenal Kowshik	Biological Sciences / Community Welfare	FIC	Assistant Professor
9	35	R. P. Pradhan	Hum & Mang./ public Relations	FIC	Assistant Professor
10	50	Anuradha Voolapalli	Library	IC	Assistant Librarian
11	52	Judith Maria Braganca	Biological Sciences / Publications	FIC	Assistant Professor
12	80	Srikanth M.	Biological Sciences/Interna tional Programmes and Collaborations	PIC	Assistant Professor
13	68	Srinivas Krishnaswamy	Chem Engg	HOD	Associate Professor
14	70	Patincharath Nandakumar	Physics	HOD	Assistant Professor
15	73	P.N.Deepak	Physics/Audio Visual	FIC	Assistant Professor
16	78	Bharat M. Deshpande	CS & IS	HOD	Associate Professor
17	83	J. V. Rao	CS & IS/ CAHU	FIC	Associate Professor
18	89	Gaurav Dar	Physics/ Placement	FIC	Associate Professor
19	94	Sutapa Roy Ramanan	Chem Engg/ Practice School	FIC	Associate Professor
20	95	Sunil Bhand	Chemistry	HOD	Associate Professor
21	104	Raghunath A. Ratabole	Physics/ WILP	FIC	Assistant Professor

S.No.	GPSRN	Name	Department/ Facility	Activity	Designation
22	108	Pravin M. Singru	Mech Engg/ Workshop	HOD/FIC	Assistant Professor
23	185	Sampatrao Dagu Manjare	Chem Engg/ RCEDD	FIC	Assistant Professor
24	230	Raghavendra K.M.	Medical Centre	FIC	Assistant Professor
25	297	Saby John K.	Biological Sciences/ BITSAA	FIC	Assistant Professor
26	299	K.R. Anupama	EEE	HOD	Associate Professor
27	328	Mridula Goel	Economics	HOD	Associate Professor
28	346	Dibakar Chakrabarty	Biological Sciences	CW	Associate Professor
29	367	Meenakshi Raman	Hum & Mang.	HOD	Professor
30	433	Krishnaswamy N. Ponnani	R&D	FIC	Consultant (R&D)
31	437	B.J.C. Babu	Mech Engg/ SWD And Admissions	FIC	Visiting Professor
32	522	Debasis Gupta	General Administration	IC	Deputy Registrar
33	320	Mahadev J Suryawanshi	Finance	IC	Finance Officer

NAME OF WARDENS OF GOA CAMPUS

S.No.	GPSRN	Name	Hostel	Activity
1	066	P.V. Rao	AH -1	Resident Warden
2	107	Amalin Prince	AH -1	Non-Resident Warden
3	039	C.P.Kiran	AH -2	Resident Warden
4	122	Ranjan Dey	AH -2	Non-Resident Warden
5	184	Anil Kumar	AH -3	Resident Warden
6	327	N Kubendran	AH -4	Resident Warden
7	121	Palla Dhanumjaya	AH -4	Non-Resident Warden
8	093	Tarkeshwar Singh	AH -5	Resident Warden
9	318	Halan Prakash	AH -5	Non-Resident Warden
10	388	Aswini Mishra	AH -6	Resident Warden
11	180	Shibu Clement	AH -6	Non-Resident Warden
12	237	Prasanta K. Das	AH -7	Resident Warden
13	124	Sunil Kumar V	AH -7	Non-Resident Warden
14	310	S. S. Baral	AH -8	Resident Warden
15	085	Anjan Chattopadhyay	AH -8	Non-Resident Warden
16	035	R.P.Pradhan	CH -1	Resident Warden

S.No.	GPSRN	Name	Hostel	Activity
17	226	Gautam G Bacher	CH -1	Non-Resident Warden
18	016	R.N.Behera	CH -2	Resident Warden
19	414	Angshuman Sarkar	CH -3	Resident Warden
20	033	Meenal Kowshik	CH -4	Resident Warden
21	116	Anusuya Ganguly	CH -4	Non-Resident Warden
22	381	Vijayshree Naik	CH -4	Non-Resident Warden
23	010	Neena Goveas	CH -5	Resident Warden
24	189	Rashmi Chauhan	CH -5	Non-Resident Warden
25	346	Dibakar Chakrabarty	CH -6	Chief Warden

Annexure 'B2-2'
(2 Pages)
Ref. AR 2012, Page No.B2-1

DETAILS OF ADMISSIONS MADE DURING THE YEAR 2012

(a) Second Semester 2011-12

Doctoral Programmes:

Ph.D.	12(07)
	<hr/>
	12(07)
	<hr/>

(b) First Semester 2012-2013

1. Integrated First Degree Programmes

	No. of students joined	BITSAT Cut-off scores	
		Highest	Lowest
<u>Group A</u>			
B.E.(Hons.)			
Chemical	54(13)	312	283
Computer Science	80(14)	368	313
Electrical & Electronics	80(11)	331	303
Electronics & Instrumentation	79(13)	306	292
Mechanical	79(1)	333	296
	<hr/>		
	372(52)		
	<hr/>		
<u>Group B</u>			
M.Sc.(Hons.)			
Biological Sciences	35(13)	298	271
Chemistry	33(9)	291	276
Economics	35(8)	303	282
Mathematics	36(6)	296	277
Physics	36(3)	304	282
	<hr/>		
	175(39)		
	<hr/>		
<u>Group C</u>			
M.Sc.(Tech.)			
Information Systems	44(10)	298	276
	<hr/>		
Total :	44(10)		
	<hr/>		
	591(101)		
	<hr/>		

2. Higher Degree Programmes :

M.E.

Biotechnology	12(9)
Chemical Engineering	11(4)
Design Engineering	10
Microelectronics	8(2)
Embedded Systems	8(1)
Software Systems	9(2)
Total	58(18)

3. Doctoral Programmes :

Ph.D. 19(10)

SUMMARY

	II Semester 2011-2012	I Semester 2012-2013
On-Campus Programmes		
Integrated First Degree Programmes	-	591(101)
Higher Degree Programmes	-	58(18)
Total	-	649(119)
Doctoral Programmes		
Ph.D.	12(07)	19(10)
GRAND TOTAL	12(07)	668(129)

Annexure 'B2-3'

(1 Page)

Ref. AR 2012, Page No.B2-1

STATEMENT SHOWING THE NUMBER OF CANDIDATES WHO HAVE BEEN PERMITTED IN THE ACADEMIC YEAR 2012-2013 TO PURSUE VARIOUS DUAL DEGREE PROGRAMMES UNDER VARIOUS PRIORITIES

FIRST PRIORITY

(From Group 'B' to Group 'A' Programmes)

Programmes* From ↓ To →	A1	A3	A4	A7	A8	Total
B1	6	7	7	5	8	33
B2	10	6	7	6	5	34
B3	6	8	6	8	12	40
B4	4	7	11	9	9	40
B5	2	11	8	11	4	36
Total	28	39	39	39	38	183

OTHER PRIORITIES

NIL

*Legend:

A1: B.E.(Hons.) Chemical,

A3: B.E.(Hons.) Electrical &
Electronics,

A4: B.E.(Hons.) Mechanical,

A7: B.E.(Hons.) Computer Science,

A8: B.E.(Hons.) Electronics and
Instrumentation,

B1: M.Sc.(Hons.) Bio. Sciences,

B2: M.Sc.(Hons.) Chemistry,

B3: M.Sc.(Hons.) Economics,

B4: M.Sc.(Hons.) Mathematics,

B5: M.Sc.(Hons.) Physics,

C6: M.Sc.(Tech.) Information
Systems

Annexure 'B2-4'

(3 Pages)

Ref. AR 2012, Page No.B2-4

NUMBER OF STUDENTS REGISTERED

Second Semester 2011-2012

Programme	Year of Admission						Total
	2006	2007	2008	2009	2010	2011	
<i>A. Integrated First Degree Programmes</i>							
B.E. (Hons)							
Chemical	0	0	53(10)	55(14)	57(12)	54(9)	219(45)
EEE	0	3(0)	84(09)	80(11)	79(17)	80(12)	326(49)
Mechanical	0	1(0)	79(07)	79(4)	78(6)	80(0)	317(17)
Computer Science	0	3(0)	81(05)	84(16)	83(23)	79(9)	330(53)
Electronics & Instrumentation	0	1(0)	77(09)	72(17)	74(16)	79(14)	303(56)
M.Sc. (Hons)							
Biological Science	0	30(06)	36(11)	33(11)	38(7)	33(11)	170(46)
Chemistry	1(0)	19(03)	21(03)	25(4)	30(2)	34(6)	130(18)
Economics	0	43(13)	44(04)	42(13)	43(11)	40(9)	212(50)
Mathematics	2(0)	41(11)	37(09)	34(10)	36(3)	40(10)	190(43)
Physics	0	25(04)	27(03)	31(6)	32(4)	37(7)	152(24)
M.Sc. (Tech)							
Information Systems	0		49(10)	51(13)	48(11)	49(13)	197(47)
Total	3(0)	166(37)	588(80)	586(119)	598(112)	605(100)	2546(448)

B. Higher Degree Programmes

Programme	Year of Admission				Total
	2008	2009	2010	2011	
M.E.					
Biotechnology			17(8)	10(5)	27(13)
Design Engg.			15(0)	8(0)	23(0)
Embedded System			11(2)	12(2)	23(4)
Software Systems			16(3)	9(1)	25(4)
Chemical Engg.			5(2)	6(2)	11(4)
Microelectronics				10(3)	10(3)
Total			64(15)	55(13)	119(28)
Grand Total					2665(476)

First Semester 2012-2013

Programme	Year of Admission							Total
	2006	2007	2008	2009	2010	2011	2012	
<i>A. Integrated First Degree Programmes</i>								
B.E.(Hons.)								
Chemical			4(0)	55(14)	57(12)	53(8)	53(13)	222(47)
EEE	2(0)		5(0)	80(11)	79(17)	79(12)	80(11)	325(51)
Mechanical			9(1)	79(4)	78(6)	79(0)	79(1)	324(12)
Computer Science	3(0)		8(0)	86(16)	83(23)	82(10)	79(14)	340(63)
Electronics & Instrumentation			6(0)	73(17)	74(16)	79(14)	78(13)	310(60)
M.Sc. (Hons)								
Biological Science	1(1)		34(9)	33(11)	38(7)	33(11)	35(13)	174(52)
Chemistry	2(0)		21(3)	25(4)	30(2)	34(6)	33(9)	145(24)
Economics	2(0)		44(4)	43(13)	43(11)	40(9)	36(8)	208(45)
Mathematics	3(0)		37(9)	34(10)	36(3)	41(10)	36(6)	187(38)
Physics	1(0)		25(3)	31(6)	32(4)	36(7)	34(3)	159(23)
M.Sc. (Tech)								
Information Systems			4(0)	51(13)	48(11)	49(13)	44(10)	196(47)
Total	14(1)		197(29)	590(119)	598(112)	605(100)	584(101)	2591(462)

B. Higher Degree Programmes

Programme	Year of Admission				Total
	2010	2011	2012		
M.E.					
Biotechnology	9(2)	10(5)	12(9)		31(16)
Design Engg.	8(0)	8(0)	10(0)		26(0)
Embedded System	8(1)	12(2)	8(1)		28(4)
Software Systems	10(2)	9(1)	9(2)		28(5)
Chemical Engg.	2(1)	6(2)	11(4)		19(7)
MicroElectronics		10(3)	8(2)		18(5)
Total	37(6)	55(13)	58(18)		150(37)

C. PhD Programmes

PhD Programmes	Year of Admission								Total
	2004 and earlier	2005	2007	2008	2009	2010	2011	2012	
Sem 2 11-12	3(0)	2(0)	6(1)	11(4)	11(6)	24(9)	26(12)		83(32)
Sem 1 12-13	2(0)	2(0)	6(1)	11(4)	10(5)	27(12)	25(13)	15(8)	98(43)
Grand Total	5(0)	4(0)	12(2)	20(8)	21(11)	51(21)	51(25)	15(8)	181(75)

Summer Term 2011-2012

Programme	Year of Admission		
	2009	2010	Total
<i>A. Integrated First Degree Programmes</i>			
B.E. (Hons)			
Chemical	1(1)	57(12)	58(13)
EEE	1(0)	79(17)	80(17)
Mechanical	4(1)	77(6)	81(7)
Computer Science	3(1)	83(23)	86(24)
Electronics & Instrumentation	2(0)	74(16)	76(16)
M.Sc. (Hons)			
Biological Science		38(7)	38(7)
Chemistry	1(0)	30(2)	31(3)
Economics		43(11)	43(11)
Mathematics	1(0)	36(3)	37(4)
Physics	1(0)	32(4)	33(5)
M.Sc. (Tech)			
Information Systems		47(10)	47(10)
Total	14(3)	596(111)	610(114)

Annexure 'B2-5'

(2 Pages)

Ref. AR 2011, Page No.B2-5

STATEMENT OF DEGREES AWARDED

Degrees	No. of degrees	No. of degrees
	70th Award (8.3.2012)	71th Award (29.6.2012, 7.7.12)
(i) Integrated First Degree		
B.E.(Hons.)		
Chemical (with Practice School)	7(0)	64 (13)
Electrical and Electronics		2(0)
Electrical and Electronics (with Practice School)	3(0)	111 (19)
Mechanical	1(0)	4(0)
Mechanical (with Practice School)	1(0)	99 (12)
Computer Science		4(2)
Computer Science (with Practice School)	2(0)	104(12)
Electronics and Instrumentation		2(1)
Electronics and Instrumentation (with Practice School)	1(0)	103 (16)
M.Sc.(Hons.)		
Biological Sciences		3(0)
Biological Sciences (with Practice School)	1(0)	29(7)
Chemistry		1(0)
Chemistry (with Practice School)	2(0)	17(3)
Economics		5(1)
Economics (with Practice School)	2(0)	36(12)
Mathematics		2(2)
Mathematics (with Practice School)		38(9)
Physics		5(0)
Physics (with Practice School)		22(4)
M.Sc.(Tech.)		
Information Systems		1(1)
Information Systems (with Practice School)	1(1)	44(9)
Sub Total	21(1)	696(123)
(ii) Higher Degree		
M.E.		
Chemical Engineering	2(0)	1(0)
Chemical Engineering (with Practice School)		2(1)
Biotechnology	4(3)	1(1)
Biotechnology (with Practice School)		4(3)
Design Engineering	2(2)	2(0)
Design Engineering (with Practice School)	3(0)	5(0)
Software Systems	3(0)	3(0)
Software Systems (with Practice School)	6(3)	3(1)
Embedded Systems	6(3)	
Embedded Systems (with Practice School)		3(1)
Sub Total	26(11)	24 (7)
PHD	6(1)	
Total	53(13)	720(130)

SUMMARY

Award	70th Award	71th Award	Total
Integrated First Degree	21(1)	696(123)	717(124)
Higher Degree	26(11)	24(7)	50 (18)
PHD	6(1)		6(1)
Total	53(13)	720(130)	773(143)

Note: The numbers in brackets indicate number of female students.

Annexure 'B2-6'

(1Pages)

Ref. AR 2011, Page No.B2-5

**72th AWARD OF DEGREES TO BE APPROVED BY THE 66th MEETING OF
THE BOARD OF GOVERNORS**

(No. in brackets indicates no. of female students)

Programme	Dist.	I	II	Total
B.E.(Hons.)(Chemical)	0	1	0	1(1)
B.E.(Hons.)(Chemical)(with Practice School)	0	3	4	7(0)
B.E.(Hons.)(Electrical and Electronics)(with Practice School)	0	1	3	4(0)
B.E.(Hons.)(Mechanical)	0	2	0	2 (0)
B.E.(Hons.)(Mechanical)(with Practice School)	0	2	10	12(2)
B.E.(Hons.)(Computer Science)(with Practice School)	1	0	7	8(0)
B.E.(Hons.)(Electronics and Instrumentation)(with Practice School)	0	0	5	5(0)
M.Sc.(Hons.)(Biological Sciences)(with Practice School)	0	1	1	2(1)
M.Sc.(Hons.)(Chemistry)(with Practice School)	0	0	1	1(0)
M.Sc.(Hons.)(Economics)(with Practice School)	0	0	2	2(0)
M.Sc.(Hons.)(Economics)	0	0	1	1(0)
M.Sc.(Hons.) (Mathematics) (With Practice School)	0	1	0	1(0)
M.Sc.(Hons.) (Physics) (With Practice School)	0	0	1	1(0)
M.Sc.(Tech.)(Information Systems)	0	2	3	5(0)
Sub-Total	1	13	38	52(4)
M.E.(Chemical)	2(1)			
M.E.(Software Systems)	2(0)			
M.E.(Biotechnology)	5(2)			
M.E.(Biotechnology) (With Practice School)	4(0)			
M.E.(Embedded Systems)	1(0)			
M.E.(Embedded Systems)(With Practice School)	6(1)			
M.E.(Design Engineering)	1(0)			
M.E.(Software Systems)(with Practice School)	6(2)			
M.E.(Design Engineering)(with Practice School)	5(0)			
Sub-Total	32(6)			
Ph.D.	3(0)			
TOTAL	87(10)			

Note: Numbers in brackets indicate total females

Annexure 'B2-7'

(4 Pages)

Ref. AR 2012, Page No.B2-6

LIST OF ORGANIZATIONS WHICH CONDUCTED CAMPUS INTERVIEWS**Second Semester 2011-2012**

S.No.	Name of Organization	Number of Students		Discipline
		Interviewed	Selected	
1	Thorogood Associates	71	2	All Disciplines
2	Microsoft IT	36	1	CS/IS
3	Gharpay	15	0	All Disciplines
4	Arista Networks	37	4	CS/IS/EE/ENI
5	ZS Associates	110	4	All Disciplines
6	Oracle	150	30	All Disciplines
11	Cisco	120	14	CS/IS/EEE/ENI
12	CEAT	74	4	MECH/EEE
13	3DPLM	38	3	MECH
14	CommVault	120	2	All Disciplines
15	Samsung India Software center	41	7	CS/IS/MI
16	Ixia	82	4	CS/IS/EEE/ENI/ME Embedded
17	Deloitte	62	8	CS/IS/EEE/ENI
18	Yatra	19	3	CS/IS/EEE/ENI
19	SKF	44	4	MECH
20	MuSigma	142	20	All Disciplines
21	J P Morgan Chase	96	6	All Disciplines
22	Mutual Mobile	25	0	CS/IS
23	Indus Valley Partners	48	4	CS/IS/EEE/ENI
24	Tata Autocomp	32	12	MECH/EEE
25	Zuari industries	18	4	CHEM
26	Praj industries	34	6	MECH/CHEM
27	Calsoft	21	8	CS/IS
28	Sankalp Semi conductors	34	7	EEE/ENI
29	Infosys Technologies	89	63	All Disciplines
31	Mechatronics	57	3	EEE/ENI
32	Harman International	65	4	CS/IS/EEE/ENI
33	GE India	69	1	CS/IS/EEE/ENI
34	Rockwell Automation	65	6	MECH/EEE/ENI

S.No.	Name of Organization	Number of Students		Discipline
		Interviewed	Selected	
35	Wellsfargo	110	16	All Disciplines
36	Roof for Two	24	1	MECH
37	Epic Systems	60	1	CS/IS
38	MRF	25	7	MECH/EEE
39	Alfa Laval (off campus)	14	3	MECH/CHEM
40	Polmon Instruments	26	1	MECH/EEE/ENI
41	Sokrati	34	2	All Disciplines
42	IBM	16	13	All Disciplines
43	Latent View Analytics	6	6	All Disciplines
44	De Shaw	1	1	All Disciplines
45	Capillary	1	1	All Disciplines
46	ARM	1	1	EEE/ENI
47	Riversilica	1	1	EEE/ENI
48	Advanced micro systems	1	1	CS/IS
49	Marvel	1	1	EEE/ENI
50	Elecon	1	1	MECH
51	Vestas	1	1	MECH
52	Altair	1	1	MECH
53	Consilium software	1	1	CS/IS
54	Infinera	1	1	CS/IS
55	Milaap	1	1	EEE/ENI

Summary

Total No. of companies:	55
Total No. of students interviewed:	2141
Total No. of appointments offered:	296

Legend:

BT: Biotechnology, CE: Civil, CHE: Chemical, CM: Communication Engineering, CS: Computer Science, DE: Design Engineering, EEE: Electrical & Electronics, ET: Engineering Technology, E&I: Electronics & Instrumentation, ECON: Economics, FIN: Finance, GS: General Studies, IS: Information System, MANUF: Manufacturing Systems Engineering, MATH: Mathematics, MECH: Mechanical, MI: Microelectronics, MMS: Master of Management Studies, PHARM: Pharmacy, SS: Software Systems.

First Semester 2012-2013

S.No.	Name of Organization	Number of Students		Discipline
		Interviewed	Selected	
1	3DPLM Software	39	2	CS/IS/EEE/ENI
2	Alfa Level	25	3	MECH/CHEM
3	Capillary	60	5	All Disciplines
4	CISCO	90	23	CS/IS/EEE/ENI
5	Commvault	40	2	CS/IS/EEE/ENI
6	Cosmic Circuits	20	0	EEE/ENI
7	Directi	110	3	All Disciplines
8	Education Initiatives	53	2	All Disciplines
9	EPIC	36	4	CS/IS
10	Fiorano Software Technologies Pvt. Ltd.	37	2	CS/IS/EEE/ENI
11	Flipkart India Pvt. Ltd.	81	2	All Disciplines
12	FMC Technologies India Pvt Ltd	16	2	MECH
13	Harman International India Pvt. Ltd	53	6	CS/IS/EEE/ENI
14	Honda 2 Wheelers	13	4	MECH
15	Ittiam	1	1	EEE/ENI
16	Kony Labs	38	10	CS/IS/EEE/ENI
17	Michelin Tyres	2	1	M.E Design Engineering
18	Microsoft IDC	52	2	CS/IS
19	Microsoft IT	50	1	CS/IS
20	Morgan Stanley	68	3	All Disciplines
21	MuSigma	85	13	All Disciplines
22	National Instruments	44	4	MECH/EEE/ENI
23	Nvidia Graphics Pvt. Ltd	50	3	EEE/ENI
24	Oracle	120	28	All Disciplines
28	Paypal	50	5	CS/IS/EEE/ENI
29	Perceptive Analytics	48	0	All Disciplines
30	Persistent Systems	50	4	CS/IS/EEE/ENI
31	Red Pine Signals	75	3	EEE/ENI
32	Sabre Holdings	60	3	All Disciplines
33	Safran	10	2	M.E Design Engineering
34	Shell	4	2	MECH/CHEM
35	SKF India Ltd.	19	4	MECH

S.No.	Name of Organization	Number of Students		Discipline
		Interviewed	Selected	
36	Symantec	52	5	CS/IS/EEE/ENI
37	Tata Motors	50	8	MECH/EEE/ENI
38	Tata Steel	1		CHEM
39	Tata Technologies	28	8	EEE/MECH
40	The Elitest	15	0	All Disciplines
41	Walmart Labs	90	2	CS/IS/EEE/ENI
42	Zuari Industries	25	3	MECH/EEE/ENI/CHEM
43	Finisar Malaysia	22	2	MECH/EEE/ENI

Summary

Total No. of companies:	43
Total No. of students interviewed:	1782
Total No. of appointments offered:	178

Legend:

BT: Biotechnology, CE: Civil, CHE: Chemical, CM: Communication Engineering, CS: Computer Science, DE: Design Engineering, EEE: Electrical & Electronics, ET: Engineering Technology, E&I: Electronics & Instrumentation, ECON: Economics, FIN: Finance, GS: General Studies, IS: Information System, MANUF: Manufacturing Systems Engineering, MATH: Mathematics, MECH: Mechanical, MI: Microelectronics, MMS: Master of Management Studies, PHARM: Pharmacy, SS: Software Systems.

BITS Pilani

annual report

2012

Part B3: Hyderabad Campus

CONTENTS

	Page No.
B3.1 SENIOR OFFICERS AND APPOINTMENTS	B3-1
B3.2 ADMISSIONS	B3-1
B3.3 DUAL DEGREES AND TRANSFERS	B3-1
B3.4 ACADEMIC CALENDAR	B3-2
B3.5 COURSES OFFERED	B3-2
B3.6 REGISTRATION OF STUDENTS	B3-2
B3.7 ACADEMIC AND PROFESSIONAL COUNSELLING	B3-2
B3.8 AWARD OF DEGREES	B3-3
B3.9 CAMPUS INTERVIEWS AND PLACEMENT	B3-4
B3.10 DEPARTMENT-WISE REPORT	B3-4
<i>B3.10.1 Biological Sciences</i>	B3-4
<i>B3.10.2 Chemical Engineering</i>	B3-9
<i>B3.10.3 Chemistry</i>	B3-12
<i>B3.10.4 Civil Engineering</i>	B3-17
<i>B3.10.5 Computer Science and Information systems</i>	B3-20
<i>B3.10.6 Economics and Humanities</i>	B3-23
<i>B3.10.7 Electrical and Electronic Engineering</i>	B3-25
<i>B3.10.8 Mechanical Engineering</i>	B3-29
<i>B3.10.9 Mathematics</i>	B3-31
<i>B3.10.10 Pharmacy</i>	B3-34
<i>B3.10.11 Physics</i>	B3-42
B3.11 DIVISION/UNIT/CENTER-WISE ACTIVITY HIGHLIGHTS	B3-44
RESEARCH AND DEVELOPMENT	B3-44
CENTRAL FACILITIES REPORT	B3-44
Library	B3-44
Workshop	B3-45
Community Welfare Unit	B3-46
B3.12 STUDENTS ACTIVITIES, ACHIEVEMENTS, SCHOLARSHIPS, CULTURAL AND ACADEMIC FESTIVALS	B3-46
Student Welfare Division	B3-46
NIRMAAN	B3-47
Sports Activities	B3-47
NSS	B3-48
B3.13 MAJOR MAINTENANCE, RENOVATIONS OR NEW CONSTRUCTION REPORTS	B3-49
B3.14 MAJOR EQUIPMENTS ACQUIRED DURING THE YEAR	B3-49

LIST OF ANNEXURES

	Page No.
1. Annexure B3-1 – ADMINISTRATIVE BODIES	B3:A-1
2. Annexure B3-2 – DETAILS OF ADMISSIONS MADE DURING THE YEAR 2012	B3:A-4
3. Annexure B3-3 – LIST OF NEW COURSES INTRODUCED DURING THE YEAR 2012	B3:A-6
4. Annexure B3-4 – NUMBER OF STUDENTS REGISTERED DURING THE YEAR 2012	B3:A-10
5. Annexure B3-5 – LIST OF ORGANIZATIONS WHICH CONDUCTED CAMPUS INTERVIEWS	B3:A-12
6. Annexure B3-6 – RESEARCH PROJECTS	B3:A-15
7. Annexure B3-7 – LIST OF EQUIPMENTS	B3: A-29

BITS PILANI – HYDERABAD CAMPUS

B3.1 SENIOR OFFICERS AND APPOINTMENTS

(a) Senior Officers

1. Prof. V S Rao, Director and Senior Professor
2. Prof. M B Srinivas, Dean - Administration
3. Prof. Suman Kapur, Dean - International Programmes and Collaborations Division
4. Dr. K V G Chandra Sekhar, Assistant Dean -Practice School Division

(b) Professor-in-charge

- Prof. Srinivas Prakash Regalla, Professor In charge Faculty Affairs

The following were appointed as Professor-in-charge for Divisions mentioned against their names for a period up to 31st July, 2013.

- Dr. P Yogeeswari, for Sponsored Research and Consultancy Division from 1st August 2012.
- Dr. Vidya Rajesh, for Academic Research Division from 1st August 2012.
- Dr. Souri Banerjee, for International Programmes and Collaborations Division from 4th December 2012.

(c) New appointments

During the year, no new significant administrative appointments were made. The names and designations of senior officers of Hyderabad campus are given in **Annexure 1** (Part B3).

B3.2 ADMISSIONS

The number of students admitted in each of the semesters is given below.

	Integrated First Degree Programmes	Higher Degree Programmes	Doctoral Programmes (PhD)	Total
Second Semester 2011-2012	--	--	28	28
First Semester 2012-2013	673	62	21	756

The programme-wise details are given in **Annexure 2** (Part B1).

B3.3 DUAL DEGREE AND TRANSFERS

During the Academic year 2012-2013, a total no of 183 students were permitted to pursue concurrently two first degrees under the Dual Degree scheme as per details given below.

Departments	No. of Students (offers given)	No of Students (offers Taken up)	No of Students (offers not taken up)
B.Pharm (Hons.) - A5	11	6	5
BE (Hons) chemical – A1	18	18	0
BE (Hons) civil – A2	18	18	0
BE (Hons) Electrical and Electronics – A3	33	33	0
BE (Hons) Mechanical – A4	28	28	0
BE (Hons)Computer Science – A7	37	37	0
BE (Hons)Electronics & Communication - AA	34	34	0
M.Sc (Hons.) Physics - B5	--	--	--
M.Sc (Hons.) Chemistry – B2	3	3	0
M.Sc (Tech.) Information Systems – C6	1	1	0
Grand Total	183	178	5

Transfer

During the Academic year 2012-2013, **10** students were permitted to transfer from Integrated First Degree to Higher Degree. There were no inter-campus transfers from Hyderabad campus.

B3.4 ACADEMIC CALENDAR

The Academic year of the Institute is divided into two semesters and a summer term.

	Starting Date	Ending Date	No of instruction Days (Excluding Examination Days)
Second semester 2011-2012	07.01.2012	14.05.2012	90
First Semester 2012-2013	03.08.2012	14.12.2012	93
summer term 2011-2012	21.05.2012	13.07.2012	47

B3.5 COURSES OFFERED

The number of courses, offered during the year 2012 are as follows:

	Number of Courses Offered
Second semester 2011-2012	196
First Semester 2012-2013	279
summer term 2011-2012	1 (PS-1)

During the year the following new courses are added

Second semester 2011-2012	50
First Semester 2012-2013	100

The list of new courses added is attached as a separate **Annexure 3** (Part B3).

B3.6 REGISTRATION OF STUDENTS

The registration processes for both the semesters was completed on the first day of each semester.

	Number of students registered
Second Semester 2011-2012	2598
First Semester 2012-2013	2943
Summer Term 2012	600

Details of Registration of students for the First Semester 2011-2012 are given in **Annexure 4** (Part B3).

B3.7 ACADEMIC AND PROFESSIONAL COUNSELLING

During the year, the Academic Counselling Board (ACB) identified the extent to which students' performance fell below the stipulated minimum academic requirements. It drew up a time-frame within which afflictions were to be removed. It also determined the package of courses for their registration in each semester and laid down necessary stipulations for achieving intermediate targets.

It further monitored their progress and applied necessary mid-course corrections, wherever required. The statistical summary of the number of On-campus students under its purview during the year is given below:

		II Semester 2011-12	I Semester 2012-13
1.	Total number of students under the purview of ACB at the beginning of the semester	87	83
2.	No. of students declared out of its purview at the end of the semester	37	41
3.	No. of students who left/transfer the Institute during the semester	1	2
4.	No. of new students who came under the purview of ACB at the end of the semester	34	15
5.	Total No. of students under the purview of ACB during the next semester	83	55

B3.8 AWARD OF DEGREES

First Convocation was conducted on 12.08.2012, Chief Guest Shri Kapil Sibal, Union Minister for HRD, Communications and IT, New Delhi, Chancellor Dr Kumar Mangalam Birla, Member (BOG) Smt Manjushree Khaitan and the Vice Chancellor Dr B N Jain have participated in the first Convocation of the campus for award of various degrees (First Degree, Higher Degree) to 413 students who have qualified in second Semester 2011-12.

S. No.	Name and ID No	Gender	CGPA Obtained	Position Obtained	Type of Medal to be awarded
1	CHANDRALEKHA MOTATI ID No. 2008A7PS356H	Female	10.00	FIRST	GOLD
2	VARIKUTI SAINATH ID No. 2008A4PS335H	Male	9.75	SECOND	SILVER
3	SHEETAL JAGDISH SARAOGI ID No. 2008A7PS469H	Female	9.74	THIRD	BRONZE

During the year, a total of 413 students graduated and the details are as follows:

S. No	Programmes	B.E. (Hons.)	M.Sc. (Hons.)	M.Sc. (Tech.)	H.D.	Ph. D	Total
First Degrees							
1.	Chemical Engineering	17	-	-	-	-	17
2.	Civil Engineering	29	-	-	-	-	29
3.	Electrical & Electronics Engineering	62	-	-	-	-	62
4.	Mechanical Engineering	53	-	-	-	-	53
5.	B. Pharmacy	13	-	-	-	-	13
6.	Computer Science	67	-	-	-	-	67
7.	Electronics & Communication Engineering	67	-	-	-	-	67
8.	Chemistry		1	-	-	-	1
9.	Information Systems	-	-	35	-	-	35

S. No	Programmes	B.E. (Hons.)	M.Sc. (Hons.)	M.Sc. (Tech.)	H.D.	Ph. D	Total
Higher Degrees							
10.	M.E. Embedded Systems	-	-	-	19	-	19
11.	M.E. Microelectronics	-	-	-	23	-	23
12.	M.E. Computer Science	-	-	-	8	-	8
13.	M.Pharm. (with specialization in Pharmaceutics)	-	-	-	9	-	9
14.	M.Pharm. (with specialization in Pharmaceutical Chemistry)	-	-	-	10	-	10
Total		308	1	35	69	-	413

B3.9 CAMPUS INTERVIEWS AND PLACEMENT

Number of companies which conducted campus interviews	79
No of interviews	4586
No of offers made	411

The discipline-wise statistics and the list of organizations which conducted campus interviews during the year are given in **Annexure 5 (Part B3)**.

B3.10 DEPARTMENT-WISE REPORT

In the following pages, a brief summary of the main activities and achievements of different departments of the campus as on 31.12.2012 are highlighted.

B3.10.1 Biological Sciences

Number of faculty members

Senior Professors, Professors	1
Associate Professors	0
Assistant Professors	10
Lecturers	0
Visiting Faculty	0

Head of the Department: Dr. Ramakrishna Vadrevu

Contact details: Email: vrk@hyderabad.bits-pilani.ac.in; Tel No: 040-66 303 529

Number of PhD Scholars: 26

Sponsored Research activities: Ongoing projects

S. No.	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration Years
1	Novel Biomarker Responses To Validate Acute Toxicity Of Engineered Nanoparticles And Their Physicochemical Interactions In Earthworm As A Model Bio Indicator Of Nano (Eco) Toxicology	Dr. Sankar Ganesh	BITS Pilani	2 Lakhs	1 Year
2	Discovery Of Novel Modulators Of Nad ⁺ Dependent Protein Deacetylase Sirt 1 For The Treatment Of Various Disorders	Dr. Jayati Ray Dutta (Co-PI)	DBT	2 Lakhs	3 Years
3	Novelmolecular Mechanism Involving Adenosine And Adenosine Receptors In Acceleration Of Alcohol Induced Hepatic Fibrosis	Dr. PalashMandal	CSIR	24.07 lakhs	3 Years
4	Exploring Sequence And Structural Features Of The Catalytic Loops In Tim Barrel Proteins: Implications For Protein Engineering	Dr. Ramakrishna Vadrevu	UGC	8.26 lakhs	3 Years
4	Polymorphism Studies Of The Malaria Vaccine Candidate Serine Repeat Antigen (Sera) In Indian Isolates – Under Fast Track Scheme	Dr. Vidya Rajesh	DST-SERC	19.6 lakhs	3 Years
5	Characterization Of The Prenatal And Perinatal Risk Factors Of Autism Spectral Disorder In Indian Autistic Population	Dr. Vidya Rajesh	UGC	6.51 lakhs	3 Years
6	Molecular Studies On T3 Binding Domain Of Thyroid Receptors In Autistic Individuals	Dr. Vidya Rajesh	DST-CSI	24.75 lakhs	3 Years
7	Developing Low Cost Poc Device For Detection Of Blood Glucose Levels	Dr. SumanKapur	ICMR	28. 06 lakhs	2 Years
8	Identification Of Genetic Loci associated With Risk For Type 2 Diabetes Mellitus In Indians From Rajasthan	Dr. SumanKapur	ICMR	31.90 lakhs	3 Years
9	Functional Mutations In The Opioid Receptors And Their Impact On Immune Cell Function	Dr. SumanKapur	ICMR	55.76 lakhs	3 Years
10	Development Of An Indigenous Chip For Testing Antibiotic Sensitivity Of Pathogens Found In Human Urinary Tract	Dr. SumanKapur	NPMASS -DRDO	80.18 lakhs	3 Years
11	Site-Specific Immobilization Of A Single DNA Molecule	Dr. SumanKap ur (Co-PI)	BRNS	19.5 lakhs	2 Years
12	Investigation Of Magneto-Optical Effects In Composite Magneto-Plasmonic Nano-Structures For Sensing Applications	Dr. SumanKapur (Co-PI)	DST	30.0 lakhs	3 Years

a) Projects sanctioned during the year

S. No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration Years
1	Role Of Adipose In Ethanol-Induced Tissue Injury	Dr. PalashMandal	DST	Information awaited	3 Years
2	Studies On The Characterization Of Engineered Nanoparticles (Enps) And Their Toxicological And Biochemical Effecton <i>Eiseniafoetida</i> Earthworms	Dr. P. Sankar Ganesh	DBT	51.29 lakhs	3 Years

S. No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration Years
3	Consequences Of Cellular Crowding On The Structure Stability And Folding Of A Tim Barrel Protein	Dr. Ramakrishna Vadrevu	DST	37,37,000	3 Years
4	Arogya Ghar: Health Care Delivery Program	Dr. SumanKapur	Sustainable Innovations, USA	8.00 lakhs	2 Years
5	Diabetes Mellitus: Reward Pathway And Energy Metabolism	Dr. SumanKapur	IIBT, Hyderabad	6.1 lakhs	2 Years

The department was also awarded Rs 1crore under the FIST program of Department of Science & Technology.

Publications

- Roychowdhury S, Chiang DJ, MandalPalash, McMullen MR, Liu X, Cohen JI, Pollard J, Feldstein AE, Nagy LE. Inhibition of apoptosis protects mice from ethanol-mediated acceleration of early markers of CCl₄-induced fibrosis but not steatosis or inflammation. *Alcohol ClinExp Res.* 2012 Jul;36(7):1139-47
- SitaRamyasreeUppada, Amit Kumar Gupta, Jayati Ray Dutta, Statistical optimization of culture parameters for lipase production from *Lactococcuslactis* and its application in detergent industry, *International Journal of ChemTech Research*, Sphinxsai, 4 4, (2012), pp 1509-1517.
- Jayati Ray Dutta, U. SitaRamyasri, Optimization of L-arabinose isomerase production from *Lactococcuslactis*: bioconversion of D-galactose to D-tagatose using the enzyme, *International Journal of Biosciences (IJB)*, INNSPUB, 2 10(2), (2012), pp. 48-57.
- A.Santhana Krishna Kumar, RevathiRamachandran, S.Kalidasan, Vidya Rajesh, N. Rajesh, "Potential application of dodecylamine modified sodium montmorillonite as an effective adsorbent for hexavalent chromium", *Chemical Engineering Journal*, 211-212 (2012) 396-405.
- A.Santhana Krishna Kumar, Timsi Gupta, Shruti Singh Kakan, S.Kalidhasan, Manasi, Vidya Rajesh, N. Rajesh, " Effective adsorption of hexavalent chromium through a three center (3c) co-operative interaction with an ionic liquid and and biopolymer. *J. Hazardous Material*, 239-240 (2012), 213-224.
- S. Kalidhasan, PriyankaAmba Gupta, Vinusha Reddy Cholleti, A. Santhana Krishna Kumar, Vidya Rajesh and N. Rajesh, Microwave assisted solvent free green preparation and physicochemical characterization of surfactant-anchored cellulose and its relevance towards the effective adsorption of chromium, *Journal of Colloid and Interface Science* 372 (2012) 88.
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- S. Kalidhasan, A. Santhana Krishna Kumar, Vidya Rajesh and N. Rajesh, An efficient ultrasound assisted approach for the impregnation of room temperature ionic liquid onto Dowex 1 x8 resin matrix and its application towards the enhanced adsorption of chromium (VI), *Journal of Hazardous Materials*, 213 (2012) 249.
- Santhana Krishna Kumar, S. Kalidhasan, Vidya Rajesh, N. Rajesh, Application of Cellulose-Clay Composite Biosorbent towards the Effective Adsorption and Removal of Chromium from Industrial Wastewater, *Industrial and Engineering Chemistry Research* 51(2012) 58.
- KankanampatiKrishnaveni, Rosaline Mishra, K Pushkala, D Velayudam, SumanKapur, Ethanolic extract of *Mangifera indica* seed kernel ameliorates visceral fat via improvement in lipid metabolism in high fat diet induced obese mice, Oct 2012, *J. Pharm. Res.* 5(10): 4974-78.
- ShipraMehra, SumanKapur, Suma Ganesh, Association between a Tetranucleotide Repeat Polymorphism of SPAG16 Gene and Cataract in Male Children, *Journal of Biomarkers*, Vol. 2013, Article ID 810395, 8 pages.
- K M Siddharth, SumanKapur, C. Venkata S. Ram, Angiotensin Converting Enzyme Gene Polymorphism and Hypertension: No Ace Yet in the Pack of Cards, *JAPI*, 2012, 60: 9-10 (Editorial)

13. ShaifaliGurjar, Anuradha Pal and SumanKapur, Triphala and Its Constituents Ameliorate Visceral Adiposity in High Fat Diet –Induced Obese Mice, *Alternative Therapies in Health and Medicine*, 2012, 18(6): 38-45.
14. Sharma M, Sachdev V, Singh N, Bhardwaj P, Pal A, Kapur S, Saraya A. Alterations in intestinal permeability & endotoxemia in severe acute pancreatitis, *Trop. Gastroenterol.* 2012, 33 (1):45-50.
15. Suman, Kapur, Anuradha Pal and ShashwatSharad Role of Opioidergic System in Humoral Immune Response, In “Immunosuppression: Role in Health and Disease”, ISBN: 978-953-308-19, 2012 Publisher Intech.

Conferences attended/papers presented:

1. Sankar Ganesh P and Siva Prasad B. Flipped Teaching: Insight, Interpretation and Feasibility in the Indian Scenario, *ISTE 42nd Annual Convention, Hyderabad, India, Dec 2012.*
2. Siva Prasad B, Mathews M. John, AtulGovardhan M, KannanRamaswamy, Sankar Ganesh P, Rapid assessment of persistent organic pollutant, Sulfamethoxazole in aquatic ecosystems, using surface plasmon resonance based biosensors, L-86, *National Conference on conservation and management of wetland ecosystems, LAKE 2012, Mahatma Gandhi University, Kottayam, India, Nov 2012.*
3. Mathews M John, Sankar Ganesh P, A wireless sensor network approach to monitor process temperature in composting heaps, Part II: Thermocouple Thermometers, SES -13, *National Seminar on sustainable Development: Recent Trends in Meeting the Challenges, NSSD 2012, Mahatma Gandhi University, Kottayam, India, Jan 2012.*
4. EU-India Science Technology and Innovation cooperation days with a thematic focus on water, at NGRI, Hyderabad, India 8-9 November, 2012.
5. U. SitaRamyasri and Jayati Ray Dutta: Statistical optimization of culture conditions by Response surface methodology, Artificial neural network and Genetic algorithm for synthesis of lipase from *Lactococcuslactis* – In World Congress Biotechnology, Bright International Conference, 2012, Leonia International Convention Centre, Hyderabad, India, May 4-6.
6. K. Raja SekharVarma, Nabeel Ahmed, P. Ravi Chand, Ramakrishna Vadrevu. Exploring sequence and structural patterns of the **OBPs** in TIM Barrel Proteins: Lessons for Loop grafting. International Conference on Advances in Biological Sciences, Kannur University, India.
7. P. Ravichand, Ramakrishna Vadrevu, P. Yogeswari, D. Sriram. Structure based pharmacophore and virtual screening of **secretase inh** Sciences, Kannur University, India.
8. Ramakrishna Vadrevu attended and chaired session at the International Symposium on Protein Folding and Dynamics, Oct 2012, NCBS (TIFR Bangalore).

Invited Talks given by BITS faculty

1. SumanKapur, invited talk entitled “Genes, diet, environment and health at International Conference on Anthropogenic Impacts on Environment and Bioremediation (ICAIEB-2012) held at Tirupati on 26 to 28 November 2012.
2. SumanKapur, invited TEDx talk entitled “Innovatus: the Indian Style” on 25th November 2012.
3. P. Parikh, A. Sethi, S. Benedict, D. Nagendra Prasad, B. Mallik, S. Kapur, S. Deb and S. Banerjee, Effect of conductivity and viscosity in the velocity characteristics of a fluid flow induced by non-uniform ac electric field in electrolytes on microelectrodes to be presented at Cosmol Conference India 2012 being held at Bangalore from 2nd to 3rd November 2012.
4. SumanKapur, invited lecture entitled “Frugal technology: Products to cut wastefulness” during ATMOS held at BITS on 27th October 2012.
5. SumanKapur, invited lecture entitled “Frugal Technology”, delivered at NIIT Warangal on 5th September 2012.
6. Anuradha Pal, ShashwatSharad, SumanKapur, “OPRM1 gene mutations and glucose homeostasis”, accepted for presentation at the International Omics meeting to be held in Hyderabad from Sept 24th to 27th 2012.
7. SumanKapur, invited lecture entitled “Cultural aspects of research across countries”, delivered at Albert Einstein College of Medicine, New York on 19th June 2012.

8. SumanKapur, invited lecture entitled "Genes, Environment, Diet and Disease, delivered at 11th Summer Training Course being held at Manipal from 1st to 30th June 2012.
9. SumanKapur, Environment and Health: Biotechnological Approach for Screening Biohazardous Chemicals, Keynote address at the World Congress on Biotechnology 2012, held at Leonia Resorts, Hyderabad from 4-6th May 2012.
10. Punita Manga, Shivani Gupta and SumanKapur, Bioremediation of Morpholine containing Industrial Waste Water, presented at Go Green symposium held at Birla Institute of Technology Science (BITS-Pilani), Hyderabad Campus, Hyderabad, on 1st April 2012.
11. SumanKapur, invited lecture, entitled "Metabolomics: Genes, Environment, Diet and Disease delivered at National Seminar on "Omics", held at Central University of Rajasthan, Kishangarh, Rajasthan, India from 22-23rd February 2012.
12. SumanKapur, invited lecture, entitled "Careers in Research" delivered at VIT, Jaipur, India on 21st February 2012.
13. SumanKapur, invited lecture, entitled "Genes, Environment, Diet and Disease delivered at National Seminar on Recent Trends in Chemical and Biological Sciences, held at Government Holkar Science College, Indore from 13-15th January 2012.

Invited talks arranged in the department:

- Prof. K.V.R. Chary, TIFR, Mumbai) NMR of Intrinsically Structured and Unstructured Proteins" *Dr. Madhusudan Reddy Nandineni, **(Head, Lab of Genomics and Profiling Applications, CDFD, Hyderabad)** DNA profiling in crime investigations.

Awards and recognitions won by faculty and students

- Shri B. K. Birla and Shrimati Sarla Birla Chair Professor (2011-2014) in Biological Sciences.
- Sankalp Singayapally, IIIrd year student was awarded Indian Academy of Sciences Summer Research Fellowship, 2012 to carry out research at the Indian Institute of Science, Bangalore.
- Ekta Khetan was awarded the Khorana Program summer internship for summer research at the University of Illinois Urbana-Champaign, USA).

Faculty Development, International Collaboration & Industry Immersion

- Dr. Sankar Ganesh Attended the Faculty Training Programme on Teaching Learning Methodologies, at Teaching Learning Centre, Centre for Continuing Education, Indian Institute of Technology, Madras, August 20-22, 2012.

Departmental association/club activities:

- Synapsis" The Association of Biological Sciences has organized a weekly biology lecture series had organized ten lectures. Also invited two eminent scientists, Prof. K.V.R. Chary (Department of Chemical Sciences, TIFR, Mumbai) and Dr. Madhusudan Reddy Nandineni, **(Head, Lab of Genomics and Profiling Applications, CDFD, Hyderabad)**
- "Synapsis" had also participated in inaugural technical festival, ATMOS. Students organized a seminar on 'Innovation through research in Biology' in which graduate and undergraduate students from institutions in Andhra Pradesh participated. As a part of the fest, 'Hidden Engineering' and 'Hype Your Thesis', events were also included.

Major maintenance, renovations or new construction reports: N/A**Major equipment's acquired during the year:**

- Cell separator
- BIOMEK
- Liquid handling system
- High Speed Ultra Centrifuge

B3.10.2 Chemical Engineering

Department: Number of faculty members

Senior Professors, Professors	-
Associate Professors	-
Assistant Professors	7
Lecturers	-
Visiting Faculty	-

Head of the Department: Dr. I Sreedhar

Contact Details: isreedhar2001@yahoo.co.in; isreedhar@hyderabad.bits-pilani.ac.in

Sponsored Research activities:

Total number of Sponsored Projects in the department: Details are given below.

S.No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration in Years
1	Ruthenium Crossover in Direct methanol fuel cells	Dr.Balaji Krishnamurthy and Dr. Ramesh Adumasalli	ABG Group	12 lakhs	3 years

Projects sanctioned during the year

S.No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
2	Mathematical modeling of lithium ion batteries	Dr. Balaji Krishnamurthy	BITS Pilani seed grant	2 Lakhs	1 year

Conferences attended/papers presented

1. I.Sreedhar, Manvendra Singh, Swapnil Srivastava, "A Review on Toluene Nitration Methods", AP Academy of Sciences, Special Issue, Dec 2012.
2. I.Sreedhar, P.Srinivas, "Drag Reduction Effects using Hydroxy Propyl Methyl Cellulose, ", Chemical Engineering Communications, 2012 (Communicated)
3. I.Sreedhar, Manvendra Singh "Recent Advances in Water Treatment", Proceedings of the National Conference on Water Purification Technologies and Management (InDACon 2012), Mumbai, Feb 8-9 (2012).
4. I.Sreedhar, Manvendra Singh and Arun Tomar, "Applications of CFD in Chemical Engineering", Proceedings of the National Conference on Recent Advances in Chemical Engineering (RACE), Jalgaon, Feb 4, 2012
5. I.Sreedhar, Akhila Gollakota and Harini Kantamaneni, "Process Standardization of zeolite catalyzed Acylation of Anisole" *Proceedings of International Symposium & 65th Annual Session of IChE in association with International Partners (CHEMCON 2012)*, Jalandhar, India, Dec 27-30 (2012) .
6. Srikanta Dinda, Anand V. Patwardhan, and Narayan C. Pradhan, Selective epoxidation of natural triglycerides using acidic ion exchange resin as catalyst. *Asia Pacific Journal of Chemical Engineering*, 2011, 6 870–878.

7. Coupling agents used in natural fibre reinforced polypropylene Composites D. Purnima, Jigyasa Kapoor Conference on "Technological Advancements in Chemical and Environmental Engineering (TACEE – 2012)", March 23-24, 2012, BITS Pilani, Pilani Campus.
8. Production of polymers from agricultural waste D. Purnima, Ruheena Ansari Conference on "Technological Advancements in Chemical and Environmental Engineering (TACEE – 2012)", March 23-24, 2012, BITS-Pilani, Pilani Campus.
9. Polymer Composites used in making Windmill Turbine Blades Dr. D. Purnima, Ms. Ruheena, Indo-Danish International Conference On Wind Energy: Materials, Engineering and Policies (WEMEP-2012) November 22-23, 2012, BITS-Pilani Hyderabad Campus

Patents:

- Dr. Karthik Chethan Chewing Gum Elastomers from Soy Protein Fractions (US Patent Filed, 2012 Application No. 13420751). Mo. X., Liu, J. and Greenberg, M. (Wrigley, Inc.), Sun, X. S., Qi, G., Venkateshan, K. and Zhang, L. (Kansas State University).
- S. Dinda, P. K. Chinthala, A. Gohel, A. Yadav, S. Mandal, G. Ravichandran and A. K. Das, Process and Composition of a New Catalyst/Additive for Reducing Fuel Gas Yield in Fluid Catalytic Cracking (FCC) Process. Patent No: WO2013005225
- G. Ravichandran, P. K. Chinthala, T. Doshi, A. Gohel, A. Arusu, S. Mandal, A. K. Das, S. Dinda and A. Parekh, FCC catalyst additive and a method for its preparation. Patent No: EP 2548644, WO 2013011517, US 20130023710

Conferences attended

- R.B. Adusumalli. Understanding fibre-matrix bonding in natural fibre reinforced composites used in wind energy applications. Indo-Danish International conference on Wind energy: Materials, Engineering, and Policies, BITS Pilani Hyderabad campus, Hyderabad, India, 2012.
- S.V.S.S. Vamsi Krishna, R. Sunil Kumar, E. Vaishnavi, S. Sushma, R.B. Adusumalli, S. Dinda, I. Sreedhar, P. Sankar Ganesh. Treatment and Disposal of Municipal Solid Waste in Third world Countries: A Critical Review. National Conference on Environment & Biodiversity of India, New Delhi, 2012.

In Peer-Reviewed International Journals

- S. Dinda. Development of Solid Adsorbent for Carbon Dioxide Capture from Flue Gas, *Journal of Separation and Purification Technology*, Ref. No.: SEPPUR-D-12-00741R1, under review 2012,

In Peer-Reviewed National Journals

- S.V.S.S. Vamsi Krishna, E. Vaishnavi, S. Sushma, R. Sunil Kumar, I. Sreedhar, P. Sankar Ganesh, S. Dinda, R.B. Adusumalli, Treatment and Disposal of Municipal Solid Waste in Third world Countries: A Critical Review, **NeBio, an international journal of environment & biodiversity**, accepted for publication 2012.
- A capacity fade model for lithium ion batteries including diffusion and kinetics, Shrihari Sankarasubramanian and Balaji Krishnamurthy, *Electrochimica Acta*, , 70, (2012), 248-254 , 2012.

Books Published/Edited during the year:

- R.B. Adusumalli, T. Roeder, W. Gindl. Characterisation of Lyocell and Flax Single Fibres and their Nonwoven Composites. *GRP mission News & Views* 2012; 6(2);51-56.
- R. Raghavan, R.B. Adusumalli, G. Buerki, S. Hansen, T. Zimmermann, J. Michler. Deformation of the compound middle lamella in spruce latewood by micro-pillar compression of double cell walls. *Journal of Materials Science* 2012; 47(16):6125-6130

Publication in National Conferences:

- S.V.S.S. Vamsi Krishna, E. Vaishnavi, S. Sushma, R. Sunil Kumar, I. Sreedhar, P. Sankar Ganesh, S. Dinda, R.B. Adusumalli, Treatment and Disposal of Municipal Solid Waste in Third world Countries: A Critical Review, **EBI conference, 29-30th December 2012, New Delhi**.
- Srikanta Dinda, Ritesh Bindal, Epoxidation of Neem Oil by In Situ Generated Peroxyacetic Acid, CHEMCON-2012, Jalandhar, India; 27-30 December 2012.
- A capacity fade model for lithium ion batteries, Shrihari Subramaniam and Balaji Krishnamurthy, *Electrochimica Acta*, 70, (2012), 248-254 (Impact factor 3.8).

Invited Talks given by BITS faculty:**Dr. I Sreedhar**

- Attended Academic Council Meeting at Osmania University in Jan 2013
- Went as an External Examiner for PhD Thesis at NIT Surat

Invited talks arranged in the department

- Dr. Ramesh Babu. A reviewed article for Bio Resources (Impact factor: 1.4)
- Ramesh Babu A Characterisation of Natural fibres for Composite applications. National Conference on Recent Advances in Composites (NCRAC 2012). Organised by Fibre glass industries association of Andhra Pradesh and FRP Institute Chennai. June 15-16, 2012, Hotel Tajdeccan, Hyderabad.
- Dr. Ramesh Babu. ADAC (Doctoral Advisory committee) member, Department of Biology, BITS Pilani Hyderabad Campus, Hyderabad (December 2012)
- V., Karthik Chethan., Development of Bio-based Composites for Bioplastics, Foundry and Encapsulation Applications. International Conference on Wind Energy: materials, Engineering and Policies (WEMEP 2012), November 23, 2012, Department of Chemical Engineering, BITS-Pilani, Hyderabad Campus, India.

Departmental association/club activities:

- In Charge of the ACE newsletter from Jan 2012- Aug 2012.
- Placement in charge for the department.
- The Association of Chemical Engineers has started the local chapter of IICHEat BITS Hyderabad.
- Green conference was conducted in 2012.
- Invited talk by Dr. D P Rao, Managing Partner of PIC, Hyderabad, Nov 2012.
- Tech Fest 2012, Department of Chemical Engineering, BITS Pilani Hyderabad Campus included activities such as, Technical Paper Competition talk by Dr. Sathyanarayana Subrahmanyam, Biologics Department, Dr. Reddy's, Hyderabad, OCT 2012.
- Industry visit to DuPont, India, Oct 2012.
- Industry visit to Dr. Reddy's, Hyderabad, Jan 2013.
- ASPEN and FLUENT workshop for students Jan 2013 to April 2013

Major maintenance, renovations or new construction reports

Department labs: The following are the labs existing in Chemical Engineering Department

- The Kinetics and Reaction Engineering lab was established in the year 2011. Five equipment namely Batch reactor, Continuous Stirred Tank reactor (CSTR), Plug Flow reactor (PFR), Cascaded CSTR and PFR and CSTR in series was established.
- The environmental engineering lab was established in the year 2011. The following instruments are available in the lab: Digital pH meter, Digital conductivity meter, Ion analyser, Dissolved oxygen meter, Turbidity meter, UV visible spectrophotometer, Calorimeter, BOD incubator, Gas chromatograph, water bath shaker and electronic balances.
- A state of the art Process Control Lab was established in the year 2011. The following equipment was established and demonstrated - Level/flow process control rig, Temperature process control rig, Pressure process control rig, pH process control rig.
- Kinetics and Reaction Engineering, Special operations in Chemical Engineering and Transport Phenomena and Heat Transfer labs have already been established.
- Advanced separation Laboratory
- Selected Chemical Engineering Operation Laboratory

Following are the labs added in Chemical Engineering Department. This brings the total number of labs in the Department to eight.

- Research Laboratory
- Petroleum Laboratory

Major equipments acquired during the year: NA

B3.10.3 Chemistry

Number of faculty members: 14

Senior Professors, Professors	1
Associate Professors	1
Assistant Professors	12
Lecturers	-
Visiting Faculty	-

Head of the Department: Dr. K. Sumithra

Contact details: sumithra@hyderabad.bits-pilani.ac.in

Number of PhD Scholars: 16

Sponsored Research activities: Ongoing projects:

S. No.	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
1.	Novel synthetic approach to p-type (Nano) Transparent Semiconducting Oxides of Delafossite type structure by soft chemistry routes and the study of their properties	Dr. R. Srinivasan	DST SERB	21.8 Lakhs	3 Years
2.	Synthesis and Pharmacological Evaluation of Various Indole Analogues for the Treatment of Schizophrenia.	Dr. K V G Chandra Sekhar	DSR Fast track scheme	18.28 lakhs	3 Years
3.	Synthesis and Pharmacological Evaluation of Bishomo(hetero) arylpiperazines as atypical antipsychotic agents	Dr. K V G Chandra Sekhar	UGC	6.44 lakhs	3 Years
4.	Laboratory investigation and field application toward the effective defluoridation of water using appropriately tailored sorbents	Dr. N. Rajesh	DST	26.67 Lakhs	3 Years
5.	Chemically modified polymeric sorbents for the removal of precious palladium from industrial wastes	Dr. N. Rajesh	UGC	4.7 Lakhs	3 Years
6.	Synthesis of some selected nitrogen	Dr. Anupam	DST FT	18.78	

S. No.	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
	based heterocycles as potential anti tubercular agents	Bhattacharya		Lakhs	3 years
7.	Adsorption and freezing of heteropolymers on disordered surfaces: a model for biomimetic recognition"	Dr. K. Sumithra	DST	33.6 Lakhs	3 years
8.	Developing supramolecular complexes for solar energy conversion and hydrogen generation	Dr. R. Krishnan		13.80 Lakhs	3 years
9.	Optical and semiconducting molecular materials based on tetrathiafulvene, tetracyanoquinodimethane and their polymer templates	Dr.J.Subbalakshmi		22.25 Lakhs	3 years
10	Investigations on synthetic and catalytic reactions of unsaturated organophosphonates with oxaziridines	Dr. Manab Chakravarty	DST FT	19.93 lakhs	3 years

Projects sanctioned during the year

S. No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
1	DST-FIST grant		DST& BITS	90 lakhs	
2	Photocurable organic-inorganic hybrid precursors for the fabrication of metal oxide micro/nanostructures	Dr. Ramakrishnan Ganesan	DST	Details not yet received.	3 years
3	Metal selective fluorescence modulation of biologically important chromophores: Effect of micellar charge, pH, and solvent	Dr. Amit Nag	BITS RIG	2 lakhs	2 years
4	Ultracold chemistry of the early universe.	Dr Subhas Ghosal	DST	21.6 lakhs	3 yrs
5.	Dynamics of cryogenic reactions	Dr Subhas Ghosal	BITS RIG	2 Lakhs	2 yrs
6.	Synthesis and Biological Activity of Various Triazoles as Effective Antifungal Agents.	Dr. K V G Chandra Sekhar	DBT	19.56 lakhs	3 years
7.	Investigation of magneto-optical effect in composite magneto-plasmonic nanostructures for sensing applications	Dr. Balaji Gopalan and Dr. Krishnan are Co-PIs	DST	35 Lakhs	3 years

Publications

1. Banik, M.; El-Khoury, P. Z.; Nag, A.; Rodriguez-Perez, A.; Guarrotxena, N.; Bazan, G. C. and Apkarian, V. A. "Surface enhanced Raman trajectories on a single nanodumbbell: The transition from field to charge transfer plasmons during the fusion of the spheres" *ACS Nano* 2012, 6(11), 10343.
2. Banik, M.; Nag, A.; El-Khoury, P. Z.; Rodriguez-Perez, A.; Guarrotxena, N.; Bazan, G. C. and Apkarian, V. A. "Surface-enhanced Raman scattering of a single nano-dumbbell: dibenzyl-dithio-linked silver nanospheres" *Journal of Physical Chemistry C* 2012, 116(18), 10415.
3. Gangaram Palikonda and Manab Chakravarty*. FeCl₃-Mediated Arylation of α -Hydroxyphosphonates with Unactivated Arenes: Pseudo-umpolung in Allylic Phosphonates, *European Journal of Organic Chemistry*, Wiley Publishers, 2012, DOI: 10.1002/ejoc.201201352 (just accepted for publication) (From BITS, Pilani)
4. Sridevi Kona, Venkata N. R. Chava, Rama Suresh Ravi, Ramu Sridhar P, Manab Chakravarty * An Efficient One Pot Synthesis of Carbazole-Based α -Aminophosphonates under Solvent-Free and Catalyst-Free Conditions, *Der Chemica Sinica*, (Pelagia Research Library), 2012, 3, (3):548. (From BITS, Pilani)
5. Sridevi Kona, Rama Suresh Ravi, Manab Chakravarty* and Venkata N.R. Chava Phosphine-Free Palladium-catalyzed Direct α -Arylation of 2-Phenylimidazo[1,2-*a*]pyridine using silver(I) carbonylate, *Journal of Chemistry*, Hindawi Publishers, 2012, *Journal of Chemistry* Volume 2013 (2013), Article ID 305934. (From BITS, Pilani)
6. Chandra Sekhar, K.V.G., Vyas, D. R. K., H N Nagesh, Rao. V.S., Pharmacophore Hypothesis for Atypical Antipsychotics. *Bull. Korean Chem. Soc.* 2012, 33 (9), 2930-2936.
7. Chandra Sekhar, K.V.G., Rao V.S., Conrad W. D., Nagesh, H. N., Sreedhar Kumar, V., Divya Sridhar., Brust P., Murali Krishna M., Synthesis, Preliminary *in vitro* and *in vivo* pharmacological evaluation of 4-[2-(4-(2-substitutedquinoxalin-3-yl)piperazin-1-yl)ethyl]phenylthiazoles as atypical antipsychotic agents. *Med. Chem. Res.* DOI 10.1007/s00044-012-0164-1.
8. Jayanty, S., Akutagawa, T., Nakamura, T. *Cryst. Eng. Comm.* 2012, 12, 4087-4090. Hydrogen bonding Maleate anions as counter anion of tetrathiafulvalene crystals.
9. A.Santhana Krishna Kumar, S. Kalidhasan, V. Rajesh, N. Rajesh, Application of cellulose-clay composite biosorbent toward the effective adsorption and removal of chromium from industrial wastewater, *Ind. Eng. Chem. Res.* 51, 2012, 58-69.
10. A.Santhana Krishna Kumar, Revathi Ramachandran, S. Kalidhasan, Vidya Rajesh, N. Rajesh, Potential application of dodecylamine modified sodium montmorillonite as an effective adsorbent for hexavalent chromium, *Chem. Eng. J.* 211-212, 2012, 396-405.
11. A.Santhana Krishna Kumar, Timsi Gupta, Shruti Singh Kakan, S. Kalidhasan, Manasi, Vidya Rajesh, N. Rajesh, Effective adsorption of hexavalent chromium through a three centre (3c) co-operative interaction with an ionic liquid and biopolymer. *J. Hazard. Mater.* 239-240, 2012, 213-224.
12. A.Santhana Krishna Kumar, S. Kalidhasan, V. Rajesh, N. Rajesh, A meticulous study on the adsorption of mercury as a tetrachloromercurate(II) anion with trioctylamine modified sodium montmorillonite and its application to a coal fly ash sample, *Ind. Eng. Chem. Res.* 51, 2012, 11312-11327.
13. S. Kalidhasan, Vinusha Reddy Chollety, Priyanka Amba Gupta, A. Santhana Krishna Kumar, Vidya Rajesh, N. Rajesh, Microwave assisted solvent free green preparation and physicochemical characterization of surfactant-anchored cellulose and its relevance toward the effective adsorption of chromium, *J. Colloid Interface Sci.* 372, 2012, 88-98.
14. S. Kalidhasan, A. Santhana Krishna Kumar, V. Rajesh, N. Rajesh, Ultrasound-assisted preparation and characterization of crystalline cellulose-ionic liquid blend polymeric material: A prelude to the study of its application toward the effective adsorption of chromium, *J. Colloid Interface Sci.* 367, 2012, 398-408.
15. S. Kalidhasan, A. Santhana Krishna Kumar, Vidya Rajesh, N. Rajesh, An efficient ultrasound assisted approach for the impregnation of room temperature ionic liquid onto Dowex 1 \times 8 resin matrix and its application toward the enhanced adsorption of chromium (VI). *J. Hazard. Mater.* 213-214, 2012, 249-257.
16. Radhakrishnan Srinivasan* and Sathish Bolloju, Optical Properties of undoped and Mg-doped Delafossite CuCrO₂ powders synthesized by Sol-Gel route - manuscript submitted to AIP Conference proceedings (2nd International Conference on Optoelectronic Materials and Thin Films for Advanced Technology (OMTAT 2013), Jan 3-5, 2013, Cochin, Convenor – Dr. M.K.Jayaraj).

17. *A Mechanistic Study of Alcohol Dehydration on γ -Al₂O₃* Roy Sounak; Mpourmpakis, G.; Vlachos, D. G.; Bhan, A.; Gorte. R. J. *ACS Catalysis* doi: 10.1021/cs300176d
18. Ganesan, R., Dinachali, S.S., Saifullah, M.S.M., Chong, W.T., Lim, A.H.H., Yong, J.J., Thian, E.S., He, C., Low, H.Y., 2012. Direct nanoimprint lithography of Al₂O₃ using a chelated monomer-based approach *Nanotechnology* 23, 315304.
19. Kundu, S., Ganesan, R., Gaur, N., Saifullah, M.S.M., Hussain, H., Yang, H., Bhatia, C.S., 2012. Effect of angstrom-scale surface roughness on the self-assembly of polystyrene-polydimethylsiloxane block copolymer *Sci. Rep. (Nature Publishing Group)* 2, 617.
20. B. Arun, S. Jayanty and P. Raghavaiah Abundant short interactions in the novel 1:2(TTF)(2-Amino-6, nitrobenzothiazole)charge transfer complex *Manuscript communicated*.
21. T. Vikramaditya and K. Sumithra New Insights in the adsorption of oxygen molecules on single walled carbon nanotubes. *Manuscript communicated*.
22. K. Sumithra, Selective adsorption and pattern recognition of multiblock copolymers on chemically patterned heterogeneous surface, *manuscript communicated*.
23. A. Bhattacharya *Synthesis of Aplidiopsamine A and its application as a general route for synthesis of 4-substituted pyrrolo[2, 3-c]quinolines (communicated to Tetrahedron Letters)*.

Conferences attended/papers presented

1. Prof V S Rao, participate in the 2nd Digital Learning World Education Summit '12 in New Delhi.
2. Prof V S Rao was also as a speaker in India Education Summit 2012, Hyderabad.
3. N.Suresh, H.N.Nagesh, K.Mahalakshmi Naidu, K.V.G. Chandra Sekhar, Design and Synthesis of 1-cyclopropyl-6-fluoro-4-oxo-7-(4-substituted piperazin-1-yl)-1,4-dihydro quinoline-3-carboxylic acid derivatives as anti tumor agents, 6th Midyear CRSI Symposium in Chemistry, CDRI Lucknow, 21-22 July 2012.
4. H.N. Nagesh, N.Suresh, K. Mahalakshmi Naidu, V.S. Rao, K.V.G. Chandra Sekhar, Synthesis of Phenanthridinyl piperazines as novel Dopamine D₂ antagonists. 14th CRSI National Symposium on Chemistry, CSIR-NIIST, Thiruvananthapuram, 03-05 Feb. 2012
5. K. Sumithra, Adsorption and recognition of copolymers on chemically patterned, heterogeneous surfaces Third International Multicomponent Polymer conference (IMPC) 2012, 23-25 March 2012 at Mahatma Gandhi University, Kottayam, Kerala
6. K. Sumithra, Selective adsorption and pattern recognition of multiblock copolymers on chemically patterned heterogeneous surfaces, 3rd International Conference on Natural Polymers, Bio Polymers (ICNP 2012), Kottayam, October 2012.
7. Radhakrishnan Srinivasan⁺ and Sathish Bolloju, Optical Properties of undoped and Mg-doped Delafossite CuCrO₂ powders synthesized by Sol-Gel route – Poster presented at 2nd International Conference on Optoelectronic Materials and Thin Films for Advanced Technology (OMTAT 2013), Jan 3-5, 2013, Cochin.
8. Satish Bolloju, D. Maheswaran and R.Srinivasan⁺, Delafossite CuAlO₂ – A comparison between the solid state and sol-gel synthetic routes – Abstract accepted for poster presentation at 15th CRSI - National Symposium in Chemistry, Feb 1– 3, 2013, IT-BHU, Varanasi.
9. R. Srinivasan⁺ and D. Maheswaran, ZnO Nanowires by thermal decomposition of Zinc Acetate Dihydrate – An Analysis: Abstract accepted for oral presentation at National Conference on Advanced Functional Materials (NCAFM), Jan 21-23, 2013, VNIT Nagpur.
10. Rajesh Kannan, B.HariVenkatraman, S.Kalidhasan, A.S.K.Kumar, N.Rajesh, Study of the interesting physical properties of biopolymer-strontium titanate nanocomposites, International Conference on Nanoscience and Technology, organized by ARCI, Hyderabad, Jan 20-23, 2012.
11. A.Santhana Krishna Kumar, S. Kalidhasan, V. Rajesh, N. Rajesh, Cellulose impregnated with mercaptobenzothiazole for the effective adsorption of mercury from aqueous solution, CRSI National symposium in Chemistry (NSC-14) NIIST, Trivandrum, Feb 2-5, 2012.
12. A.Santhana Krishna Kumar, C.Uday Kumar, V. Rajesh, N. Rajesh, Graft Polymerization of n-butylacrylate onto chitosan for the remediation of hexavalent chromium, National Conference on "Chemistry for Sustainable Development" (SusCon-2012), GITAM University, Vizag, October 10-11, 2012.
13. S. Ghosal, Theoretical chemistry symposium December 2012, at IIT Guwahati.

14. N. Rajesh, A. Santhana Krishnakumar, "Long Chain Amine Impregnated Exfoliated Graphene Oxide for the Effective Removal of Chromium from Tannery Wastewater" at the Singapore International Chemistry Conference (SiCC 7) at National University of Singapore held during Dec 16-19, 2012.

Invited Talks given by BITS faculty

1. K. Sumithra, Adsorption and recognition of copolymers on chemically patterned, heterogeneous surfaces, Third International Multicomponent Polymer conference (IMPC) 2012 to be held from 23-25 March 2012
2. K. Sumithra, Selective adsorption and pattern recognition of multiblock copolymers on chemically patterned heterogeneous surfaces 3rd International Conference on Natural Polymers, Bio Polymers (ICNP 2012), Kottayam, October 2012.
3. N.Rajesh, Tailored Polymeric Sorbents for Environmental Remediation of Heavy Metals, 3rd International Conference on Natural Polymers, Bio Polymers (ICNP 2012), Kottayam, October 2012.
4. N.Rajesh, Polymeric composites and their relevance in environmental remediation, National Seminar on New Frontiers in Scientific Research, Andhra Loyola College, Vijayawada, Feb 2012.
5. N.Rajesh, Emerging trends in the application of biopolymer composites, National Conference on Advanced Nanomaterials, Periyar University, Salem, Feb 2012.
6. J. Subbalakshmi, Optical materials based on Tetracyanoquinodimethane, Invited Talk given at the Post graduation centre for maths and sciences. Govt. College(Autonomous) Rajahmundry, on October 25th, 2012.

Invited talks arranged in the department

- Prof. T.P. Radhakrishnan, School of Chemistry, University of Hyderabad, presented a talk on "Polymer-metal nano composites via chemistry inside a thin film, " on Sep. 4, 2012.
- Prof. Suresh Valiyaveetil, National University of Singapore, presented a talk on "Synthesis and characterization of functional materials" on Sep.22, 2012.

Awards and recognitions won by faculty and students

1. Dr. Amit Nag and Dr. Subhas Ghosal are selected under the scheme "bilateral collaborative exchange programme by INSA" to visit Germany for 3 months in 2013.
2. Dr. J. Subbalakshmi was the Invited Judge for in Andhra Pradesh "Science fair" conducted by Dr. K.V.Rao Scientific society on December 4th 2012.
3. Dr. N. Rajesh visited as external examiner for a Ph.D. Thesis entitled " Biosorption of copper using neem leaf powder" at the University of Nottingham, Malaysia campus on Nov 18, 2012

Faculty Development, International Collaboration & Industry Immersion

- Dr. K. V. G. Chandrasekhar established an international collaboration with Institute of Radiopharmacy, Leipzig, Germany

Significant new equipments/experimental facility added during the year:

- Dr. J. Subbalakshmi Procured Keithly make multimeter(1.06)lakhs through project and Sartorius balance (1.53lakhs) with high precision.

Departmental association/club activities:

- The chemistry association conducted two important invited lectures (see VI)

Major maintenance, renovations or new construction reports

- A new Instrumentation lab and a computational chemistry lab have been set up.

Major equipments acquired during the year:

- Dr. K. Sumithra procured high performance compute cluster (IBM) with 48 cores worth ~16 lakhs and a high performance Lenovo Think Station (~1.3 lakhs)

B3.10.4 Civil Engineering

Number of faculty members

Senior Professors, Professors	2
Associate Professors	-
Assistant Professors	8
Lecturers	1
Visiting Faculty	

Head of the Department: Dr Chandu Parimi**Contact details:** 040-66303592 Email: parimi@hyderabad.bits-pilani.ac.in**Number of PhD Scholars:** 2**Sponsored Research activities:**Ongoing projects:

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
1.	Multi objective Reservoir Optimization Using Swarm Intelligence Algorithms	Dr. A.Vasan	CSIR	11.18 Lakhs	3 years
2.	Experimental and Numerical Investigations on Sandwiched Modular Multilayer Self Compacted Cement Concrete Pavements	Dr. VR Vinayaka Rao (PI) Dr. MVN Sivakumar (CO-PI) Dr. A.Vasan (Co-Investigator) Mr. M Venu (Co-Investigator)	ABG	10 Lakhs	2 Years

Projects sanctioned during the year

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
1.	Collaborating for quality teaching and research in the area of computational mechanics (Knowledge Economy Partnership)	Chandu Parimi	British Council	8 Lakhs	1 year
2.	Fourier Analysis and Development of Two-Dimensional Finite Element Schemes for Shallow Water Equations and Transport Related Systems	Jagadeesh Anmala	DST	11 Lakhs	3 years
3.	Multicriterion Analysis for Ranking of Various General Circulation Models to Study Water Resources of India	K.Srinivasa Raju	CSIR	16.22 Lakhs	3 years

Publications:

1. Tripathi, Satyendra and A. Vasan, Study of Agroclimatic Conditions of Nagarjuna Sagar Reservoir to Reduce Vulnerability Using Sustainable Management Practices, *Journal of Ecosystem & Ecography*, 2 (4), 175, 2012 (doi:10.4172/2157-7625.S1.009).
2. Hyung-II Eum, A.Vasan and Slobodan P. Simonovic, Integrated Reservoir Management System for Flood Risk Assessment Under Climate Change, *Water Resources Management*, 26(13), 3785-3802, 2012.
3. Srinivasa Raju, K, A. Vasan, Piyush Gupta, Karthik Ganesan and Hitesh Mathur, Multiobjective Differential Application to Irrigation Planning, *ISH Journal of Hydraulic Engineering*, Taylor & Francis, 18(1), 77-93, 2012.
4. Anmala, J., V. Kapoor. Mixing and Bimolecular Reaction Kinetics in a Plane Poiseuille Flow, *Flow, Turbulence and Combustion*, 88, 387-405, 2012.
5. Venu Malagavelli and Neelakanteswara Rao Paturu, "Strength and Workability Characteristics of Concrete By Using Different Super Plasticizers", *International Journal of Materials Engineering*, Vol. 2(1), pp 7-11, 2012. DOI: 10.5923/j.ijme.20120201.02
6. Sivakumar M V N, Rao B N, Satishkumar S R.(2012), "The Effect of Pressure Induced Hoop Stress on Bi-Axially Loaded Through Wall Cracked Cylindrical Structures – A Strain Based Method", *Applied Mechanics and Materials*, Vol.110-116, pp.1525-1530.
7. Sivakumar M V N. (2012), 'Performance Characteristics of Carbon - Nanofiber Blended Self Compacting Concrete ', *International Journal of Advanced Structural Engineering*, Vol.3 (2),pp.179-186.
8. Vinayaka Rao VR, Sidharth Srivastav (2012), "Towards development of sustainable bitumen binder for pavement applications - an experimental investigation with poly phosphoric acid - sodium sulphide blended polymer" *International Journal of Engineering Science (In review)*

Conferences attended/papers presented:

1. Tripathi, Satyendra and A Vasan, *Global Peace a Climate Change Conflict: A Gandhian Approach*, Proceedings of Gandhirama 2012: A Feast of Ideas and a Festival of Art, August 17-22, 2012, Published by Indian Council of Philosophical Research, New Delhi, India, pp. 169.
2. Vasan, A and Ashoka Vardhan, *Self-adaptive Differential Evolution Algorithm for Pipe Network Optimization*, Proceedings of Asia Oceania Geosciences Society AOGS-AGU (WPGM) Joint Assembly, August 13-17, 2012, Singapore.
3. Vasan, A, *Particle Swarm Optimization for Design of Water Distribution Systems*, Proceedings of International Conference on Mathematical and Computation Methods in Science and Engineering, June 27-28, 2012, Paris, France.
4. Venu Malagavelli and P. N. Rao, "*Durability and Strength Characteristics of Fiber Reinforced Concrete*", Proceedings of 11th International Conference on Concrete Engineering and Technology 2012 (CONCET 2012), June 12 – 13, University of Malaya, Malaysia, pp. 188 – 193 (ISBN 978-967-0380-12-4).
5. G. Mithun Murthy and M. Venu, "*Recent Advances in Recycled Aggregate Concrete – A Review*", Proceedings of International Conference on Advances in Architecture and Civil Engineering 2012 (AARCV 2012), June 21 – 23, M.S. Ramaiah Institute of Technology, Bangalore, India, Vol. 1, pp. 72 – 76 (ISBN 978-93-82338-01-7).
6. Sivakumar M V N, Rao B N. "Reference Strain Based Fracture Analysis of Through wall Cracked Pipes Subjected to Bi-axial Loading", *International Congress on Computational Mechanics and Simulation (ICCMS)*, IIT Hyderabad, 10-12 December 2012.
7. Sivakumar M V N, Rao B N. "Fracture Analysis of Off-centered Cracked pipes using HDMR Coupled fast Fourier transform", *The 10th world congress on computational mechanics (WCCM 2012)*, Sao Paulo, Brazil, 8 -13 July 2012.
8. V. Venkataramayya, V R Vinayaka Rao, Prof. Krishnayya "Indegenous development of Shear Asphalt Rheometer", *The International Conference on Advances in Materials and Techniques for Infrastructure Development (AMTID 2011)*, Sepetember 28-30, 2011

Invited Talks given by BITS faculty:

1. K.Srinivasa Raju, a panel member for brain storming session/workshop on climatic impact studies held at Department of Civil Engineering, Indian Institute of Technology, Madras, Chennai on March 28th, 2012
2. K.Srinivasa Raju, delivered invited lecture on “Cluster Analysis : An Efficient Approach for Data Mining” during the National Conference held at Vasavi College of Engineering, Hyderabad on May 8, 2012.
3. K.Srinivasa Raju, Delivered expert lectures on Multiobjective Optimization and Multicriterion Decision Making during One week TEQIP - STTP on “Genetic Algorithm and Neuro Fuzzy Applications in Engineering (GANEUF AE-2012)”at Department of Civil Engineering, Government Engineering College, Aurangabad on December, 18,2012
4. Vinayaka Rao V R, Delivered Er. Koka Krishna Mohan Rao Twenty Second Endowment Lecture on Failure of Highway Pavements on April 23, 2012 at Institution of Engineers (I), Hyderabad on invitation
5. Vinayaka Rao V R, Delivered a key note address on “Transportation Engineering” at CBIT, Hyderabad for a National Convention for students conducted during 16-17, March 2012
6. Vinayaka Rao V R , Participated as a member for a round table conference on concrete roads and white topping with three other experts from USA Mr. Sunil Vanikar, Dr. Van Dam and Dr. Gajanan Sabnis on 24th February 2011 on invitation by M/s Ultra Tech Cements at Hotel Green Park, Greenlands, Hyderabad.

Invited talks arranged in the department: NA**Awards and recognitions won by faculty and students**

- Prof K S Raju listed among 150 Most Cited Civil Engineering Authors (Source: Google Scholar)
- Faculty Development, International Collaboration & Industry Immersion
- Significant new equipments/experimental facility added during the year:
- Six Spindle Jar test Apparatus -Environmental lab
- Physical Models of different water resources and irrigation models as teaching aids
- Complete set of equipment for Self compacting concrete have been purchased and added in to the laboratory from the research project granted to Dr. V R Vinayaka Rao and team.

Departmental association/club activities:

Date	Topic	Speaker
28.09.2012	Introduction of BASF-Admixture, Repair, Strengthening, Flooring, Waterproofing, Expansion Joints etc.	Priyanka Patra
28.09.2012	Sustainable Building Solution	Priyanka Patra
5.10.2012	Repair and Rehabilitation using Fibre Reinforced Polymer	Mr. Santosh A C
26-10.2012	Technical session on Revit Architecture	Autodesk
27.10.2012	Paper presentation related to different disciplines of Civil Engineering	

Major maintenance, renovations or new construction reports: NA**Major equipments acquired during the year: NA**

B3.10.5 Computer Science and Information Systems

Number of faculty members

Senior Professors, Professors	-
Associate Professors	1
Assistant Professors	5
Lecturers	7
Visiting Faculty	2

Head of the Department: Dr. R.Gururaj, Asst. Professor & HoD of CSIS Dept.

Mobile: 09490745694 Office: 040-66303525

Email: gururaj@hyderabad.bits-pilani.ac.in**Number of PhD Scholars:** Regular Scholars: 7; Faculty Pursuing PhD- 8 (Including 2 PS Faculty);
Off-campus-1**Sponsored Research activities:****Ongoing projects:**

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
1	Efficient Peer-to-Peer Overlay Infrastructure for Secure Computing over the Internet	Dr. Chittaranjan Hota	University Grants Commission (UGC)	10.38 Lakhs	
2	Automated Detection of Security and Privacy Threats in Peer-to-Peer Networks	Dr. Chittaranjan Hota	Ministry of Communication & Information Technology, Govt. of India, New Delhi	61.95 Lakhs	

Projects sanctioned during the year: NIL**Publications:**

1. G Geethakumari and Abha Belorkar, "Regenerating Cloud Attack Scenarios using LVM2 based System Snapshots for Forensic Analysis", **2012**. International Journal of Cloud Computing and Services Science (IJ-CLOSER), Vol.1 No.3, ISSN: 2089-3337.
2. G Geethakumari and Agrima Srivastava, 2012. "Big Data Analysis for Implementation of Enterprise Data Security", International Journal of Computer Science, Information Technology, & Security (IJCSITS) Vol.2, No.4, ISSN: 2249-9555 (Online), 2250-1355 (Print).
3. Sreeja T, Chittaranjan Hota, and A. Yla Jaaski, 2012, Tag-based Improved Search in Peer-to-Peer Overlays, *Int. J. Computer Applications*, Vol. 49.
4. Haribabu K, Chittaranjan Hota, and A Paul, 2012. A method to detect Sybil groups in Peer-to-Peer overlays, *Int. J. Grid and Utility Computing*, IJGUC, Vol. 3, Nos. 2/3, Inderscience, pp. 145-156.
5. Chittaranjan Hota, Vikram Nunia, and Antti Yla-Jaaski, 2012. Distributed Algorithms for Improving Search Efficiency in P2P Overlays, *International Journal of Computer Network and Information Security*, IJCNIS, Vol. 4, No. 3, pp. 1-7.

6. Dhaval Moliya, Rusheel Jain, Vakul Mohanty and Chittaranjan Hota, 2011. Probabilistic Anonymous Routing in Mobile Ad-Hoc Networks, Special Issue of International Journal of Computer & Communication Technology (IJCCT) Vol-2, Issue-5 First Student Research Symposium in conjunction with Seventh ICDCIT 2011, pp.6-12.
7. S Bansal, B Kothari, and Chittaranjan Hota, March 2011. Dynamic Task Scheduling in Grid Computing using Prioritized Round Robin Algorithm, International Journal of Computer Science Issues, 8(2).
8. M. Sreevani, M. Aruna, S. Rajashree, O.Yaswanth Babu, 2010. A Hybrid Intelligence system for Web Mining, International Journal of Computer Engineering & Computer Applications, Volume No 1, Issue No 1, page no 6-12.
9. Aruna Ranganath, 2010. A novel algorithm for small molecule docking, International Journal of Computer Engineering & Computer Applications , Volume No 1, Issue No 1, page no 37-45.
10. Kayiram Kavitha, Cheemakurthi Ravi Teja and Dr.R.Gururaj, March 2012. "WORKLOAD-AWARE TREE CONSTRUCTION ALGORITHM FOR WIRELESS SENSOR NETWORKS", International journal on applications of graph theory in wireless ad hoc networks and sensor networks (GRAPH-HOC) , pp 1-14, Vol.4, No.1.

Conferences attended/papers presented:

1. Soumya S Chatterjee, Jatin Jani, and Dr. R. Gururaj, 2012. "Task Dependency Identification and Dependency-Aware Scheduling for Lazy-Parallel Calls", International Conference on Information Engineering, Singapore. Lecture Notes in Information Technology, pp. 141-147, Vol.25
2. Soumya S Chatterjee and Dr. R. Gururaj, 2012. Overhead-Aware Composition of Parallel Components Using Lazy-Parallel Function Calls", International Conference on Advances in Mobile Network, Communication and its Applications – MNCApps.
3. Kayiram Kavitha, Cheemakurthi Ravi Teja and Dr.R.Gururaj, 2012. "Workload-Aware Path Repairing Scheme for Wireless Sensor Networks", The Seventh International Conference on Industrial and Information Systems (ICIIS-2012) held at Indian Institute of Technology Madras (IITM), Chennai, India.
4. Digambar Powar and G Geethakumari, 2012. "Digital Evidence Detection in Virtual Environment for Cloud Computing", International Conference on Security of Internet of Things - SecurIT2012
5. Usha Diwakarla and G Geethakumari, 2012. "A Trust Based Generic Security Framework for Cloud Service Models", International Conference and Workshop on Emerging Trends in Technology (ICWET 2012), India.
6. Mrs.Prafulla Kalapatapu, Aruna.M, 2012. Smart Playlist generation using data mining techniques, International Conference on Advanced Computing, Networking and Security (ADCONS' 11), LNCS 7135, p. 217.
7. KCS Murthi, 2012. "Adapting Temporal Aspects to Static GIS Models" proc. CCSIT 2012.
8. Rakhee, Sai Phaneendra P, M.B.Srinivas, 2012. "Evaluation of WSN Protocols on a Novel PSoC-Based Sensor Network", ICECCS-2012, Springer LNCS, Cochin, Kerala
9. Chittaranjan Hota, Gaurav K, Prasanna G, Sathya M, Hrushikesh Mohanty, and Muttukrishnan Rajarajan, 2011. Improved Object Lookup in Unstructured Peer-to-Peer Overlay Networks, Fourth International Conference on Recent Trends in Computing, Communication & Information Technologies, VIT, Vellore, P.V. Krishna, M.R. Babu, and E. Ariwa (Eds.), ObCom 2011, Communications in Computer and Information Science (CCIS 269), Springer, pp. 237-244.
10. RakheeMohiddin, ManojKumar, ShashiKumar Palakurty, SurabhiBothra, Sai Phaneendra P, M.B. Srinivas, NarayanaPidugu, Karthikeyan Mahalingam,Patrick Kane, 2011. "Building a Sensor Network with PSoC", International Conference on Sensing Technology, ICST 2011, New Zealand.
11. IEEE International Conference on Cloud Computing for Emerging Markets, IEEE CCEM 2012, October 11-12, 2012, Bangalore, India.

Invited Talks given by BITS faculty:

- Dr. Chittaranjan Hota: Inaugural talk on “Big Data”, at Adhyayan 2012, organized by AMSSOI, Hyderabad, on 21-Dec-2012.

Invited talks arranged in the department:

- Guest Lecture by Prof Amit Sheth, Wright State University, on 17-01-2012, on “Knowledge enabled Computing”.
- Dr Srinivasa Ramaswamy, ABB Research, Bangalore, on 27-02-2012, gave a talk on “The Future of Engineering and Automation: Opportunities and Challenges”

Awards and recognitions won by faculty and students

- Rakhee, Sai Phaneendra P, M.B.Srinivas, "Evaluation of WSN Protocols on a Novel PSoC-Based Sensor Network", ICECCS-2012, August 9-11, Springer LNCS, Cochin, Kerala (Best Paper Award Nomination).
- Chittaranjan Hota, Appointed as a Visiting Professor at Electrical and Computer Engineering Department, University of Cagliari, ITALY.
- Rusheel Jain, 3rd year CS student won 2nd best paper award at ICDCIT 2012, Bhubaneswar.

Faculty Development, International Collaboration & Industry Immersion

1. Intel has supported our CSIS dept., to set up a lab for conducting lab-work on embedded systems. Intel has given us 15 Atom kits for this purpose.
2. A Workshop on Cyber Security, was organized in collaboration with experts from Tallinn University, Estonia, on 02-Oct-2012.
3. CSIS Department organized a 5-day International workshop on Information Security, between 15th and 20th of Dec, 2012. We had experts and eminent researchers from within India and abroad, to deliver talks. We had around 65 participants.
4. Department is collaborating with Deloitte India, to offer Computer Oriented projects our CSIS students. Dr. Geetha Kumari is Coordinating this activity.
5. CSIS Department is in touch with Informatica Business Solutions Pvt Ltd., for collaboration in terms of research and projects.

Significant new Equipment/experimental facility added during the year:

- Intel has supported our CSIS dept., to set up a lab for conducting lab-work on embedded systems. Intel has given us 15 Atom kits for this purpose. A separate lab has been identified for this purpose. Students are working on specific assignments on these facilities.

Departmental association/club activities:

- Computer Science association (CSA)
- Information systems association (Extek)
- Students of CSA and Extek have conducted Android coding contest during TECHFEST-2012
- Information Security Awareness workshop by cyber security experts from CDAC, Hyderabad on 23/08/2012
- Cyber Security workshop was conducted in collaboration with Tallinn University of Technology, Estonia, on 2/10/2012.
- International workshop on Information Security (IWIS-2012) will be held during 15-19, December 2012.

Major maintenance, renovations or new construction reports: Nil

Major equipment acquired during the year: Nil

B3.10.6 Economics and Humanities

Number of faculty members: 13

Senior Professors, Professors	Nil
Associate Professors	Nil
Assistant Professors	8
Lecturers	3
Visiting Faculty	2

Head of the Department: M.G. Prasuna

Contact Details: 04066303531 / 09848532203

Number of PhD Scholars: 2

Sponsored Research activities:

Ongoing projects:

Title of the Project	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
'An Evaluation of Developmental Policies for Tribals in Andhra Pradesh and Tribals in Dahod District in Gujarat, 2012	Dr. Meera Lal	ICSSR, New Delhi	6.20 Lakhs	1 year
Sustainable skill development and training through knowledge centers for rural poor in Andhra Pradesh	Dr. P. Lalitha	Research Initiation Grant–BITS-Pilani (Hyderabad)	2 Lakhs	1 year
Climate Change, Market and Livelihoods: A comparative study of Nizamsagar Project, Nagarjunasagar Left Bank Canal and Tungabhadra Low Level Canal, Andhra Pradesh.	Dr. Srinivas Sajja	Research Initiation Grant–BITS-Pilani (Hyderabad)	2 Lakhs	1 year

Publications: Books

- M.G. Prasuna, "Patterns of Divergence & Convergence : A Comparative Study of the literary works of Dickens and Chilakamarti". Lambert Academic Publishing (LAP), Germany. 2012.
- Joy Anuradha, C.Muralikrishna and Sunita Mishra "Communication Skills". Pearson: New Delhi 2012.

Publications in Journals:

- M.G.Prasuna, Technical Communication in India: Trends and Concerns, International Journal of Theory and Practice in Language Studies. Vol.2, No.12, December 2012. ISSN:1799-2591.
- C Hussain Yaganti and B Kamaiah "Hedging Efficiency of Commodity Futures Markets in India" The IUP Journal of Financial Risk Management, Vol.IX No.3, June 2012. (<http://ssrn.com/abstract=2169227>)
- Aruna Lolla "A Report on the Mock Interviews Conducted for Students of MCA IV Semester in April 2011 at the ELTC" Theory and Practice in Language Studies, Vol. 2, No. 2, ACADEMY Publisher, Finland, February 2012. ISSN: 1799-2591.

Conferences attended/papers presented:

- Aruna Lolla “Language of the Soul for Cross – Cultural Intercourse”, Interfacing ELT with Culture and Technology: Direction for new classroom. ed. Pushplatha, Devika and Gajendra Singh Chauhan. (Conference Volume) Jain Brothers, New Delhi, October 2012. ISBN: 978-81-8360-187-0. Presented the Paper at 3rd International Conference organized by BITS Pilani, Pilani 8-9 Oct. 2012.
- Meera Lal, ‘Nutrition and Food Security-the Indigenous solution’ accepted for presentation at International Conference on Health and Food Security, University of Illinois, US, October, 2012.
- Swati Alok, Prasuna M.G. and Jayasree Raveendran, “Application of Theory of Planned Behaviour in Conflict Management” (Conference Volume); Wisdom Publication ISBN : 978-93-81505-44-1 . Presented the paper at 6th International Conference of Management & Behavioral Science (ICMBS) organized by Society of Management and Behavioral Sciences, Ahmedabad Dec 2012.
- M.G.Prasuna, “Socio-cultural Perspectives of Muslim community in the short stories of Saleem : A Study” at the International Conference on Minority Discourses Across Cultures” organized by the Comparative Literature Association of India and University of Rajasthan from 26-28 Feb, 2012.
- M.G.Prasuna, “Defining Dialogues” International Meet, organized by Cognizant Technologies in Dubai from 3-4 March, 2012.
- Joy Anuradha, “Campus Jargon: A preliminary Study” at National Seminar on English Language Education in India: Theory and Practice organized by Center For English Language Studies, University of Hyderabad during 23-25 January 2012.
- Joy Anuradha, “Creativity in the Classroom through (New) Media”. 3rd ELT@I Rajasthan International Conference on Interfacing Language, Culture and Technology organized by BITS, Pilani, on 8-9 October 2012.

Invited Talks given by BITS faculty:

- Joy Anuradha conducted a Training Session for Students of MS-QM on “Technical Communication” at CETE, ETDC, Hyderabad, 14-16 January.

Invited talks arranged in the department: NA**Awards and recognitions won by faculty and students: NA****Faculty Development, International Collaboration & Industry Immersion: NA****Significant new equipments/experimental facility added during the year: NA****Departmental association/club activities:**

- The English Language Activities' Society (ELAS) club organized VERBA MAXIMUS, the first literary fest This two day fest hosted on the 28th and 29th of January 2012, had a multitude of exciting events like literary quiz, group discussions, Jam sessions, spell bee competitions, debates etc.

Major maintenance, renovations or new construction reports: NA**Major equipments acquired during the year: NA**

B3.10.7 Electrical and Electronic Engineering

Number of faculty members

Senior Professors, Professors	1
Associate Professors	1
Assistant Professors	4
Lecturers	6
Visiting Faculty	2

Head of the Department: Prof. Y. Yoganandam

Phone: +40 6630 3569

Email: yogi@hyderabad.bits-pilani.ac.in

Number of PhD Scholars: 12**Sponsored Research activities:****Ongoing projects:**

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
1.	R&D Project: Design of a digital Demodulator for 64-Bit QAM on a Virtex-V FPGA	M.B.Srinivas	DLRL, Hyderabad	10 lakhs	1 Year
2.	Consultancy Project: Development of Technologies for Monitoring of Malnutrition in Growing Children.	M.B.Srinivas	IIBT, Hyderabad	4 lakhs	8 Months
3.	Placement of FACTS device: Interline Power Flow Controller, in Multi-machine Power System to increase the power system stability Sanctioned in September 2012	Alivelu Manga Parimi	RIG (BITS Pilani)	Rs. 2Lakhs	One year
4	Matlab modeling of a novel battery system (Consultancy project)	U M Rao	Hyderabad Batteries Ltd.	2.00 Lakhs	6 Months

Publications:

- 1) Vudadha, C.; Phaneendra P, S.; Makkena, G.; Sreehari, V.; Muthukrishnan, N.M.; Srinivas, M.B.; , "Design of CNFET based ternary comparator using grouping logic," 2012 IEEE Faible Tension Faible Consommation (FTFC),, vol., no., pp.1-4, 6-8 June 2012.
- 2) M.K, Kaushik; Y, Yoganandam;, "Dynamic Spectrum Sensing By Channel Information Table in Cognitive Radios," IOSR Journal of Electronics and Communication Engineering (IOSRJECE), ISSN : 2278-2834 Volume 2, Issue 2 (July-Aug 2012), PP 14-21 .

Conferences attended/papers presented:

1. M. Parimi, Ch. Koteswara Rao, K.C.B. Balasubramanyam, B. Saisurya, "Thyristor Controlled Series Compensator Based Genetic Algorithm Controller to Improve Stability of Single Machine Infinite Bus System", National Conference on Contemporary Control and Soft Computing in Electrical Engineering (ConCon-2012), May 2012.
2. M. Parimi, G.Madhu Babu, Ch. Rajendhar, "Mitigating Low Frequency Oscillations Using Fuzzy Logic Based Interline Power Flow Controller to Enhance Power System Stability", National Conference on Contemporary Control and Soft Computing in Electrical Engineering (ConCon-2012), May 2012.
3. Vudadha, Chetan; Sai, Phaneendra P; Sreehari, V; Srinivas, M B;,"CNFET based ternary magnitude comparator," *International Symposium on Communications and Information Technologies (ISCIT),2012*, vol., no., pp.942-946, 2-5 Oct. 2012.
4. Vudadha, Chetan; Phaneendra, P. Sai; Sreehari, V.; Ahmed, Syed Ershad; Muthukrishnan, N. Moorthy; Srinivas, M.B.; , "Design of Prefix-Based Optimal Reversible Comparator," *IEEE Computer Society Annual Symposium on VLSI (ISVLSI),2012*, vol., no., pp.201-206, 19-21 Aug. 2012.
5. Vudadha, Chetan; Phaneendra, P. Sai; Sreehari, V.; Ahmed, Syed Ershad; Muthukrishnan, N. Moorthy; Srinivas, M.B.; , "Design and Analysis of Reversible Ripple, Prefix and Prefix-Ripple Hybrid Adders," *IEEE Computer Society Annual Symposium on VLSI (ISVLSI),2012*, vol., no., pp.225-230, 19-21 Aug. 2012.
6. Vudadha, Chetan; Sreehari, V.; Srinivas, M. B.; , "Multiplexer Based Design for Ternary Logic Circuits," *2012 8th Conference on Ph.D. Research in Microelectronics and Electronics (PRIME)*, vol., no., pp.1-4, 12-15 June 2012.
7. Vudadha, C.; Makkena, G.; Nayudu, M.V.S.; Phaneendra, P.S.; Ahmed, S.E.; Veeramachaneni, S.; Muthukrishnan, N.M.; Srinivas, M.B.; , "Low-Power Self Reconfigurable Multiplexer Based Decoder for Adaptive Resolution Flash ADCs," *2012 25th International Conference on VLSI Design (VLSID)*, , vol., no., pp.280-285, 7-11 Jan. 2012
8. Subha Mada, Adoni Arun, Harshvardhan Srivastava, M.B.Srinivas, "Analog VLSI Design of Neural network architecture for implementation of forward only computation", 2012 Asia Pacific conference on Postgraduate Research in Microelectronics & Electronics (Prime Asia-2012), 5-7 December,2012
9. Viswa Saidutt P, Srinivas V, Sai Phaneendra P, Moorthy Muthukrishnan N, "Design of Encoder for Ternary Logic Circuits," *Microelectronics and Electronics (PrimeAsia), 2012 Asia Pacific Conference on Postgraduate Research in* , vol., no., pp., 5-7 Dec. 2012
10. Vudadha, Chetan; Phaneendra, P. Sai; Sreehari, V.; Ahmed, Syed Ershad; Muthukrishnan, N. Moorthy; Srinivas, M.B.; , "Design and Analysis of Reversible Ripple, Prefix and Prefix-Ripple Hybrid Adders," *IEEE Computer Society Annual Symposium on VLSI (ISVLSI),2012*, vol., no., pp.225-230, 19-21 Aug. 2012.
11. Vudadha, C.; Phaneendra P, S.; Makkena, G.; Sreehari, V.; Muthukrishnan, N.M.; Srinivas, M.B.; , "Design of CNFET based ternary comparator using grouping logic," *2012 IEEE Faible Tension Faible Consommation (FTFC)*,, vol., no., pp.1-4, 6-8 June 2012.
12. Vudadha, C.; Makkena, G.; Nayudu, M.V.S.; Phaneendra, P.S.; Ahmed, S.E.; Veeramachaneni, S.; Muthukrishnan, N.M.; Srinivas, M.B.; , "Low-Power Self Reconfigurable Multiplexer Based Decoder for Adaptive Resolution Flash ADCs," *2012 25th International Conference on VLSI Design (VLSID)*, , vol., no., pp.280-285, 7-11 Jan. 2012
13. Giddaluru Madhavi, M.K. Kaushik, "Queuing Methodology Based Power Efficient Routing Protocol For Reliable Data Communications In Manets", International Conference on Emerging Trends In Electrical, Communication and Information Technology, 21- 23 Dec 2012.
14. Naveen kumar reddy, M.K. Kaushik, "A Methodology For Adaptive Code Allocation In Cdma Communications, IETE National Conference 24-25 November 2012
15. Mohan suri, Anusha Ponugoti, M.K. Kaushik, "A Brief Review On Recent Trends In Multimedia Communications And Cognitive Radios, IETE National Conference 24-25 November 2012.
16. S. K. sahuo, K.S. Reddy, "A High Speed FIR filter Architecture based on Novel Higher Radix Algorithm" IEEE Proceeding of 25th International conference on VLSI design, 7-11 January 2012, Hyderabad, India.

17. Novel Image processing Techniques for early detection of breast cancer: Matlab and Labview implementation, P. Spandana, K.M.M. Rao, BVVSN Prabhakara Rao, IEEE int. conf. on point – of-care (POC) Healthcare Technologies, 2013.
18. Syed Ershad Ahmed, Sibi Abraham, Sreehari Veeramanchaneni, Moorthy Muthukrishnan N, M.B.Srinivas; "A Modified Twin Precision Multiplier with 2D bypassing technique," International Symposium on Electronic System Design (ISED), 2012, 19-21 Dec. 2012, Kolkata, India.
19. Soumya Ganguly, Abhishek Mittal, Syed Ershad Ahmed ; "A Reconfigurable Parallel Prefix Ling Adder with modified Enhanced Flagged Binary Logic," Asia Pacific Conference on Postgraduate Research in Microelectronics and Electronics (PrimeAsia), 2012 , 5-7 Dec. 2012, Hyderabad, India.

Conferences attended

- 25th International Conference on VLSI Design (VLSID), held at Hyderabad 7-11 January 2012.
- Asia-Pacific Conference on Postgraduate Research in Microelectronics & Electronics (PrimeAsia), 2012 held at BITS-Pilani, Hyderabad Campus, Hyderabad 5-7 December 2012
- International Symposium on Electronic System Design (ISED), 19-21 Dec. 2012, Kolkata, India (Attended and presented paper)

Invited Talks given by BITS faculty:

- Prof M B Srinivas was invited for a talk on Development of Technologies for Telehealth Care, US-Poland (EUROVIAL) Workshop, Wroclaw, Poland, May 2012.

Invited talks arranged in the department:

- Technical Presentations on "Basic preparation for technical interview"- Training program for placement students July 27th 2012 in the areas of Electrical, Electronics & Communications
- "History of Semiconductor Devices and circuits" by Prof. LK Maheswary

Awards and recognitions won by faculty and students

- Syed Ershad along with student of BITS Won Silver Leaf Award for the paper presented at PrimeAsia, 5-7 Dec. 2012, Hyderabad, India

Faculty Development, International Collaboration & Industry Immersion

1. Workshop "Recent Trends in Switch Gear and Protection", Hyderabad, 5-7 July, 2012.
2. Participation in guest lectures "High Voltage DC & Flexible AC Transmission Systems" By Dr. Narain G. Hingorani IEEE Life Fellow
3. Visiting Other educational institutes like (IIT Hyderabad, Osmania University, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad) for seeking information about the Labs (Machines Lab, Control System Lab, Power System Lab, Power Electronics Lab, Circuits Lab: equipment, infrastructure etc.)
4. International Collaboration & Industry Immersion: MOS-AK/GSA(India) Workshop:2012 on Compact modeling for Microsystems design - March 16-17, 2012 at IIIT. Noida

Significant new equipment/experimental facility added during the year:

S.No	Name of Lab	To cater for	Number of Setups	Number of students per session	Cost of the equipment	Remarks
1	Digital Electronics	2 nd Year Students	20	60	Up graded from 10 setups to 20 setups with a cost of Rs. 12.7 Lakhs	This lab runs 6 afternoons a week
2	Microprocessor & Interfacing	2 nd Year Students	20	60	Up graded from 10 setups to 20 setups with a cost of Rs. 5.24 Lakhs	This lab runs 6 afternoons a week

S.No	Name of Lab	To cater for	Number of Setups	Number of students per session	Cost of the equipment	Remarks
3	Digital Signal Processing HW	3 rd Year Students	20	60	Fresh facility with a cost of 14.56 Lakhs	This lab runs 5 afternoons a week
4	Microelectronic Circuits	2 nd Year Students	20	60	Fresh facility with a cost of 6.5Lakhs	This lab runs 3 afternoons a week
5	Analog Electronics	3 rd Year Students	16	48	Up graded from 12 setups to 16 setups and also introduced easy to use kits with a cost of Rs. 2.56 lakhs	This lab runs 5 afternoons a week

Departmental association/club activities:

- Article on “Cognitive Radio Approach for Effective Spectrum Usage” in The Electronic Times (Department Newsletter).

Major maintenance, renovations or new construction reports

SI.No	Name of New Space	To cater for	Approximate SFT	Remarks
1	Old gym in B -Cellar	Electrical Machines & Power electronics labs	2832	The existing Machines Lab in E-Cellar has become crowded and hence this space was requested and was allotted.
2	D - 224	DSP lab & Microelectronic Circuits labs	1984	As the Lab space D-332 was provided for Tele-presence facility, D-224 was allocated to EE department.
3	D - 311	Communications & analog Electronics Labs	1184	Powerwave facility has been shifted to D-315

Major Equipments acquired during the year:

SI.No	Name of Equipment	Cost of the equipment	Remarks
1	Digital storage Oscilloscopes	2.5 Lakhs	
2	Mixed domain Oscilloscopes	6.0 lakhs	
3	Function Generators	1.7 lakhs	
4	Computers	7.7 lakhs	
5	Analog Electronics Kits	2.16 lakhs	
6	Microelectronic Circuits Kits	2.1 lakhs	
7	Microprocessor Kits	3.2 lakhs	
8	Matlab SW Extra licenses and toolboxes	8.5 lakhs	
9	DSP TI Kits	6.6 lakhs	
10	Electronic Device simulation SW	6.0 lakhs	

B3.10.8 Mechanical Engineering

Number of faculty members

Senior Professors, Professors	1
Associate Professors	1
Assistant Professors	7
Lecturers	5
Visiting Faculty	1

Head of the Department: Dr. Y V Daseswara Rao**Contact details:** 9010202869; 04066303551**Number of PhD Scholars:** 9**Sponsored Research activities: Ongoing projects:**

S.No.	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
1	Rapid Incremental Forming of Extra Deep Drawing (EDD) Steel Sheet Metal Parts with Asymmetric Geometry (PI)	Prof. Srinivasa Prakash Regalla	UGC	9.73 lakhs	3 years

Projects sanctioned during the year

S.No.	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
1	Novel Minimal-Solid Lubricant Mixture Application Method For Performance Improvement In Turning (Co-Pi)	Dr. N. Suresh Kumar Reddy	DST	32.5 lakhs	3 years

Publications:**Journals:**

- G. Pavan Kumar and Srinivasa Prakash Regalla, "Optimization of Support Material and Build Time in Fused Deposition Modeling (FDM)", Applied Mechanics and Materials (Trans Tech Publications, Switzerland), Vols. 110-116, 2012, pp.2245-2251.

Conferences attended/papers presented:

- Kurra Suresh and Srinivasa Prakash Regalla, "Modeling and Simulation of Asymmetric Incremental Sheet Metal Forming: A Review". Proceedings of the International Conference on Materials Processing and Characterization, March 8-10, 2012, GRIET, Hyderabad, India, pp. 25-30.
- Pushkar Kumar Jain and Srinivasa Prakash Regalla, "Formability and Forming Limit Diagram: Using Square Grid for Uncoated and Zinc Coated GI Steel Sheet", Proceedings of the International Conference on Materials Processing and Characterization, March 8-10, 2012, GRIET, Hyderabad, India, pp. 54-59.
- Srinivasa Prakash Regalla, K. Suresh, Varikuti Sainath, Nirbhay Kothari, "Rapid Incremental Sheet Metal Forming of EDD Steel: Feature Based Combined Spinning and Incremental Forming", 1st International Conference on Functional Materials for Defence, 2012, ICFMD, June 2012, DIAT, Pune, India.
- Anup Darshan, Umamaheshwar Reddy Paturi, Narala Suresh Kumar Reddy, Srinivasa Prakash Regalla, "A Comparative Study of Tribological Behaviour of Steel Sliding Against WC under Mineral

- and biodegradable Oil Lubrication”, Proceedings of the ASME-2012 International Mechanical Engineering Congress & Exposition (IMECE-2012), Nov 9-15, 2012, Houston, Texas, USA (IMECE2012-87182).
5. Srinivasa Prakash Regalla, Kurra Suresh, Rohan Hingmire, Ramesh Verma, “Sustainable Lubrication of Hybrid Rapid Incremental Forming (HRIF) of Extra Deep Drawing (EDD) Steel Sheet”, Proceedings of the 8th International Conference on Industrial Tribology (ICIT-2012), Dec 7-9, 2012, The Westin Pune Koregaon Park, India (TSI-812506), p.8.
 6. Pavan Kumar Gurralla, Srinivasa Prakash Regalla, “Prediction of Neck Growth due to Inter and Intra-Layer Bonding for High Strength Parts in Additive Manufacturing (AM)”, 4th International and 24th AIMTDR Conference, Jadavpur University, Kolkata, Dec 14-16, 2012.
 7. Kurra Suresh, Srinivasa Prakash Regalla, Anudeep A.V.V.N., Suri S.S.M., “Effect of Toolpath on Thinning In Negative Incremental Forming Process”, 4th International and 24th AIMTDR Conference, Jadavpur University, Kolkata, Dec 14-16, 2012.

Invited Talks given by Prof. S. P. Regalla:

- Srinivasa Prakash Regalla, “Additive Manufacturing Based Wind Turbine Blade Prototyping and Testing”, Indo-Danish International Conference on Wind Energy: Materials, Engineering and Policies, Nov 22-23, 2012, BITS Pilani, Hyderabad Campus, India.
- Srinivasa Prakash Regalla, “Incremental Sheet Metal Forming of Ni Alloys”, AR&DB Scientific Discussion Meeting, DMRL, Hyderabad, Nov 9, 2012.
- Srinivasa Prakash Regalla, “Collaborative Product Design and Product Lifecycle Management”, One-day National Level PLM Workshop, MVGR College of Engineering, Vizianagaram, Jan 7, 2012.
- Srinivasa Prakash Regalla, “Advanced Sheet Metal Forming Analysis”, CBIT-AICTE workshop on Recent Advances in Manufacturing Automation and Simulation (RAMAS-2012), 7th to 19th May 2012, CBIT, Hyderabad.

Faculty Development, International Collaboration & Industry Immersion of Prof. S. P. Regalla:

- Contributing Faculty for BARC training programme at Gurukul, Nuclear Fuel Complex (NFC), DAE, Hyderabad, on Computer Aided Design and Manufacturing, Jan 25 to March 15, 2012.
- Research collaboration with Department of Wind Energy, Technical University of Denmark, Riso Campus, Denmark. The scope is joint-organizing of Conferences/Workshops and joint research proposals on Wind Energy. One Indo-Danish International Conference on Wind Energy: Materials, Engineering and Policies was organized during Nov 22-23, 2012 at BITS Pilani, Hyderabad Campus.

Departmental association/club activities under my coordination:

- SAE-INDIA BPHC Chapter organized a 2-day workshop, “Autofactory-2012”, during March 17-18, 2012 at BITS Pilani, Hyderabad Campus. A total of 150 students attended the Workshop.
- Mechanical Engg. Department organized 45th Engineers Day Celebrations on Sept 15, 2012.
- Mechanical Engineering Department organized Indo-Danish International Conference on Wind Energy: Materials, Engineering and Policies was organized during Nov 22-23, 2012 at BITS Pilani, Hyderabad Campus.

Awards and recognitions won by faculty and students

- Faculty Development, International Collaboration & Industry Immersion:
- Contributing Faculty for BARC training programme at Gurukul, Nuclear Fuel Complex (NFC), DAE, Hyderabad, on Computer Aided Design and Manufacturing, Jan 25 to March 15, 2012.
- Research collaboration with Department of Wind Energy, Technical University of Denmark, Riso Campus, Denmark. The scope is joint-organizing of Conferences/Workshops and joint research proposals on Wind Energy. One Indo-Danish International Conference on Wind Energy: Materials, Engineering and Policies was organized during Nov 22-23, 2012 at BITS Pilani, Hyderabad Campus.

Significant new equipments/experimental facility added during the year: NA

Departmental association/club activities:

- SAE-INDIA BPHC Chapter organized a 2-day workshop, "Autofactory-2012", during March 17-18, 2012 at BITS Pilani, Hyderabad Campus. A total of 150 students attended the Workshop.
- Mechanical Engg. Department organized 45th Engineers Day Celebrations on Sept 15, 2012.
- Mechanical Engineering Department organized Indo-Danish International Conference on Wind Energy: Materials, Engineering and Policies was organized during Nov 22-23, 2012 at BITS Pilani, Hyderabad Campus.

Major maintenance, renovations or new construction reports:

Major equipments acquired during the year:

- Heat Transfer lab Equipment worth
- Hydraulic Machines Lab Equipment worth
- Refrigeration & Air Conditioning and Energy Lab Equipment worth
- CPDR Equipment

B3.10.9 Mathematics

Number of faculty members

Senior Professors, Professors	1
Associate Professors	0
Assistant Professors	9
Lecturers	0
Visiting Faculty	1

Head of the Department: Dr. Bivudutta Mishra

Contact details: E-mail: bivu@hyderabad.bits-pilani.ac.in, Tel: 040-66303532

Number of PhD Scholars: 1

Sponsored Research activities:

Ongoing projects:

S.No.	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
1	Study of cosmological models in bimetric theory of gravitation	Dr. P.K. Sahoo	UGC, New Delhi	1.8 Lakhs	2 years

Projects sanctioned during the year

S.No.	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
1	Study of cosmological models in bimetric theory of gravitation	Dr.P.K. Sahoo	UGC, New Delhi	1.8 Lakhs	2 years

Publications:

1. B. Mishra & P. K. Sahoo: "Plane Symmetric Perfect Fluid in Scale Invariant Theory", *International Journal of Theoretical Physics*, U.K. vol 51(2), pp 399-404, 2012. Impact Factor: 0.67.
2. Prateek Jain, P.K. Sahoo & B.Mishra: "Axially symmetric cosmological model with wet dark fluid in Bimetric Theory of Gravitation", *International Journal of Theoretical Physics*, U.K. ,vol 51(8), pp2546-2551, 2012. Impact Factor: 0.67.
3. B. Mishra & P.K.Sahoo: "Scale Invariant Theory on Axially Symmetric Space-time with Perfect Fluid, *International Journal of Pure and Applied Mathematics*, Bulgaria, vol 80(4), pp 535-542, 2012. Impact Factor: 0.25.
4. Arun Ravishankar, B. Mishra and P.K. Sahoo: "Kantowski-Sachs Cosmological Model with Wet Dark Fluid in General Theory of Relativity", *Turkish Journal of Physics*, Turkey, Accepted. 2012.
5. P.K. Sahoo and B. Mishra: "Axially Symmetric Space-time with Strange Quark Matter Attached to String Cloud in Bimetric Theory", *International Journal of Pure and Applied Mathematics*, Accepted, 2012. Impact Factor: 0.25.
6. K.L. Mahanta, S.K. Biswal, P.K. Sahoo & M.C. Adhikary: "String cloud with quark matter in self-creation cosmology", *International Journal of Theoretical Physics*, 51 (2012), 1538-1544.
7. Akhmad Iqbal: "On geodesic E-convex sets, geodesic E-convex functions and E-epigraphs" (with I. Ahmad and S. Ali), *Journal of Optimization Theory and Applications*, Vol 155 (1), 239-251, 2012.
8. Akhmad Iqbal: "Generalized invex set and preinvex functions on Riemannian manifolds" (with I. Ahmad and S. Ali), *Taiwanese Journal of Mathematics*, Vol. 16 (5), 1719-1732, 2012.
9. T S L Radhika and Aditya Vikram Singh: Application of Homotopy Asymptotic method for non Newtonian fluid flow through a vertical annulus, *Proceedings International Multi conference of Engineers and Computer Scientists*, Volume 2, 2012.

Conferences attended/papers presented:

1. B. Mishra: "Axially Symmetric Perfect Fluid Cosmological Model in Wesson's Theory", *International Conference on Modern Perspectives of Cosmology and Gravitation*, held at I.S.I., Kolkata during 7th – 11th Feb., 2012.
2. B. Mishra: "Scale Invariant Theory For Axially Symmetric Space-time with Perfect Fluid", *Fourth International Conference on Mathematical Sciences (ICM 2012)*, held at United Arab Emirates University, Al Ain, UAE during 11th-14th Mar., 2012.
3. B.Mishra: Participated in the "Advance School on Graph Algorithm", held at Department of Mathematics, BITS-KK Birla Goa Campus during 23rd – 27th July, 2012.
4. B. Mishra: "Kantowski-sachs Perfect Fluid Cosmological model in General Relativity with wet dark fluid", *International Conference on Mathematical Sciences (ICMS 2012)*, held at SSES Amravati's Science College, Nagpur during 28th – 31st Dec., 2012.
5. Manish Kumar: "Gray-scale image encoding using double random shift cipher associated with discrete wavelet transformation", *Ramanujan memorial symposium in mathematics and applications*, held at Indian Institute of Technology Hyderabad, Hyderabad, on 22nd Dec 2012.
6. P.K. Sahoo: Presented a paper at International Conferences on Mathematical Sciences (ICMS-2012), from Dec 28-31, 2012 at SSES Amt's Science College, Nagpur, India

Invited Talks given by BITS faculty: NA

Invited talks arranged in the department:

Guest lecture on MATHEMATICA Software by Mr.VenuGopal.Ch., Director, Amigo Optima Software Solutions.

Awards and recognitions won by faculty and students: NA

Faculty Development, International Collaboration & Industry Immersion: NA

Significant new equipments/experimental facility added during the year: NA

Departmental association/club activities:

January:

Associations First Newsletter PRIME was released during second half of the month. Also released the association website on LAN.

February:

Axiom conducted its major event MATHEFIA in first week of the month. It again conducted two of its events nCRYPTON and Boxed IN along with Paper Presentations in Pearl'12 which was a techno cultural fest.

March:

Axiom released its first T-Shirt in this month. It delivered around 520 T-shirts to people residing in various bhawans.

April:

Association organised a department FAREWELL to outgoing 2008 batch people in the second half of the month.

September:

During the first half of this month association organized a Fresher's party for the first year students who got admitted in our department, introducing them to Axiom. During the second half, notices were out calling in for nominations for various posts of office bearers.

October:

Elections were held and new office bearers were elected.

Axiom conducted two of its major events nCRYPTON and MATHEFIA along with Paper Presentations in Technical Fest ATMOS. These two events turned out to be the highest participated events in atmos.

PRIME, Newsletter of Axiom was released on the occasion of Technical Fest.

Major maintenance, renovations or new construction reports: NA

Major equipments acquired during the year: NA

B3.10.10 Pharmacy

Number of faculty members

Senior Professors, Professors	NA
Associate Professors	02
Assistant Professors	03
Lecturers	03
Visiting Faculty	NA

Head of the Department: Dr. Vamsi Krishna Venuganti**Contact details:** Email: vamsi@hyderabad.bits-pilani.ac.in Phone (Work): 040-66303581**Number of PhD Scholars:** 33**Sponsored Research activities:****Ongoing projects:**

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
1	DST-FIST project; Department of Pharmacy project	DST-FIST Project Department of Pharmacy	DST-FIST	60 lakhs	5 Years
2	Development of library of heterocyclic compounds for the treatment of tuberculosis - multi-drug resistant tuberculosis and persistent tuberculosis (modified version)	Dr. D. Sriram	DST	23.80 Lakhs	3 years
3	Development of novel isocitrate lyase inhibitors for the treatment of persistent tuberculosis	Dr. D. Sriram	ICMR	15 Lakhs	3 years
4	Development of novel DNA gyrase inhibitors against mycobacterium tuberculosis and other non-tuberculosis mycobacterial infections	Dr. D. Sriram	CSIR	16.76 Lakhs	3 years
5	Discovery of novel modulators of NAD (+) dependant protein deacetylase SIRT1 for the treatment of various human disorders	Dr. P. Yogeewari	DBT	30 Lakhs	3 years
6	Inhibition of the protease of peripheral macrophages and microglial cells in the spinal cord for the treatment of neuropathic pain	Dr. P. Yogeewari	DBT-Neurorese arch project	31.12 Lakhs	2011-2013
7	Drug discovery of inhibitors of the cathepsin S in the spinal cord for the treatment of neuropathic pain	Dr. P. Yogeewari	DST	35 Lakhs	3 years

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
8	Development of library of heterocyclic compounds for the treatment of tuberculosis - multi-drug resistant tuberculosis and persistent tuberculosis.	Dr. D. Sriram & Dr. P. Yogeewari	ICMR	23.8 Lakhs	3 years
9	Structure-guided design of new antibacterial agents against dormant mycobacterium tuberculosis	Dr. D. Sriram & Dr. P. Yogeewari	DBT Indo-Sweden joint program	64.88 Lakhs	3 years
10	Design, characterization and pharmacokinetic evaluation of nanocarriers for antiretroviral drug delivery in the effective treatment of HIV/AIDS.	Dr. Punna Rao	DST- Fast track for young scientist	26 Lakhs	3 years
11	Design, pharmacokinetic and pharmacodynamic evaluation of nanocarriers for selective estrogen receptor modulator delivery in the effective treatment of postmenopausal osteoporosis.	Dr. Punna Rao	UGC	7.83 Lakhs	3 years
12	Investigation of natural coumarinlignans and their newer synthetic analogs as cox-2 and tnf-alpha inhibitory agents in rheumatoid arthritis.	Dr. A. Sajeli Begum	CSIR	21 Lakhs	3 years
13	Lead Identification From Rubiaceae Plants For Treating Cancer	Dr. A. Sajeli Begum	BITS- Research Initiation Grant	2 Lakhs	2012-2014
14	Quality control studies on safflower petals of different Indian cultivates as per WHO guidelines. 2011-2014	Dr. A. Sajeli Begum	UGC	9.44 Lakhs	3 years
15	Transcutaneous delivery of macromolecules using layer-by-layer assembly to treat skin conditions	Dr. V.V. Vamsi Krishna	DST- Fast track for young scientist	23 Lakhs	3 years

Projects sanctioned during the year

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
1	Structure based rational design and synthesis of inhibitors for various enzymes of HIV	Dr. Sriram	DBT-ICMR	56.17 Lakhs	3 years
2	Development and analysis of novel inhibitors against mtb glmu-	Dr. D. Sriram	CSIR-OSDD	39.56 Lakhs	3 years

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
3	Design and synthesis of pharmacophoric hybrids as potential leads for the treatment of neuropathic pain	Dr. P. Yogeewari	CSIR	36.76 Lakhs	3 years
4	Novel molecular mechanism involving adenosine and adenosine receptors in acceleration of alcohol induced hepatic fibrosis	Dr. P. Yogeewari	CSIR	26.76 lakhs	3 years
5	Investigation of natural coumarino lignans and their newer synthetic analogs as cyclooxygenase (COX-2) and tumor necrosis factor (TNF- α) inhibitory agents in rheumatoid arthritis.	Dr. A. Sajeli Begum	CSIR	21 lakhs	3 years
6	Non-invasive delivery of siRNA to treat melanoma	Dr. V.V. Vamsi Krishna	RGYI-DBT	31.19 Lakhs	Awaiting fund release
7	Novel biomarker responses to validate acute toxicity of engineered nanoparticles and their physicochemical interactions in earthworm as a model bio indicator of nano(eco)toxicology	Dr. V.V. Vamsi Krishna	RGYI-DBT	51.29 Lakhs	Awaiting fund release
8	Transcutaneous delivery of liposome-siRNA complex to treat skin cancer.	Dr. V.V. Vamsi Krishna	DST	29.32 Lakhs	Awaiting fund release

Publications:

1. Malwal SR, Sriram D, Yogeewari P, Konkimalla VB, Chakrapani H. Evaluation of Thiol-Activated Sources of Sulfur Dioxide (SO₂) as Antimycobacterial Agents. *J Med Chem.* 2012 Jan 12; 55(1):553-7. doi: 10.1021/jm201023g
2. Malwal SR, Sriram D, Yogeewari P, Chakrapani H. Synthesis and antimycobacterial activity of prodrugs of sulfur dioxide (SO₂). *Bioorg Med Chem Lett.* 2012 Jun 1;22(11):3603-6. doi: 10.1016/j.bmcl.2012.04.048.
3. Yogeewari P, Sravan Kumar Patel, Ingala Vikram Reddy, Arvind Semwal, Monika Sharma, Gangadhar M, Siddarth Sai M, Sriram D. GABA derivatives for the treatment of epilepsy and neuropathic pain: A synthetic integration of GABA into 1,2,4-Triazol-2H-one nucleus. *Biomed. Ageing Pathol.* 2012, 2, 31-40.
4. Ramani AV, Monika A, Lakshmi Indira V, Karyavardhi G, Venkatesh J, Jean Kumar VU, Yogeewari P, Sriram D. Synthesis of highly potent anti-tubercular isoniazid analogues with preliminary pharmacokinetic evaluation. *Bioorg. Med. Chem. Lett.* 2012, 22, 2764-7
5. Patpi SR, Pulipati L, Yogeewari P, Sriram D, Jain N, Sridhar B, Murthy R, Anjana Devi T, Kalivendi SV, Kantevari S. Design, Synthesis and Structure-Activity Correlations of Novel Dibenzo[b,d]furan, Dibenzo[b,d]thiophene and N-Methylcarbazole Clubbed 1,2,3-Triazoles as Potent Inhibitors of Mycobacterium tuberculosis. *J Med Chem.* 2012 Apr 26;55(8):3911-22. doi: 10.1021/jm300125e
6. Alvala M, Bhatnagar S, Ravi A, Jeankumar VU, Manjashetty TH, Yogeewari P, Sriram D. Novel acridinedione derivatives: Design, Synthesis, SIRT1 enzyme and tumour cell growth inhibition studies. *Bioorg Med Chem Lett.* 2012 May 1;22(9):3256-60. doi: 10.1016/j.bmcl.2012.03.030.
7. Dinakaran M, Senthilkumar P, Yogeewari P, Sriram D. Novel Antitubercular diallyl/dibenzyl thiosemicarbazones endowed with high activity toward multi-drug resistant tuberculosis. *Med. Chem. Res.* 2012, 21, 810-815.

8. Sebastian L, Desai A, Yogeewari P, Sriram D, Madhusudana SN, Ravi V. Combination of N-Methylisatin- β -thiosemicarbazone derivative (SCH-16) with Ribavirin and Mycophenolic acid potentiates the antiviral activity of SCH 16 against Japanese encephalitis virus in vitro. *Lett. Appl. Microbiol.* 2012, 55, 234-239.
9. Jeyachandran M, Ramesh P, Sriram D, Senthilkumar P, Yogeewari P. Synthesis and in vitro antitubercular activity of 4-aryl/alkylsulfonylmethylcoumarins as inhibitors of Mycobacterium tuberculosis. *Bioorg. Med. Chem. Lett.*, 2012, 22, 4807-4809.
10. Pulla VK, Battu MB, Alvala M, Sriram D, Yogeewari P. Can targeting SIRT1 to treat type II diabetes be a good strategy?. A Review. *Expert Opinion on Ther. Targets*, 2012, 16, 819-32.
11. Mishra RK, Reshma A, Sriram D, Yogeewari P. Potential Role of Rho Kinase Inhibitors in Combating Diabetes-related Complications including Diabetic Neuropathy- A Review. *Curr. Diabetes Rev.*, 2012, 8, In Press.
12. Sharma M, Dash SS, Matharasala G, Deekshith V, Sriram D, Yogeewari P. Novel Piperazinyl Derivatives with Anti-hyperalgesic, anti-allodynic and Anti-inflammatory activities useful in the treatment of Neuropathic Pain, Antiinflammatory and Anti-allergic Agents in Medicinal Chemistry, 2012, 11, 182-190.
13. Sharma M, Deekshith V, Sriram D, Yogeewari P. Discovery of Fused [1,2,4] Triazolo [3,4-b][1,3,4]thiadiazoles as inhibitors of TNF-alpha: Pharmacophore Hybridisation for the Treatment of Neuropathic Pain, *Pain and Therapy*, 2012, 1, 3.
14. Yempala T, Sriram D, Yogeewari P, Kanteveari S, Molecular hybridization of bioactives: Synthesis and antitubercular evaluation of novel dibenzofuran embodied homoisoflavonoids via Baylis-Hillman reaction, *Bioorg. Med. Chem. Lett.*, 2012, 22, 7426-30.
15. Jeankumar VU, Chandran M, Samala G, Alvala M, Koushik PV, Yogeewari P, Salina EG, Sriram D. Development of 5-nitrothiazole derivatives: Identification of leads against both replicative and latent Mycobacterium tuberculosis, *Bioorg. Med. Chem. Lett.*, 2012, 22, 7426-30.
16. Dharmaraja AT, Alvala M, Sriram D, Yogeewari P, Chakrapani H, Design, synthesis and evaluation of small molecule reactive oxygen species generators as selective Mycobacterium tuberculosis inhibitors. *Chem Commun. (Cambridge)*, 2012, 48, 10325-7.
17. Monika S, Garigipati S, Binita K, Deekshith V, Arvind S, Sriram D, Yogeewari P. Discovery of novel 1,2,4-triazol-5-ones as tumor necrosis factor-alpha inhibitors for the treatment of neuropathic pain. *Chem. Biol. Drug Design*, 2012, 80, 961-70.
18. Judge V, Narasimhan B, Ahuja M, Sriram D, Yogeewari P, De Clercq, E, Pannecouque C, Balzarini J, Synthesis, Antimycobacterial, Antiviral, Antimicrobial Activity and QSAR Studies of N2-acyl Isonicotinic Acid Hydrazide Derivatives, *Med. Chem.* 2012, In press.
19. Aditya N, Vats R, P R Ravi. Development, Validation and Pharmacokinetic Application of Liquid Chromatographic Method for Estimation of Raloxifene Hydrochloride in Rabbit Plasma. *Acta Chromatographica.* 2012; 1-15.
20. Ravi P R, Vats R, Thakur R, Srivani S, Aditya N. Effect of grapefruit juice and ritonavir on pharmacokinetics of lopinavir in wistar rats. *Phytother Res.* 2012 Oct; 26(10):1490-5. doi: 10.1002/ptr.4593
21. Ravi P R, Vats R, Reddy KU. Validation of a Simple, Rapid and Sensitive LC Method for Quantification of Riluzole in Rat Plasma and its Pharmacokinetic Application. *J. Biol. Biomed.* 2012; doi: 10.4172/1948-593X.S6-007.
22. Ravi P R, Vats R, Reddy KU. Effect of ciprofloxacin and grapefruit juice on oral pharmacokinetics of riluzole in Wistar rats. *JPP.*2012; doi: 10.1111/j.2042-7158.2012.01604.x
23. Vats R, Varanasi KV, Arla R, Veeraraghvan S, Rajak S. Drug-drug interaction study to assess the effects of atorvastatin co-administration on pharmacokinetics and anti-thrombotic properties of cilostazol in male Wistar rats. *Biopharm Drug Dispos.* 2012 Nov; 33(8):455-65. doi: 10.1002/bdd.1812.
24. Vats R, Varanasi KV, Arla R, Veeraraghvan S, Rajak S. Effect of multidose cilostazol on pharmacokinetic and lipid profile of atorvastatin in male Wistar rats. 2012; 64(11): 1638-1645.
25. Ravi P R, Aditya N, L. Cherian, S. Patil. LC method for determination of rasagiline mesylate in different plasma matrices and its application to oral pharmacokinetic study in rabbit. *J. Chromatographic Science.* 2012; doi: 10.1093/chromsci/b

26. Mahibalan S, Sajeli Begum A, Ameer Basha S, Sameer Kumar CV. Quality control studies on non-spiny hybrid safflower petals as per World Health Organisation (WHO) requirement. *J. Oilseeds Res.*, 2012, 29 (Spl. Issue), 452-455.
27. Raghavendra G, Ameer Basha S., Nagesh Kumar MV, Dharma Reddy K, Sajeli Begum, Mahibalan S, Sameer Kumar CV, Suresh M. Effect of safflower petal extraction on spore germination of sorghum grain mold fungi. *J. Oilseeds Res.*, 2012, 29 (Spl. Issue), 329-332.
28. Deepali P, Prasad SK, Sajeli Begum A, Hemalatha S, Wahi AK. Pharmacognostical standardization and isolation of ergosterol from *Melothria maderaspatana* Linn. *International Journal of Food Properties*, Dec 2012: 121207123314003.

Conferences attended/papers presented:

1. P. Yogeeswari, A.S.K. Reddy, J.V. Ragavendran, Arvind Semwal, Ram Kumar Mishra, D. Sriram, Spironucleus linked GABA analogues as potential antiepileptic agents acting through GABA mediation and inhibiting nitric oxide and free radicals, 10th European Congress on Epileptology, 30th Septemeber -4th October 2012, London, United Kingdom.
2. R. K. Mishra, R. Chowdary, D. Sriram, P. Yogeeswari, Design of Novel Rho Kinase Inhibitors for the treatment of Diabetic Complications using Energy-based Pharmacophore Modelling, In-silico screening and Docking studies, 3rd World Congress on Diabetes & Metabolism, 24-26 Septemeber 2012, Hyderabad, India.
3. P. Sripriya, M. Soumya, Reshma Alokam, P. Susruta, D. Sriram, P. Yogeeswari, Structure Guided Design of Inhibitors for SH3 domain of p47phox subunit of NADPH Oxidase 2 implicated in various human disorders, 3rd World Congress on Diabetes & Metabolism, 24-26 Septemeber 2012, Hyderabad, India
4. M. Saketh, Ram Kumar Mishra, D. Sriram, P. Yogeeswari, Design of Novel Protein Kinase Inhibitors for the treatment of Painful Diabetic Neuropathy using Energy-based Pharmacophore Modelling and Docking studies, 3rd World Congress on Diabetes & Metabolism, 24-26 Septemeber 2012, Hyderabad, India.
5. Mallika, S. Bhatnagar, A. Ravi, V.U. Jean Kumar, T.H. Manjashetty, P. Yogeeswari, D. Sriram, Novel acridinone derivatives: Design, synthesis, SIRT1 enzyme and tumour cell growth inhibition studies, 3rd World Congress on Biotechnology, 13-15 Septemeber 2012, Hyderabad, India.
6. R. Alokam, V.U. Jean Kumar, D. Sriram, P. Yogeeswari, Identification of novel inhibitors of Chorismate mutase enzyme involved in Shikimic pathway of *Mycobacterium tuberculosis*: Design and In-vitro screening, 3rd World Congress on Biotechnology, 13-15 Septemeber 2012, Hyderabad, India.
7. P. Venkat Koushik, P. Yogeeswari, D. Sriram, Designing Small Molecule Inhibitors of NMPRTase as Anticancer leads using in silico approach, 3rd World Congress on Biotechnology, 13-15 Septemeber 2012, Hyderabad, India.
8. J.T. Patrisha, K. Sridevi, K. Shruti, D. Sriram, P. Yogeeswari, Discovery of New Small Molecule Inhibitors of Hepatitis C Virus RNA-dependent RNA polymerase: Pharmacophore modelling, 3D-QSAR studies and High-throughput screening, 3rd World Congress on Biotechnology, 13-15 Septemeber 2012, Hyderabad, India.
9. B. Madhu Babu, M. Chandra, D. Sriram, P. Yogeeswari, Discovery of New Microglial Cathepsin S Inhibitors for the Treatment of Neuropathic Pain: Pharmacophore modelling, 3D-QSAR and High-throughput screening, 3rd World Congress on Biotechnology, 13-15 Septemeber 2012, Hyderabad, India.
10. P.B. Devi, A. Mallika, P. Yogeeswari, D. Sriram, Development of Pantothenate Synthetase Inhibitors for *Mycobacterium Tuberculosis* Infection: Design and Enzyme Inhibition, 3rd World Congress on Biotechnology, 13-15 Septemeber 2012, Hyderabad, India.
11. V.U Jean Kumar, Manoj C., Vijay Soni, Patrisha J.T., Mallika A., Yogeeswari P., Nandicoori, V.K., Sriram D., Discovery of novel *Mycobacterium tuberculosis* GlmU inhibitors, 16th Annual Conference of the Swedish Structural Biology Network, 15-18 June 2012, Talberg, Sweden.
12. P. Omer, S. Robert, V.U. Jean Kumar, P. Yogeeswari, D. Sriram, S. Gunter r, Discovery of inhibitors targeting the *Mycobacterium tuberculosis* O-acetylserine sulfhydrylase (OASS) CysK1 as potential agents against mycobacterial latency. 16th Annual Conference of the Swedish Structural Biology Network, 15-18 June 2012, Talberg, Sweden.

13. P. Ravichand, V. Ramakrishna, P. Yogeewari, D. Sriram, Structure-based Pharmacophore Modeling and Virtual screening of β -secretase Inhibitors, International Conference on Advances in Biological Sciences, 15-17 March 2012, Kannur, Kerala, India.
14. M. Sharma, A. Semwal, V. Deekshith, D. Sriram, P. Yogeewari, Discovery of newer triazolo[3,4-b]thiadiazoles for the treatment of neuropathic pain: Pharmacophoric hybrid approach for multifunctional lead development, 4th International Conference on Drug Discovery & Therapy, 12-15 February 2012, Dubai, UAE.
15. **S. Begum.** Quality control studies on non-spiny hybrid safflower petals as per World Health Organisation (WHO) requirement. 8th International Safflower Conference, 2012, Hyderabad. (Ref. J. Oilseeds Res., 29, January 2012, p.452-455).
16. **S. Begum.** Effect of safflower petal extract on spore germination of sorghum grain mold fungi. 8th International Safflower Conference, 2012, Hyderabad. (Ref. J. Oilseeds Res., 29, January 2012, p. 329-332)
17. **S. Begum.** In-vitro anticancer activity of *Abutilon indicum* leaves on Human breast carcinoma cell line (MDA-MB-231). 4th International Conference on Drug Discovery and Therapy, 2012, Dubai. (Current Medicinal Chemistry, February 2012, p. 156-157).
18. N. Aditya N, R. Vats, P. R. Ravi. Lipid nanoparticles for oral delivery of raloxifene hydrochloride: Preparation, characterization, bio-distribution and pharmacokinetic studies in Proceedings of the 2012 AAPS Annual Meeting and Exposition, Oct 14-18, 2012, McCormick Place, Chicago, 2012.
19. N. Aditya, R. Vats, H. Kathuria, U. Avula, P. R. Ravi. Design of polymeric nanocapsules for raloxifene hydrochloride by multiple emulsion method (w/o/w) using rotatable central composite design model in 10th International Nano Medicine and Drug Delivery (NanoDDS'12) Symposium, Oct 2012, Atlantic City, NJ. Unpublished conference paper. Ernest Mario School of Pharmacy Rutgers, The State University of NJ, 2012.
20. M. P. Kumar, V.V. K. Venuganti. Fabrication of self-assembled layer-by-layer microcapsules for encapsulation of model charged lipophilic molecule. 64th Indian Pharmaceutical Congress, Dec' 7-9, 2012, Chennai, India.
21. B. L. Mani Sunder, V. Deekshith, P. Susruta, M. P. Kumar, V. V. K. Venuganti. Preparation and characterization of self-assembled biodegradable microparticles to deliver hydrophilic molecule. 64th Indian Pharmaceutical Congress, Dec' 7-9, 2012, Chennai, India.
22. R. Sharma, M. P. Kumar, V. V. K. Venuganti. Fabrication of self-assembled layer-by-layer microcapsules for encapsulation of model charged lipophilic molecule. 2nd International Conference and Exhibition on Pharmaceutical Regulatory Affairs, Nov' 2012, Hyderabad, India.
23. M. P. Koranglekar, M. P. Kumar, V. V. K. Venuganti. Fabrication of self-assembled layer-by-layer microcapsules for encapsulation of model charged hydrophilic molecule. 2nd International Conference and Exhibition on Pharmaceutical Regulatory Affairs, Nov' 2012, Hyderabad, India.

Invited Talks given by BITS faculty:

1. P. Yogeewari: Invited Speaker on "Pharmacophoric Hybrid Chemical Design using Aryl Semicarbazide Scaffold to Yield Multifunctional Leads for the Treatment of Various Neuropathic Pain Conditions" delivered at the National Symposium on Emerging Trends in Chemical Sciences sponsored by UGC, March 20, 2012, Indore, India.
2. P Yogeewari: Invited Talk on "Pharmacophore-based design of Anti-HIV agents" delivered to the Chemistry group of Federal University of Para Belem, Brazil, 23rd September 2012
3. D. Sriram: Invited Talk on "Design and development of novel mycobacterium tuberculosis pantothenate synthetase inhibitors" delivered at Bose Institute, Kolkata, India, December 2-4, 2012.
4. D. Sriram: Invited Talk on "Design & synthesis of novel HIV protease inhibitors" delivered at UFPA, Belem, Brazil, 23rd September 2012.
5. P. R. Ravi: Invited Speaker on 'Design of Polymeric Nanocapsules for Raloxifene Hydrochloride by Multiple Emulsion Method (w/o/w) Using Rotatable Central Composite Design Model' at 2nd International Conference and Exhibition on Pharmaceutical Regulatory Affairs organized by OMICS Group Conferences at Hyderabad on November 23-24, 2012.

Invited talks arranged in the department:

- Presenter: Dr. Lakshmi P. Kotra, Associate Professor in Leslie Dan Faculty of Pharmacy, University of Toronto, Canada
Title of talk: Drug discovery in infectious diseases in academia
Date: 13th Feb' 2012
- Presenter: Dr. HG Kruger, Professor at University of Kwazulu-Natal, Durban, South Africa.
Title of talk: Research Interests of the Centre for Catalysis and Peptide Research Group in UKZN
Date: 29th Feb' 2012
- Presenter: Dr. Jeronimo Lameira Silva, faculty at Federal University of Para, Belem, Brazil.
Title of talk: Computational Chemistry Method used by UFPA, Brazil
Date: 2nd Mar' 2012
- Presenter: Dr. Ganesh Cherala, Assistant Professor, College of Pharmacy, Oregon Science and Health University, USA
Title of talk: Fetal Programming of Drug Pharmacokinetics
Date: 13th April, 2012
- Presenter: Dr. Vinay Bansal, Research Advisor, Merck and Ranbaxy
Title of talk: Drug Discovery: A Science or Luck
Date: 05th Sep' 2012
- Presenter: Dr. K. Sumathy, Head of R&D at Bharat Biotech Int. Ltd.
Title of talk: Challenges in Development of Novel Biologics: BH005 a case study
Date: 07th Sep' 2012
- Presenter: Dr. Isaeva, Bogomoletz Institute of Physiology.
Title of talk: Regulation of neuronal excitability, synaptogenesis, and synaptic plasticity by sialic acids
Date: 07th Nov' 2012
- Presenter: Dr. Luís Constantino, Faculdade de Farmácia da, Universidade de Lisboa
Title of talk: Antimycobacterial pyrazinoates with improved plasma stability
Date: 26th Nov' 2012
- Presenter: Dr. Ramesh Panchagnula, Vice-President, site head, Nektar Therapeutics.
Title of talk: Bollywood, cricket and knowing the unknown in drug discovery.
Date: Nov' 29th 2012
- Presenter: Dr. Omathanu Perumal, Associate Professor, South Dakota State University, USA.
Title of talk: From unknown to known and known to unknown.
Date: Dec' 11th 2012

Awards and recognitions won by faculty and students

1. Sajeli Begum has been admitted as fellow of Indian Chemical Society, Kolkata, India – Fellowship No. F/7349
2. Mrs. A Mallika has received best research award for her research work in molecular biology in year 2012 sponsored by Bharat Biotech Int. Ltd.

Faculty Development, International Collaboration & Industry Immersion

Research Collaborations in year 2012

1. Dr. A. Sajeli Begum with Prof. Yoshinori Fujimoto, Tokyo Institute of Technology, Japan.
2. Dr. P. Yogeeswari with Ukrainian scientist of Bogolometz Institute, Kiev

Foreign student exchange programs:

1. Under IUSSTF (indo-US Science and Technology Forum), Mr. Abik Seal Ph.D. student at Indiana University, Bloomington, USA spent two months from 1st July till 31st Aug 2012 to work on a project on Mycobacterial PknB inhibitor design in our CADD lab.
2. Under DST-IBSA project, two Brazilian students Ms. Glacia Nascimoto and Mr. Edikarlos spent two months from 1st Nov till 31st dec 2012 in our Drug discovery lab to get training in the synthesis and biological assay procedures involved in our department.

Significant new equipments/experimental facility added during the year:

1. PermeGear Franz-type vertical diffusion cell setup
2. Hoefer Protein electrophoresis and blotting system
3. Flash Chromatography System
4. Biotage Microwave digester
5. Rotary microtome and Tissue processor
6. Mediatech Biopac instrument
7. Gel electrophoresis and Gel doc system- Make Biorad
8. HPLC – Shimadzu with PDA detector (numbers two)

Departmental association/club activities:**Conferences:**

2nd National Symposium on Current Trends in Pharmaceutical Sciences (CTPS)-2012: Nov' 17. 2012. BITS-Pilani, Hyderabad Campus.

The symposium was aimed to cover promising approaches in drug discovery and delivery research to address the challenges of 21st century. Renowned scientists from research institutes and industry shared their achievements and experiences in scientific sessions. Over 70 posters were presented by students, research scholars and scientist from various colleges and industries.

Workshop:

One day workshop on Molecular Modeling and Drug Design was organized on Nov' 18, 2012 following CTPS at BITS-Pilani, Hyderabad Campus

Seminars:

Weekly seminars are being conducted by Department of Pharmacy for research scholars to showcase their research work.

Departmental Magazine:

Pharmacy Research scholars Bimonthly Epistle (PROBE) is a bimonthly magazine that provide research scholars to wise their views on various scientific topics.

Major maintenance, renovations or new construction reports: NA

Major equipments acquired during the year: NA

B3.10.11 Physics

Number of faculty members: 15

Senior Professors, Professors	-
Associate Professors	2
Assistant Professors	13
Lecturers	-
Visiting Faculty	-

Head of the Department: Mr. Kannan Ramaswamy

Contact details: 040 66303526 Email:kannan@hyderabad.bits.pilani.ac.in

Number of PhD Scholars:**Sponsored Research activities:****Ongoing projects:**

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
1.	Investigations into the influence of rare earth ion doping on structural and dielectric properties of layered ferroelectric ceramics by adopting molten salt synthesis route, 2009	Dr. Harihara Venkataraman	DST-Fast track	23 Lakhs	3 years
2.	Site specific immobilization of a single DNA molecule, 2011	Prof. Souri Banerjee	BRNS-DAE	19 Lakhs	3 years

Projects sanctioned during the year

SL No	Project Name	Principal Investigator	Funding Agency	Sanctioned Amount	Duration
1	Development of magnetoimpedance sensors for bio-cells detection, 2012	Dr. V. Satyanarayana murthy	DST-Fast track	23 Lakhs	3 years
2	Investigation of magneto-optical effects in composite magneto plasmonic nanostructures for sensing application, 2012	Dr. Kannan Ramaswamy	DST-SERB	30 Lakhs	3 years
3	Study of Gravitational Anyons in 2+1 Dimensions	Dr. Rahul Nigam	BITS-RIG	2 Lakhs	2 years

Publications:

1. G. Balaji, R. Aravinda Narayanan, A. Weber, F. Mohammad, and C.S.S.R. Kumar, 2012, Giant Magnetostriction in magnetite nanoparticles, *Materials Science & Engineering B*, 177, 14
2. Astha Sethi, P. Parikh, S. Benedict, S. Deb and S. Banerjee, 2012, Multi-peaked velocity spectrum of a ac-electric-field-induced electrolytic flow with microelectrodes, *Applied Mechanics & Materials* 229, 957

3. Sudipto Muhuri, Ignacio Pagonabarraga and Jaume Casademunt, Intrinsic oscillations of polymerizing antiparallel microtubules in a motor bath, 2012, *Euro. Phys. Lett.* 98, 68005
4. Sudipto Muhuri, "Scale invariant pattern in dynamically extending lattice", *Euro. Phys. Lett.*, 2012 (accepted)
5. Haque, A and S. D. Joglekar, Twisted Bosonization in Two Dimensional Noncommutative Spacetime, 2012, *Mod. Phys. Lett. A*, 27, 250149.
6. Sophia E. Hayes, Stacy Mui and Kannan Ramaswamy, "Tuning of photoabsorption materials through use of magnetic fields", *US Patent No: 8084,374 B2*, December, 2011

Conferences attended/papers presented:

1. B. Rajesh Kannan, S. Kalidhasan, A. Santhana Krishna Kumar, N. Rajesh, B. Harihara Venkataraman, 2012, Study of the interesting physical properties of Biopolymer - Strontium titanate nanocomposites, International conference on nanoscience and technology (ICONSAT-2012)
2. B. Rajesh Kannan and B. Harihara Venkataraman, 2012, Molten salt synthesis and dielectric characterization of samarium ion doped SrBi₂Ta₂O₉ ferroelectric ceramics, International conference on materials science and technology (ICMST-2012)
3. Astha Sethi, P. Parikh, S. Benedict, S. Deb and S. Banerjee, 2012, Multi-peaked velocity spectrum of a ac-electric-field-induced electrolytic flow with microelectrodes, International conference on nanomaterials and electronic engineering (ICNEE2012), Kuala Lumpur
4. Kannan Ramaswamy, participated in the workshop on "Capacity Building for Industrial Physics in Developing and Emerging Economies", ICTP, Trieste, Italy, April-2012.
5. B. Siva Prasad, Mathews M. John, Atul Goverdhan, Kannan Ramaswamy and P. Sankar Ganesh - "Rapid assessment of persistent organic pollutant, Sulfamethoxazole using surface plasmon resonance based biosensors", National Conference on Conservation and Management of Wetland Ecosystems, 2012.

Invited Talks given by BITS faculty:

- Dr. V. Satya Narayana Murthy "Preparation of thin films", in a short term course on Engineering Materials and Manufacturing Methods (EM3-2012) held in NIT Tiruchi, during June 25-30, 2012.

Invited talks arranged in the department:

- Professor A. K. Kapur, "Hamilton-Jacobi equation in Quantum Mechanics", October 2012
- Professor Surampilly Y. S. Rao, "Emerging contaminants in the environment", December 2012

Awards and recognitions won by faculty and students: NA

Faculty Development, International Collaboration & Industry Immersion

- Dr. Rahul Nigam is collaborating with Bonn University, Bonn, Germany
- Prof. Souri Banerjee visited Tokyo Institute of Technology as a JSPS fellow in June 2012

Significant new equipments/experimental facility added during the year:

- Solar training kit
- Electronic balance with density kit

Departmental association/club activities:

- Participated actively in the institute Techfest, ATMOS 2012

Major maintenance, renovations or new construction reports: NA

Major equipments acquired during the year:

- DC sputtering unit for thin-film deposition
- Fluorescence microscope

B3.11 DIVISION/UNIT/CENTER-WISE ACTIVITY HIGHLIGHTS

RESEARCH AND DEVELOPMENT

The education system offers several opportunities to members of faculty to pursue research and involve students at all different levels through specialized projects, in the chosen research area. Research is promoted in the institution through the faculty development scheme and by encouraging faculty members to obtain funding from national and international agencies for sponsored research projects and to provide consultancy services. Presently, there are 22 faculty members and 111 research scholars, pursuing Ph. D. programs in identified thrust areas.

There are 21 research projects funded by various National and International funding agencies for about Rs. 4,12,22,120/-. Details of approved research projects are enclosed in **Annexure 6(Part B3)**.

Ph.D. Qualifying Examination

Ph.D. qualifying examination was conducted at Hyderabad campus during the two semesters of (Feb and Sep) 2012. 35 candidates were declared successful in this examination.

CENTRAL FACILITIES REPORT

LIBRARY

In September 2011 the library moved to its new building. The new library is very spacious with 45000 sqft area in two floors, fully air-conditioned, with modern and comfortable furniture for the users. Library has a seating capacity of 450 readers. It remains open from 0900 to 2300 hrs. on all working days and from 0900 to 1700 hrs during weekends and other holidays.

The library has been using the LIBSYS Library Management Software to automate all its housekeeping activities. The library internet site has got the Web OPAC (Web enabled Online Public Access Catalogue). A facility on LIBSYS Web OPAC includes advance search options for books, journals, theses, CDs etc. The library site has been linked with the institute home page for external access. Students can access the library catalogue and the e-resources from their hostel rooms through LAN.

The library renders standard services like issuing of books; attending to reference queries, providing photocopies, inter library loans, etc for the faculty and students of the institute. The following are the highlights.

Acquisition Section

The Library has a collection of 21800 volumes and 3800 new volumes were added to the existing collection this year in different disciplines. These include emerging areas like Lean Technology, Leadership, Digital Libraries, Earthquake Engineering, Wireless Communication, Signal Processing, Robotics, Nano-technology, Micro-electromechanical Systems (MEMS), Bio-informatics, Biotechnology, Geographical Information Systems, Network Security, Embedded Systems, Grid Computing, Pervasive Computing, Software Testing and Data Warehousing/ Mining. A good number of fiction, general reading books, and case studies in Management, latest editions of handbooks, encyclopedias, yearbooks and books which are useful for campus recruitment were also added this year.

E-resources

Access to over 14,000 e-journals and other important websites have been provided on the library site. Under the INDEST –AICTUE consortium, e-journals of the following publishers were made available:

- American society of civil Engineers (ASCE)
- ASCE Conference proceedings
- American Society of Mechanical Engineers (ASME)
- IEEE Explore
- Science Direct
- ACM
- Bentham Science Pharmacy

We are also an Associate Member of INFLIBNET and subscribed to the following Journals:

- JSTORE
- IOP (Institute of Physics)
- Nature

Journals

Presently the Library subscribes to 93 printed journals including foreign journals. Useful articles, news, newspaper clippings are displayed on the notice board for the information of the readers. Besides, articles authored by institute faculty are displayed in a prominent place in the library.

Other Services

- a) The library continues to keep the readers informed every week through regular display of all the books added to the library. A list of weekly/monthly additions is also made available to readers on the library site. Special topical displays are also organized periodically.
- b) The library facilitates in the Earn While You Learn Programme of the Institute wherein students assist in the library jobs like book data entry, spine labeling of books, bar-coding of books etc
- c) Organized a Book Festival in association with Book Syndicate, our campus book store in October 2012. During the Book Festival faculty members were encouraged to suggest books for the library.
- d) Free wireless internet (WIFI) access is available in the library

Library Statistics

The Library collection is growing steadily. The following table shows some of the significant statistical data:

1	Current library holdings	21800
2	Average number of books issued per day	162
3	Average number of readers visiting the library per day	910
4	Books added during the year	3800
6	Number of print Journals subscribed	93
7	E journals made available on library site	14084
8	CD-ROM Collection	1050
9	Educational Video/DVD Collection	80
10	Total number of reading seats in the library	450
11	Library membership	3559

Visit to Eminent Universities in United States

Prof V S Rao, Director and Sr. Professor visited, along with the Vice Chancellor, universities, such as, Stanford, MountainView; UC Davis, Santacruz, Berkeley, Irvine, Los Angeles & San Diego; USC Viterbi School of Engineering, among others, in June-July, 2012 in order to present BITS vision and to understand their best practices & contemporary developments.

CENTRAL WORKSHOP

The Central Workshop imparts training to students and caters to the maintenance & fabrication needs of the Institute. Students' training involves training all first degree students through the course "Workshop Practice" by imparting skills in various manufacturing processes like machining, fitting, carpentry, smithy, foundry, sheet metal, electroplating and welding *etc.* In addition, this semester we introduced two computer oriented experiments i.e., CNC Programming & Manufacturing simulation. Students are also imparted in-depth training in other courses such as "Production Techniques" and "Computer Aided Manufacturing". Apart from routine maintenance and training, the workshop also accepts fabrication jobs concerning the project works of students.

The workshop comprises the following sections: Machine shop, Welding, Electroplating, Fitting, Smithy, Sheet Metal, Carpentry, Foundry and Metrology. Major equipment include vertical machining center (Bridgeport VMC GX600), 9 Lathes, 2 Shapers, 1 Radial Drilling Machine, 1 Universal Milling Machine with indexing attachment, 1 Cylindrical Grinding Machine, 1 Tool and Cutter Grinder, 1 Pedestal Grinder, 1 Open-hearth furnace for smithy, 1 Gas-fired furnace for foundry, 5 Wood-working Lathes, 2 Arc-welding equipment, 1 Oxy-Acetylene gas welding equipment, 1 Gauge planner for wood works, Electroplating equipment (zinc coating), Power Hacksaw and metrology instruments. Two machine tools, recently added, are surface grinding (HMT make) and slotting machine (Daljit make).

The Central Workshop is due for further expansion to cater to the requirements of BE degree course in "Manufacturing Engineering".

COMMUNITY WELFARE UNIT

The community welfare unit (CWU) coordinates the welfare and recreational activities of the students and staff members of the institute. In 2012, more consultants in specialized fields visited the medical centre regularly. The diagnostic needs of the campus residents are taken care of by trained staff visiting the medical centre from medicit every morning to collect the samples.

The Independence Day, Republic Day and Gandhi Jayanthi celebrations in the campus were also organized by the CWU. Professionals visit the campus to teach musical instruments, classical Dance, keyboard, Yoga and Karate. Community also actively contributes to organizations like YUVA in their clothes collection drive for old-age homes and orphanages.

Jain Heritage International School has its Toddler (play school and kindergarten) campus in BITS to cater to the needs of the community. About 35 kids go to this school.

B3.12 STUDENTS ACTIVITIES, ACHIEVEMENTS, SCHOLARSHIPS, CULTURAL AND ACADEMIC FESTIVALS

STUDENT WELFARE DIVISION

The campus has been bustling with activities of various clubs and associations in which students actively participated.

Clubs: The following established clubs have accelerated their activities by organizing various events and competitions on campus.

- Astronomy Club
- Bulls n Bears club
- Crux Club
- Dance Club
- Dramatics Club
- Shades Club
- English Language Activities Society (ELAS)
- Journal Club
- Music Club
- Photography Club
- Quiz Club
- VFX Club
- Automation and Robotics Club
- Martial arts Club

Apart from these clubs, there are regional associations which depict their unique culture and tradition through various regional celebrations.

Scholarships: Following scholarships are availed by the students of Hyderabad campus and the number of students who received them for this academic year are:

- Ashok Agarwal Scholarship –2 students
- Merit Scholarship – 101 students
- Merit Cum Need Scholarship – 1085 students
- DAAD Scholarship – 4 students

Lecture Series:

- Spreading knowledge about Finance to all the students on Campus and lecture series organized by Bulls n Bears
- Guest Lecture on Entrepreneurship as a Career was conducted by Alumni Affairs unit
- Guest Lecture on Occupational Health Hazards

- Guest Lectures on Challenges in Opportunities with Current Generation of Poorly Soluble Drugs was conducted by Pharma Alumni
- Guest Lecture on Implications for Structure-Based Drug Design was conducted by Pharma Alumni

Social and Environmental Activities:

There are many social organizations actively working on campus like NSS, NIRMAAN, YUVA, Make a Change, society involved in reinventing India and URJA on campus.

- We have various on campus events like Cloth Donation, Tree Plantation, Blood Donation, Campus Clean Up programmes.

NIRMAAN

a) SAP (School adoption Program)

Focusing on the quality of education offered at the Government schools, our project also aims at bridging the huge void created by the lack of English language skills to the kids there.

b) Livelihood Opportunities:

Empowering women and providing an alternate means of livelihood to the financially backward, our livelihood projects in the village target 39 women. Trained 45 women in skills like tailoring, candle making, interior design.

c) Community Development:

The team looks after various needs of the community in areas of health, hygiene, awareness and other infrastructural lacks. Conducted various medical camps and have spread awareness on sanitation and the like.

d) Ignite- All round Education Project

It is an education project aimed at providing value-based education to the under-privileged. Extending from schools, orphanages to a cluster of houses we were able to reach out to kids of different backgrounds and bridge the quality gap in education by adding a more practical component to it.

SPORTS ACTIVITIES

Students have shown great enthusiasm in making use of the sports facilities provided in the campus. Each hostel has facilities for indoor games like table-tennis, chess and caroms. There are two shuttle badminton courts and grounds for volley-ball, foot-ball and cricket. Physical Education Department of SWD has been conducting friendly matches among Bhavans and inter-discipline teams in all events apart from invitational competitions with other institutions like IIT Hyderabad, IIIT, NALSAR, CBIT etc. Intra Hyderabad Sports Meet was conducted in BPHC on 8th and 9th of September considering the major colleges in Hyderabad which are reputed in sports.

The SAC consist of State-of-the-art GYM separate for Boys and Girls. The Boys section is equipped with strength gaining single and multi-sections machines, electrical trainers and treadmills. While the Girls section is consist of Cardio Fitness machines, including electrical trainers and treadmills. Two Badminton courts with maple wood flooring, Five T.T. tables, 16 carom boards, 30 chess sets and 3 Pool Tables are also available in the SAC. Apart from indoor games two Basketball and two Lawn Tennis Nova acrylic cushion surface courts are also available with chain link fencing and flood lights.

Awards and recognitions won by students

1. Ms. Vaidehi Murarka, ID No. 2009B3A7609H, has got the acceptance of her paper on "ALPHABET RECOGNITION USING PIXEL PROBABILITY DISTRIBUTION" From International Journal of Scientific and Engineering Research (IJSER) Paris, France.
2. Ms. Madhumitha Gaddam, 2008B1A4581H, has been awarded the GE Scholarship.
3. a) In BOSM – 2012, Mr. Varun Soni, 2010A2PS484H, was won the 3 Gold Medals, best power lifter and best weight lifting trophy in Malaviya Sports Tournament held at Jaipur and All India Sports Festive, SPARDHA-2012 organized by BHU held at Varanasi. He successfully lifted 180kgs more than the runner up. He has created 10 new records in power lifting and weight lifting for which BITS-Pilani, Hyderabad Campus has been awarded "11 best performance trophy" for winning more Points/medals in weight lifting Silver Medal in Body Building And he was awarded the Best Player of BOSM – 2012.
4. Mr. Vaibhav Sharma, 2010B4A3583H, won Bronze in and Mr. Prateek Mehta, 2012B3PS610H has won Bronze Medal in Butterfly Swimming.

5. Our Basketball Team won 1st Prize in Intercity Tournament conducted by NALSAR Law College.
6. Our team has won the First Prize in the Fashion Show at the Cultural Fest (Spring Spree) organized by NIT Warangal, Ms. Dhriti Trivedi has won Best Female Model Award.

Other Events:

1. On the occasion of Foundation Day, BPHC Marathon was conducted on 23.03.2012.
2. Center for Entrepreneurial Leadership (CEL) in association with Project Spark by BITSAA was conducted under Earn While You Learn Scheme for NVC among the students.
3. The student union elections were conducted by the Election Commission on 6/9/12 to elect the office bearers of the Students Union Council for the academic year 2012-13.
4. 45th Engineers' Day was celebrated on 15.09.2012.
5. 7th Annual International Microelectronics Olympiad of Armenia was held in BITS-Pilani Hyderabad Campus on 10.09.2012.
6. French Language classes were conducted in BPHC.
7. Students represented Hyderabad Campus at different youth festivals like OASIS, WAVES, and MOOD INDIGO and won prizes in various categories.
8. Important community festivals like Lohri, Pongal, Ugadi, Rama Navami, Ganesh Chaturthi, Durga Puja, Diwali, Janmastami and Mahavir Jayanthi were celebrated by the students with great enthusiasm. Various cultural activities were organized as part of the festivities.
9. Mini-Tech fest was organized in November-2012 where events like economics quiz, general quiz and line-follower competitions were organized.
10. Network programming professional certification course was conducted by CS&IS Association.
11. Students came up with the second issue of the annual magazine of the campus, "ON THE ROCKS", which showcased their creative abilities.
12. RBI-BITS Interface was conducted on campus.
13. Journal Club release Journals during PEARL and other major events.

NATIONAL SERVICE SCHEME:

Three units of National Service Scheme are functional in BITS-Pilani, Hyderabad Campus (BPHC). Currently there are 300 volunteers consisting of 174 male and 126 female students. The Chairman of NSS team is the Director, Prof. V. S. Rao and there are three Programme Officers one each for a unit as follows. Unit I: Dr. P. Sankar Ganesh, Unit II: Dr. N. Jalaiah and Unit III: Dr. Joy Anuradha. Dr. Shamu Tharu also serves as the Programme Coordinator.

NSS activities during the year 2012:

- On World water Day 2012 i.e. 22.03.2012, water quiz was conducted by NSS.
- Villages/ slums adopted: 4 (Devar Yemjal, Pothayapalli and Adraspalli) (200 volunteers)
- Villages adopted for literacy: 3 (Adraspalli, Devar Yemjal & Workers' colony at BITS Pilani, Hyderabad Campus) (290 volunteers)
- Tree saplings planted: 10,000 (BITS Pilani, Hyderabad Campus and Thimmapur) (200 volunteers)
- Immunization camps conducted: 2 (BITS Pilani, Hyderabad Campus) (50 volunteers)
- Blood donation camps conducted: 4 (348 units of blood was donated) (450 volunteers)
- Health Camps conducted: 2 (Fluorosis and General checkup at Pothayapalli and Adraspalli) (85 volunteers)
- 1 (General health camp at Dever Yemjal) (35 volunteers)
- NSS Special Camp Programme: 3 Camps at Pothayapalli and Adraspalli Villages, R.R.District: (145 volunteers)
- 3 Camps at Dever Yamjal Village, Ranga Reddy District: (150 volunteers)

- NSS Project Type Course: 3 credit project type course for NSS volunteers (Study/Lab/Computer Oriented Projects) (Open only to eligible NSS volunteers)
- IGNITE – Educating the children of construction workers at BITS Pilani, Hyderabad Campus in 2012
- PEARL '12: Carbon footprint free annual cultural fest and Street Lights donated to Village Lakshmapur.
- Banning of plastic carry bags at BITS Pilani, Hyderabad Campus: From 01.03.2012
- International Women's day was celebrated on March 08, 2012 at BITS Pilani, Hyderabad Campus
- Earth Hour was held at BITS Pilani, Hyderabad Campus on March 2012.
- Independence Day celebrations in coordination with Community Welfare Division: 15.08.2012
- Mass tree plantation on World Ozone Day: 16.09.2012
- Orientation and review meeting for NSS volunteers: 20.09.2012
- National Service Scheme Day celebrations: 24.09.2012
- Gandhi Jayanthi celebrations in coordination with Community Welfare Division: 02.10.2012
- SAHARA – Initiative to collect old clothes & stationery: 20-21.10.2012
- Eye pledging camp: November 12-13 2012

B3.13 MAJOR MAINTENANCE, RENOVATIONS OR NEW CONSTRUCTION REPORTS

- An auditorium with a seating capacity of 2500 nos spread out in 1,44,444 sft is under construction. This project is likely to be completed by the year end.

B3.14 MAJOR EQUIPMENT'S ACQUIRED DURING THE YEAR:

During 2012 a lot of new equipment has been added to support academics, research and development. Details as per **Annexure7 (Part B3)**.

'Annexure B3-1'

(3 Pages)

Ref. AR 2012, Page No. B3-1

ADMINISTRATIVE BODIES**The names and designations of senior officers of Hyderabad campus****Head of Departments**

Sl.No.	Faculty Member	Discipline
1.	Dr. I Sreedhar	Chemical Engineering
2.	Dr. ChanduParimi	Civil Engineering
3.	Dr. Y Yoganandam	EEE
4.	Dr. YVD Rao	Mechanical Engineering
5.	Dr. V Vamsi Krishna Venuganti	Pharmacy
6.	Dr. R Gururaj	Computer Science & Information Systems
7.	Dr. Ramakrishna Vadrevu	Biological Sciences
8.	Dr. K Sumithra	Chemistry
9.	Dr. M G Prasuna	Economics and Humanities
10.	Dr. Bivudutta Mishra	Mathematics
11.	Dr. KannanRamaswamy	Physics

Dean(s), Professor-in-charge(s), Faculty-In-Charges, Other In-charges&Co-ordinators

1.	Dean, Administration	Prof. M B Srinivas
2.	Dean, International Programmes and Collaborations Division (University Wide)	Prof. SumanKapur
3.	Asst. Dean, Practice School Division	Dr. KVG Chandrasekhar

Professor-in-charge (s)

1.	Professor-in-charge, Sponsored Research and Consulting Division	Dr. P. Yogeeswari
2.	Professor-in-charge, Academic Research Division	Dr. Vidya Rajesh
3.	Professor-in-charge, International Programmes and Collaborations Division	Dr. Souri Banerjee

Faculty-In-charge(s)

1.	Academic Registration and Counseling Division	Dr. M Srinivas
2.	Admissions Division	Dr. Vinayaka Rao
3.	Placements Division	Dr. Sankar Ganesh
4.	Maintenance Division,	Dr. Y V Daseswara Rao
5.	Educational Hardware Division	Dr. Y V Daseswara Rao
6.	Engineering Services Division	Dr. Y V Daseswara Rao
7.	Instruction Division	Dr. Michael Alphonse
8.	Information Processing & Business Intelligence	Dr. ChittaranjanHota
9.	University- Industry Linkages	Dr. K.V.G. Chandrasekhar
10.	Student Welfare Division	Dr. I Sreedhar
11.	Construction	Prof. P N Rao

Other In-charges

SI.No.	Name	In-charge
1	Central Analytical Laboratory	Dr. D Sriram
2	Central CAD Laboratory	Dr. J agadeeshAnmala
3	Publications & Media Relations	Ms .VasundhariAlluri
4	Community Welfare	Dr. MeenakshiViswanathan
5	Workshop	Dr. Amit Kumar Gupta
6	Alumni Affairs	Dr. S SDeshmukh
7	Library	Mr. M S Uday Kumar

Coordinators

SI.No.	Name	In-charge
1	W I L P	Mr B R Murthy
2	National Service Scheme	Mr . Shamuel Tharu
3	Central Entrepreneurial Leadership (CEL)	Dr. P Lalitha
4	Centre of Excellence in Water Resources Management	Prof. K S Raju

Hostel Resident Wardens

SI.No	Name	Hostel
1	Dr. S SDeshmukh (w.e.f.02.01.2013)	Chief Warden
	DrPunna Rao Ravi	Budh Bhawan
2	Dr Kumar Pranav Narayan	Krishna Bhawan
3	Mr G Pavan Kumar	Gandhi Bhawan
4	Dr KVG Chandra Sekhar	Vyas Bhawan
5	Dr Joy Anuradha	Madan Mohan Malaviya Bhawan
6	MsMadhuriBayya	Meera Bhawan
7	Mr. Syed Ershad Ahmed	Ram Bhawan
8	Dr Naga Mohan Kommu	Shankar Bhawan

Hostel Non-Resident Wardens

SI.No	Name	Hostel
1	Dr. ManabChakravarty	Krishna Bhawan
2	Dr. P V Vamsi Krishna	Ram Bhawan
3	DrKannanRamaswamy	Shankar Bhawan
4	Dr. Krishnan Rangan	Budh Bhawan
5	Dr. Murari R Varma	Gandhi Bhawan
6	Dr. ArunaMalapati	Meera Bhawan
7	Mr. Kurra Suresh	Vyas Bhawan
8	Ms. Rakhee	Madan Mohan Malaviya Bhawan

Hostel Superintendents

Sl.No	Name	Hostel
1	Mr. Santosh Pillai	Shanker & Vyas Bhawan
2	Mr. Haridas	Gandhi & Buddh Bhawan
3	Mr. ShaikAreef Basha	Krishna & Ram Bhawan
4	Mrs. Anitha Pillai	Meera Bhawan
5	Mrs. Prathibha Belorkar	Madan Mohan Malaviya Bhawan

'Annexure B3-2'

(2 Page)

Ref. AR 2012, Page No. B3-1

DETAILS OF ADMISSIONS MADE DURING THE YEAR 2012**(A) Integrated First Degree Programmes at Hyderabad Campus:**

	Total
B.E.(Hons.): Chemical - A1	36
B.E.(Hons.): Civil - A2	38
B.E.(Hons.): Electrical and Electronics - A3	75
B.E.(Hons.): Mechanical - A4	60
B.Pharm.(Hons.) - A5	14
B.E.(Hons.): Computer Science - A7	85
B.E.(Hons.): Electronics & Instrumentation - A8	40
B.E.(Hons.): Electronics and Communications - AA	81
B.E.(Hons.): Manufacturing - AB	34
M.Sc.(Hons.): Biological Sciences - B1	29
M.Sc.(Hons.): Chemistry - B2	31
M.Sc.(Hons.): Economics - B3	35
M.Sc.(Hons.): Mathematics - B4	35
M.Sc.(Hons.): Physics - B5	30
M.Sc.(Tech.): Information Systems - C6	50
Grand Total	673

(B) Higher Degree Programmes:

	Total
M.E. Biotechnology	9
M.E.Civil (with specialization in Structural Engineering)	8
M.E. Computer Science	7
M.E. Embedded Systems	4
M.E. Design Engineering	10
M.Pharm.(with specialization in Pharmaceutics)	8
M.Pharm.(with specialization in Pharmaceutical Chemistry)	5
M.E. Mechanical (with specilization in Thermal Engg.)	7
M.E. Microelectronics	4
Grand Total	62

(C) Ph.D Programmes:

Second Semester 2011-2012	Total
Biology	6
Chemical	0
Chemistry	4
Civil	2
CSIS	4
EEE	3
Humanities	2
Mathematics	0
Mechanical	0
Pharmacy	6
Physics	1
Grand Total	28

First Semester 2012-2013	Total
Biology	2
Chemical	0
Chemistry	4
Civil	0
CSIS	3
EEE	5
Humanities	0
Mathematics	0
Mechanical	1
Pharmacy	5
Physics	1
Grand Total	21

'Annexure B3-3'

(4 Pages)

Ref. AR 2012, Page No. B3-2

LIST OF NEW COURSES INTRODUCED DURING THE YEAR 2012**Second semester 2011-2012**

S.No.	Course No.	Course Title
1.	BIO C461	RECOMBINANT DNA TECH
2.	BIO F110	BIOLOGY LABORATORY
3.	BIO G515	STEM CELL & REGENER BIO
4.	BIO G542	ADVANCED CELL MOLE BIO
5.	BIO G642	EXPERIMENTAL TECHNIQUES
6.	BIO G643	PLANT BIOTECHNOLOGY
7.	BITS C393	CURRENT AFFAIRS
8.	BITS F112	TECHNICAL REPORT WRITING
9.	CE G552	ADVANCED STRUCTURAL MECHANICS & STABILITY
10.	CE G615	EARTHQUAKE ENGINEERING
11.	CE G618	DESIGN OF MULTI - STOR STR
12.	CHE C411	ENVIR POLLUTION CONTROL
13.	CHE G512	PETRO REFIN & PETROCHEM
14.	CHEM C461	NUCLEAR & RADIOCHEMISTRY
15.	CHEM F110	CHEMISTRY LABORATORY
16.	CS F111	COMPUTER PROGRAMMING
17.	CS G513	NETWORK SECURITY
18.	CS G523	SOFTWARE FOR EMBEDDED SYSTEMS
19.	CS G525	NETWORK SECURITY
20.	CS G551	ADVANCE COMPILATION TECH
21.	CS G553	RECONFIGURABLE COMPUTING
22.	DE G514	FRACTURE MECHANICS
23.	EA C414	INTRO TO BIOINFORMATICS
24.	EA C415	INTRODUCTION TO MEMS
25.	EEE C415	DIGITAL SIGNAL PROCESS
26.	EEE F111	ELECTRICAL SCIENCES
27.	HIST C211	MAIN CURRENTS OF MOD HIST
28.	HUM C341	COMPARITIVE INDIAN LITERATURE
29.	HUM C351	PUBLIC ADMINISTRATION
30.	HUM C383	SRIMAD BHAGAVAD GITA
31.	HUM C411	PROFESSIONAL EITHICS
32.	HUM C431	THEATRE ARE ACTING AND PRODUCTION
33.	FIN C342	FINANCIAL MANAGEMENT
34.	MBA C423	BUSINESS POLICY & STR MGT
35.	ME G516	ENERGY SYSTEMS ENGINEERING
36.	ME G532	MACHINE TOOL ENGINEERING
37.	ME G535	CONVECTIVE HEAT & MASS TRANSFER
38.	ME G536	THERMAL EQUIPMENT DESIGN

S.No.	Course No.	Course Title
39.	ME G611	COMP AIDED ANAL & DESIGN
40.	MEL G632	ANALOG IC DESIGN (W/P)
41.	MEL G642	VLSI ARCHITECTURE
42.	MGTS C322	MARKETING
43.	MSE G511	MECHATRONICS
44.	PHA C416	CHEM OF SYNTHETIC DRUGS
45.	PHA G510	APPL OF STAT & COMP INFO
46.	PHA G613	PHARMACEUTICAL BIOTECH
47.	PHA G621	ADVANCED MEDICINAL CHEM
48.	PHA G632	DOSAGE FORM DESIGN
49.	PHA G642	LABORATORY PROJECT
50.	PHY F110	PHYSICS LABORATORY

First Semester 2012-2013

S.No.	Course No.	Course Title
1.	BIO F211	BIOLOGICAL CHEMISTRY
2.	BIO F212	MICROBIOLOGY
3.	BIO F213	CELL BIOLOGY
4.	BIO F214	INTEGRATED BIOLOGY
5.	BIO G514	MOLECULAR IMMUNOLOGY
6.	BIO G651	PROTEIN AND ENZYME BIOENGINEERING
7.	BIO G671	BIOCONVERSION TECHNOLOGY
8.	CE F211	MECHANICS OF SOLIDS
9.	CE F212	TRANSPORT PHENOMENA
10.	CE F213	SURVEYING
11.	CE F214	CONSTRUCTION MATERIALS
12.	CE G514	STRUCTURAL OPTIMIZATION
13.	CE G533	ADVANCED COMPOSITE MATERIALS FOR STRUCTURES
14.	CE G612	ADVANCED STEEL STRUCTURE
15.	CHE F211	CHEMICAL PROCESS CALCULA
16.	CHE F212	FLUID MECHANICS
17.	CHE F213	CHEM ENGG THERMODYNAMICS
18.	CHE F214	ENGINEERING CHEMISTRY
19.	CHEM F211	PHYSICAL CHEMISTRY I
20.	CHEM F212	ORGANIC CHEMISTRY I
21.	CHEM F213	PHYSICAL CHEMISTRY II
22.	CHEM F214	INORGANIC CHEMISTRY I
23.	CHEM G531	RECENT ADVANCES IN CHEM
24.	CS F213	OBJECT ORIENTED PROG
25.	CS F214	LOGIC IN COMPUTER SC
26.	CS F215	DIGITAL DESIGN
27.	CS F222	DISCR STRUC FOR COMP SCI

S.No.	Course No.	Course Title
28.	CS G554	DISTRIBUTED DATA SYSTEMS
29.	CS G623	ADVANCED OPERAT SYSTEMS
30.	DE G522	DESIGN PROJECTS
31.	DE G531	PRODUCT DESIGN
32.	DE G631	MATERIALS TECH AND TESTING
33.	EA C471	PATTERN RECOGNITION
34.	ECE F211	ELECTRICAL MACHINES
35.	ECE F212	ELECTROMAGNETIC THEO I
36.	ECE F214	ELECTRONIC DEVICES
37.	ECE F215	DIGITAL DESIGN
38.	ECON F211	PRINCIPLES OF ECONOMICS
39.	ECON F212	FUNDA OF FIN AND ACCOUNT
40.	ECON F213	MATHEMATIC & STAT METHOD
41.	ECON F214	ECONOMIC ENV OF BUSINESS
42.	ECON F415	NEW VENTURE CREATION
43.	EEE F211	ELECTRICAL MACHINES
44.	EEE F212	ELECTROMAGNETIC THEO I
45.	EEE F214	ELECTRONIC DEVICES
46.	EEE F215	DEGITAL DESIGN
47.	EEE G512	EMBEDDED SYSTEM DESIGN
48.	EEE G621	ADVANCED ELECTRONIC CIRCUITS
49.	EEE G626	HARDW ARE SOFTW ARE CO-DESIGN
50.	EEE G559	ADV POWER ELECTRONICS
51.	FIN C411	PROJECT APPRAISAL
52.	FIN C432	ISSUES IN INDIAN ECONOMY
53.	FIN C441	ORGANISATION BEHAVIOUR
54.	GS F211	MOD POLITICAL CONCEPTS
55.	GS F231	DYN OF SOCIAL CHANGE
56.	GS F232	INTRODUCTORY PSYCHOLOGY
57.	GS F241	CREATIVE WRITING
58.	GS F243	CURRENT AFFAIRS
59.	GS F333	PUBLIC ADMINISTRATION
60.	HSS F328	HUMAN RESOURCES DEVELOPMENT
61.	HSS F334	SRIMAD BHAGAVAD GITA
62.	HUM F411	PROFESSIONAL ETHICS
63.	IS F213	OBJECT ORIENTED PORG
64.	IS F214	LOGIC IN COMPUTER SC
65.	IS F222	DISCR STRUC FOR COMP SCI
66.	IS F241	DIGITAL ELECTRO & MICRO
67.	MATH F211	MATHEMATICS III
68.	MATH F212	OPTIMIZATION
69.	MATH F214	ELEMENTARY REAL ANALYSIS
70.	MATH F215	ALGEBRA I

S.No.	Course No.	Course Title
71.	MATH F243	GRAPHS AND NETWORKS
72.	ME F211	MECHANICS OF SOLIDS
73.	ME F212	FLUID MECHANICS
74.	ME F213	MATERIALS SCIENCE & ENGG
75.	ME F214	APPLIED THERMODYNAMICS
76.	ME F243	PRODUCTION TECHNIQUES I
77.	ME G514	TURBOMACHINERY
78.	ME G515	COMPUT FLUID DYNAMICS
79.	ME G621	FLUID DYNAMICS
80.	ME G631	HEAT TRANSFER
81.	ME G641	THEORY OF ELASTICITY & PLASTICITY
82.	MEL G611	IC FABRICATION TECHNOLOGY
83.	MEL G631	PHYSICS AND MODELLING OF MICROELECTRONIC DEVICES
84.	MF C418	LEAN MANUFACTURING
85.	MGTS C351	ORGANISATIONAL BEHAVIOUR
86.	PHA F212	MICROBIOLOGY
87.	PHA F213	DISPENSING PHARMACY
88.	PHA F214	ANATOMY PHYSIO & HYGIENE
89.	PHA F243	INDUSTRIAL PHARMACY
90.	PHA G612	PHARMACOKINETICS & CLINICAL PHARMACY
91.	PHY F211	CLASSICAL MECHANICS
92.	PHY F212	ELECTROMAGNETIC THEO I
93.	PHY F213	OPTICS
94.	PHY F214	ELEC MAGNET & OPTICS LAB
95.	PHY G531	SEL TOP IN SOLID ST PHY
96.	PHY G541	PHY OF SEMICONDUCTOR DEV
97.	POL C212	MOD POLITICAL CONCEPTS
98.	POL C321	INTERNATIONAL RELATIONS
99.	POL F321	INTERNATIONAL RELATIONS
100.	PSY C211	INTRODUCTORY PSYCHOLOGY

'Annexure B3-4'

(2 Pages)

Ref. AR 2012, Page No. B3-2

REGISTRATION OF STUDENTS**Second Semester 2011-2012**

Discipline	2008 Batch	2009 Batch	2010 Batch	2011 Batch
A1 - Chemical	28	39	33	37
A2 - Civil	35	38	39	34
A3 - EEE	66	77	69	76
A4 - Mechanical	56	59	60	64
A5 - Pharmacy	27	18	21	23
A7 - Computer Science	70	77	75	84
AA - ECE	72	75	75	80
B1 - Biology	27	19	28	35
B2 - Chemistry	21	27	29	36
B3 - Economics	37	40	43	39
B4 - Mathematics	28	42	41	39
B5 - Physics	34	32	32	32
C6 - Information Sys	39	49	46	55
ME - CS Reg			7	6
ME - CS W/P		1		6
ME - Microel - Reg			9	
ME - Microel - W/P		1	13	
ME - Embed - Reg			11	10
ME - Embed - W/P			10	8
M.Pharm - Pharmacy				5
M. Pharm - Pharmaceutics			9	6
M. Pharm - Pharmaceutics W/p				10
M. Pharm - Pharm Chemistry			10	
ME - Biotechnology				6
ME - Design Engg.				8
ME - Structural Engg.				6
ME - Thermal Engg.				4
Research Scholars	1	13	22	55
Total	541	607	682	764
Research Scholars (2004, 2005, 2006 & 2007 Batch)				4
Grand Total				2598

Summer Term (PS I) 2011 – 2012

Discipline	TOTAL	Course No.
2008 & 2009 Batch Students	15	BITS C221/ BITS C231
2010 Batch Students	585	BITS C221

Total Registered during Summer Term (PS I) 2011 - 2012 **600**

First Semester 2011 - 2012

	Discipline	2008 Batch	2009 Batch	2010 Batch	2011 Batch	2012 Batch
A1	Chemical	11	39	34	37	36
A2	Civil	6	38	38	32	38
A3	EEE	4	76	69	74	74
A4	Mechanical	2	59	60	65	59
A5	Pharmacy	5	19	21	22	10
A7	Comp Science	3	77	75	88	85
A8	Electronics & Instrumentation					40
AA	ECE	5	75	75	83	80
AB	Manufacturing					34
B1	Biology	27	19	28	32	29
B2	Chemistry	20	27	29	35	30
B3	Economics	37	40	43	40	35
B4	Mathematics	28	42	41	40	35
B5	Physics	34	32	32	30	30
C6	Information Systems	4	49	46	55	50
ME-Reg	Comp Science				6	7
ME-W/p	Comp Science				6	
ME-Reg	Microelectronics					4
ME-W/p	Microelectronics					
ME-Reg	Embedded Systems			1	10	4
ME-W/p	Embedded Systems				8	6
M.Pharm	Pharmacy	3			5	
ME - W/p	Electronics & Control					11
M.Pharm	Pharmaceutics	2			6	8
M.Pharm	Pharmaceutical Chemistry	1				5
ME	Biotechnology	1			5	9
ME-W/p	Mechanical					5
ME	Structural Engineering				6	8
ME	Thermal Engineering				4	7
ME	Design Engineering				8	10
M.Pharm-W/p	Pharmaceutics				10	
	Research Scholars		13	21	53	19
	Total	193	605	613	760	768
	Research Scholars (2004, 2005, 2006 & 2007 Batch)				4	
	Grand Total	2943				

'Annexure B3-5'

(3 Pages)

Ref. AR 2012, Page No. B3-4

LIST OF ORGANIZATIONS WHICH CONDUCTED CAMPUS INTERVIEWS

S.No.	Name of the Company	No. of Offers	Salary Package (Lacs per Annum)
1.	Accolite	1	6.5
2.	Anilinear	2	4.2
3.	Applied IS	4	5.5
4.	Beroe Inc	1	4
5.	Biophore	4	1.8
6.	Bogolik software	2	4.6
7.	Bravo Lucy	1	9.05
8.	CA Technologies	11	7.1
9.	Capital IQ	2	6.4
10.	CEAT Limited	2	5.25
11.	Chrysler	4	4.5
12.	Cognizant	57	3.15
13.	Cyprus	0	7
14.	Deloitte	15	4.36
15.	Dr. Reddys	2	2.28
16.	Embedded Infotech	10	6
17.	EMC	4	9.56
18.	Epic	1	42.9
19.	Factset	14	7
20.	Fiorano	8	6.75
21.	FMC	9	5.17
22.	FourSoft	6	4
23.	Future first	2	8
24.	Google	0	4
25.	Harman International	8	7
26.	Hitachi Consulting	3	3
27.	Honda	3	4
28.	Imagination Technologies	2	5.5
29.	Indegene Life Sciences	2	3
30.	Indian Army	3	3
31.	Infosys	28	3.25
32.	Intergraph	5	3.5
33.	Kony Labs	8	5
34.	L&T Ramboll	2	3.02
35.	Manjeera	1	3.5
36.	MAQ Software	2	5
37.	Markets & Markets	7	5
38.	mfino	4	7

S.No.	Name of the Company	No. of Offers	Salary Package (Lacs per Annum)
39.	Microsemi	4	6.5
40.	Microsoft	4	10.1
41.	Morgan Stanley	3	11.3
42.	MRF	0	4.2
43.	MuSigma	6	3.3
44.	Mutual Mobile	0	4
45.	Mylan	6	2
46.	Navyug Infosolutions	4	5
47.	Nvidia Graphics	4	9.05
48.	One Convergence	0	4
49.	Oracle	23	6
50.	Orbees	4	3.5
51.	Perkin Elmer	2	4.2
52.	Polaris	20	4.25
53.	Polmon	5	3.5
54.	Polycom	4	8.57
55.	Powerwave	1	3.6
56.	Redpine Signals	6	6.5
57.	Reflexis	10	5
58.	Rockwell Collins	3	5.4
59.	Roof for Two	0	4.8
60.	Samsung	2	5.78
61.	Sapient	4	4.9
62.	Sevya	5	3
63.	Shapoorji Pallonji	1	3
64.	Soctranics	3	2.5
65.	Sokrati	3	4.2
66.	SourceBits	3	6
67.	Strata Retail	1	7.5
68.	Synopsys	2	8.63
69.	Tata Autocomp	1	3.6
70.	Tech Aspect	0	3
71.	Texas Instruments	0	10.15
72.	Thorogood	3	8
73.	United Online	4	6
74.	United Technologies	2	6
75.	Uurmi Systems	5	3.6
76.	Virtusa	12	5
77.	Water Health	4	3.2
78.	Yatra	1	7.5
79.	Zuari	6	5
	Total	411	

Branch	% Placed	Total Students	Placed Students	Job Offers	MAX	AVG	MIN
Registered Students	80%	388	310	411	11.3	6.29	4.25
BE (Chemical)	104%	24	25	35	5	3.9	3.2
BE (Civil)	67%	27	18	26	8.57	3.67	3
BE (EEE)	81%	58	47	63	7.1	4.8	3
BE(Mech)	86%	50	43	55	6.8	4.15	3.15
BE (CSE)	95%	62	59	83	11.3	6.29	3
BE(ECE)	91%	65	59	63	11	4.95	3
M.Sc.(IS)	82%	38	31	37	9.5	6.25	3.2
ME (CSE)	100%	7	7	13	10	5.32	3.15
ME (Microelectronics)	29%	7	2	6	4.25	4.25	4.25
ME (Embedded Systems)	56%	9	5	6	7.1	4.8	3.2
M. Pharma	38%	16	6	6	4.2	3.14	1.8
B.Pharma	33%	24	8	18	5	2.78	2
M.Sc. (Chemistry)	0%	1	0				

'Annexure B3-6'
(14 Pages)
Ref. AR 2012, Page No. B3-44

APPROVED PROJECTS DURING JANUARY - DECEMBER 2012

S.No.	Title of the Project	Principal Investigator	Funding Agency	Department	Sanctioned Amount	Duration	Sanctioned Date
1	Drug Discovery of inhibitors of the protease of Peripheral macrophages and Microglial Cells in the Spinal cord for the Treatment of Neuropathic Pain	Dr. P. Yogeewari	DST	Pharmacy	3978300	3 years	27.01.2012
2	Design, Characterization and pharmacokinetic evaluation of nanocarriers for Antiretroviral Drug Delivery in the Effective Treatment of HIV AIDS	Dr. Punna Rao	DST	Pharmacy	2310000	3 years	08.02.2012
3	Automated Detection of security and privacy threats in peer to peer networks	Dr. Chittaranjan Hota	DIT	CSIS	6195000	3 years	6.3.2012
4	Understanding Material Properties and Possible Forming Behavior (Using FEM) of titanium Grade-5 material at Elevated Temperatures	Dr. Amit Kumar Gupta	DST	Mechanical	1015000	3 years	22.05.2012
5	Development of electrostatic Nano-Solid Lubricant Coated Tools for Sustainable Machining	Dr. N Suresh Kumar Reddy	CSIR	Mechanical	1852000	3 years	14.06.2012
6	Fourier analysis and development of two-dimensional finite element schemes for shallow water equations and transport related systems	Dr. Jagdeesh Anmala	DST	Civil Engg.	1100000	3 years	29.06.2012
7	Transcutaneous delivery of macromolecules using layer-by-layer assembly to treat skin conditions	Dr. Vamsi Krishna Venuganti	DST	Pharmacy	2300000	3 years	20.07.2012
8	Consequences of cellular crowding in structure stability and folding of a TIM barrel protein	Dr. Ramakrishna Vadrevu	DST	Biological Sciences	3737000	3 years	27.07.2012

S.No.	Title of the Project	Principal Investigator	Funding Agency	Department	Sanctioned Amount	Duration	Sanctioned Date
9	Development of magnetoimpedance sensor for biocells detection	Dr. V Satyanarayana Murthy	DST FT	Physics	2268000	3 years	31.07.2012
10	Ultracold chemistry in the early universe	Dr. Subhas Ghosal	DST FT	Chemistry	2160000	3 years	31.07.2012
11	Novel Molecular Mechanism Involving Adenosine and Adenosine Receptors in Acceleration of Alcohol Induced Hepatic Fibrosis	Dr. Palash Mandal	CSIR	Biological Sciences	2407000	3 years	02.04.2012
12	Investigation of Natural Coumarinolignans and Their Newer Synthetic Analogs as Cyclooxygenase (COX-2) and Tumor necrosis factor (TNF- α) inhibitory agents in Rheumatoid Arthritis	Dr. Sajeli Begum	CSIR	Pharmacy	2102000	3 years	15.05.2012
13	Laboratory investigation and field application towards the effective defluoridation of water using appropriately tailored sorbents	Dr. N Rajesh	DST	Chemistry	2667000	3 years	09.07.2012
14	MATLAB MODELLING OF A NOVEL BATTERY SYSTEM FOR HYDERABAD BATTERIES LIMITED	Dr. U. M. Rao	HBL Power Systems Ltd	EEE	200000	7 months	01.06.2012
15	Chemically modified polymeric adsorbents for the removal and recovery of precious metal palladium from industrial wastes	Dr. N Rajesh	UGC	Chemistry	470000	3 years	17.07.2012
16	Development of new antiepileptic leads to suppress hippocampal leads to suppress hippocampal epileptic seizures	Dr. P Yogeewari	DST-Indo Ukrainian	Pharmacy	774000	3 years	30.07.2012
17	Development and analysis of novel inhibitors against M. tuberculosis GlmU.	Dr. D. Sriram	CSIR-OSDD	Pharmacy	3956820	3 years	28.08.2012
18	Study of cosmological models in bimetric theory of gravitation	Dr. Pradyumn Kumar Sahoo	UGC	Mathematics	180000	1.5 years	30.07.2012

S.No.	Title of the Project	Principal Investigator	Funding Agency	Department	Sanctioned Amount	Duration	Sanctioned Date
19	An evaluation of Development Policies for Tribals in Andhrapradesh and Dahod Tribles in Gujarat	Dr. MeeraLal	ICSSR	Economics	620000	3 years	25.06.2012
20	Indian institute of Biotechnology pvt. Ltd	Dr. M B Srinivas	IIBT	EEE	320000	8 months	17.10.2012
21	Indian institute of Biotechnology pvt. Ltd	Dr. SumanKapur	IIBT	Biological Sciences	610000	2 years	13.12.2012

Details of the Sponsored Projects Funding Agency wise

Department of Science and Technology (DST):

Dr. RamakrishnanGanesan

- Title of the project:** Photocurable organic-inorganic hybrid precursors for the fabrication of metal oxide micro/nanostructures.
- Sponsoring agency:** DST
- Status:** Approved for support; Awaiting fund release.
- Objective of the project:** The project is aimed to develop new type of photocurable organic-inorganic hybrid percursors. By employing such hybrid precursors, one can fabricate high-resolution metal oxide micro/nanostructures using the photolithography-based techniques. This strategy would enable the available complementary metal oxide semiconductor (CMOS) technology to fabricate metal oxide micro/nanostructures in a high-throughput fashion.

Dr. Vamsi Krishna Venuganti

- Title of the project:** Transcutaneous delivery of macromolecules using layer-by-layer assembly to treat skin conditions
- Sponsoring agency:** DST
- Status:** Sanctioned
- Objective of the project:** We were able to prepare flexible films which are self-assembled layer-by-layer charged polymers. We have optimized the preparation conditions and found that chitosan and alginate based films are more desirable compared to polyethylene imine and poly (styrene sulfonate) for further studies.

Dr. Vamsi Krishna Venuganti

- Title of the project:** Transcutaneous delivery of liposome-siRNA complex to treat skin cancer
- Sponsoring agency:** DST
- Status:** Approved; yet to be sanctioned
- Objective of the project:** Treatment of non-melanoma skin cancer using gene silencing molecules delivered after complexation with liposomes

Dr. SubhashGhosal

- Title:** Ultracold chemistry of the early universe
- Sponsoring agency:** DST
- Objective of the project** The objective of the project is to study the elementary chemical reaction at very low temperatures that contributed in the evolution of the early universe.

Dr. N. Rajesh

1. **Title of the Project:** Laboratory investigation and field application toward the effective defluoridation of water using appropriately tailored sorbents
2. **Sponsoring Agency:** DST
3. **Objective of the project:** The project involves the development of novel polymeric adsorbents for the removal of fluoride from drinking water. Methods involving the impregnation of zirconium and aluminium onto polymeric resins and biopolymers have been explored and are known to show good potential in removal of fluoride from water

Dr. Sumithra

1. **Title of the project:** Adsorption and freezing of heteropolymers on disordered surface model for biomimetic recognition.
2. **Sponsoring agency :** DST
3. **Write-up:** Over the past one year, we have started investigating the adsorption of copolymers polymers on chemically heterogeneous surfaces. As a first step, the Monte Carlo algorithms for the process has been written and tested. Some important results have been communicated.
 1. T. Vikramaditya and K. Sumithra, New insights in the adsorption of oxygen molecules on single-walled carbon nanotubes, *Manuscript communicated*.
 2. K. Sumithra, Selective adsorption and pattern recognition of multiblock copolymers on chemically patterned heterogeneous surfaces, *Manuscript communicated*

Dr. Anupam Bhattacharya

1. **Title of the project:** Synthesis of some selected nitrogen based heterocycles as potential anti tubercular agents
2. **Sponsoring agency:** DST
3. **Brief write-up:** We have been able to develop a new methodology for synthesis of 4-substituted pyrrolo-[2, 3-c]quinolines, in this process we have accomplished synthesis of a natural product aplidiopsamine A. The above mentioned compounds are currently screened for anti-tubercular activity.

Dr. ManabChakravathy

1. **Title of the project:** Investigations on synthetic and catalytic reactions of unsaturated organophosphonates with oxaziridines
2. **Sponsoring agency:** DST-FT
3. **Write-up:** The main objective of this proposal is to study the reactivity of oxaziridines with differently substituted vinyl and allylphosphonates in the presence of iron and copper catalysts. We have achieved to find out an easy route to synthesize 3-substituted vinylphosphonates by the arylation of allylhydroxyphosphonates.

Dr. K V G Chandrasekhar

1. **Title of the project:** Synthesis and pharmacological evaluation of various indole analogues for the treatment of schizophrenia
2. **Sponsoring agency:** DST
3. **Write-up:** Synthesis and characterization of oxindole series and benzisoxazole series are completed. Optimization for synthesis of series III compounds is underway. Pharmacophore hypotheses predicted based on the synthesis of the two series of compounds is published in Bulletin of Korean Chemical Society.

Dr. Jagadeesh Anmala

1. **Title:** Fourier Analysis and Development of Two-Dimensional Finite Element Schemes for Shallow Water Equations and Transport-Related Systems
2. **Sponsoring Agency:** DST

3. **Write-up:** This project presents a stability-based analysis of amplification factors obtained using Fourier method for the finite element formulation of shallow water equations and systems of various transport-related equations including the influences of convection, diffusion and reaction.

Dr. V Satyanarayana Murthy

1. **Title of the project:** Development of magnetoimpedance sensor for biocells detection
2. **Sponsoring Agency:** DST Fast Track
3. **Write - up:** Major equipment in the project was purchased, I am waiting for the electrical connections to install the equipment. Student was taken in the project recently.

Dr. PalashMandal

1. **Title of the project:** Role Of Adipose In Ethanol-Induced Tissue Injury
2. **Sponsoring Agency: DST (Not yet started)**
3. **Write-up:** In the proposal for this project, we will investigate the mechanisms by which chronic ethanol exposure increases inflammatory cytokines and decreases adiponectin secretion by adipose tissue. Based on new previous published data, we hypothesize that chronic ethanol results in the development of both oxidative and ER stress in adipose tissue and that this combined insult contributes to an increase in inflammatory cytokine production coupled with impaired secretion of the critical adipokine, adiponectin.

Dr. KannanRamaswamy

1. **Title of the project:** "Investigation of magneto-optical effects in composite magneto plasmonic nanostructures for sensing application".
2. **Sponsoring agency:** DST-SERB
3. **Write-up:** This project proposes to set-up ultra sensitive optical detection technique to sense bio-molecules. A junior research fellow has joined this project.

Dr. Ramakrishna Vadrevu

1. **Title of the project:** Consequences of Cellular Crowding on Structure, Stability and Folding of a TIM Barrel Protein
2. **Sponsoring agency:** DST
3. **Write-up:** The project aims to derive a detailed understanding of the effects of cellular crowding on structure, stability and folding of a TIM barrel protein. Detailed insights into the origin of the structural and thermodynamic changes of the native and partially folded states that are populated on free energy surface of TIM barrel under situations that represent in-vivo cellular crowding conditions using a combination of spectroscopic techniques will be worked out.

Dr. D Sriram

1. **Title of the Project:** Structure based rational design and synthesis of mycobacterium tuberculosis pantothenatesynthetase inhibitors
2. **Sponsoring agency:** DST
3. **Write-up:** In this project we designed inhibitors for MTB PS by two approaches and screening against target enzyme. Further we synthesized many analogues for the hits identified.

Dr. D Sriram

1. **Title of the Project:** Development, synthesis and testing of novel HIV drugs
2. **Sponsoring agency:** DST-IBSA
3. **Write-up:** In this project we synthesized some lopinavir analogues as novel HIV protease inhibitors. We are also working to develop non-peptidic protease inhibitor by molecular modeling approach.

Dr. Punna Rao Ravi

1. **Title of the Project:** Design, characterization and pharmacokinetic evaluation of nanocarriers for antiretroviral drug delivery in the effective treatment of HIV/AIDS
2. **Sponsoring Agency:** DST
3. **Write-up:** Objective of the research project is to develop nanocarrier systems for lopinavir (an anti-HIV drug) for oral or extra vascular administration which can improve bioavailability and thus reduce the dose and side effects of the drug. Pharmacokinetic and tissue distribution properties of the optimized nanocarrier systems will be evaluated using suitable animal models.

Dr. R Srinivasan

1. **Title of the project:** Novel synthetic approach to p-type (Nano) Transparent Semiconducting Oxides of Delafossite type structure by soft chemistry routes and the study of their properties
2. **Sponsoring Agency:** DST
3. **Write-up:** Nano crystalline powders of delafossite CuCrO_2 were synthesized by sol-gel route and found to be highly temperature sensitive. Further bulk crystalline samples of delafossite CuCrO_2 (undoped and Mg doped), CuAlO_2 and AgCrO_2 were also successfully synthesized. With the increase of temperature, the band gap is found to be decreasing with the increase in particle size. Optical band gap of doped samples were lesser than that of undoped CuCrO_2 .

Dr. Vidya Rajesh

1. **Title of the project:** Polymorphism studies of the malaria vaccine candidate Serine Repeat Antigen (SERA) in Indian Isolates – Under under Fast Track scheme
2. **Sponsoring Agency:** DST
3. **Write-up:** Deals with polymorphism studies on important vaccine candidate antigen SERA from erythrocytic stages of malaria

Dr. Vidya Rajesh

1. **Title of the project:** Molecular Studies on T3 binding domain of Thyroid receptors in autistic Individuals
2. **Sponsoring Agency:** DST(CSI)
3. **Write-up:** understanding the thyroid pathway link with ASD. Characterization of thyroid receptor mutations if any in autistic individuals.

Dr. P Yogeeswari

1. **Title of the project:** Drug discovery of inhibitors of the Protease of Peripheral Macrophages and Microglial cells in spinal cord for the treatment of neuropathic pain.
2. **Sponsoring Agency:** DST
3. **Write-up:** The project aims at the design of novel protease inhibitors specifically targeting the microglial cells to improve the treatment of neuropathic pain. Two novel structural leads have been identified to be effective as inhibitors of proteases of the microglia.

Dr. P Yogeeswari

1. **Title of the project:** Development of new antiepileptic leads to suppress hippocampal leads to suppress hippocampal epileptic seizures
2. **Sponsoring Agency:** DST- Indo-Ukraine
3. **Write-up:** Development of new antiepileptic leads to suppress hippocampal leads to suppress hippocampal epileptic seizures. In this project we propose a collaborative effort to develop new lead compounds for the treatment of epilepsy. The proposal builds on the expertise of the Indian research group in medicinal chemistry, for the design of antiepileptic leads, and the experience of the Ukrainian group in electrophysiology related to seizures and antiepileptic screening. The primary objective of this project is to combine the expertise of two international epilepsy research groups to design, synthesise and test new antiepileptic drugs.

Dr. A K Gupta

1. **Title of the project:** Understanding Material Properties and Possible Forming Behavior (Using FEM) of titanium Grade-5 materail at Elevated Temperatures
2. **Sponsoring Agency:** DST

Dr. Jayanti Subbalakshmi

1. **Title of the project:** Optical and Semiconducting molecular materials based on tetrathiafulvalene, tetracyanoquinodimethane and their polymer templates
2. **Sponsoring Agency:** DST

University Grants Commission (UGC):**Dr. P K Sahoo**

1. **Title of the project:** Study of cosmological models in bimetric theory of gravitation
2. **Sponsoring agency:** UGC
3. **Write-up (3-4 lines):** In this project various cosmological models of the universe will be studied in bimetric theory. The work includes investigations of correspondence between conformal frames of bimetric theory as well as equivalence between bimetric theories and nonlinear theories at the singular limit of general relativity. It is observed that axially symmetric model do not exist in Rosen's bimetric theory of gravitation in presence of strange quark matter attached to cloud of strings.

[International Journal of Pure and Applied Mathematics, 82(1) (2013)]

Dr. N. Rajesh

1. **Title of the Project:** Chemically modified polymeric sorbents for the removal of precious palladium from industrial wastes
2. **Sponsoring Agency:** UGC
3. **Write up:** The project involves the development of chemically modified polymeric adsorbents for the adsorption of palladium. Methods involving the impregnation of sulfur ligands and ionic liquids onto polymeric resins and biopolymers have been explored and are known to show good promise in the adsorption of palladium.

Prof. Srinivasa Prakash Regalla

1. **Project Title:** Rapid Incremental Forming of Extra Deep Drawing (EDD) Steel Sheet Metal Parts with Asymmetric Geometry
2. **Sponsoring Agency:** UGC
3. **Write up: Work Progress & Achievements:** Both pilot work on conventional milling machine and actual CNC part programming based incremental forming of differently shaped non-axi-symmetric sheet metal parts has been completed. LS-DYNA simulation of the incremental forming to predict sheet thinning and plastic strains has also been completed. Since the feed rates in incremental sheet metal forming have an upper limit, experimental work on hybrid incremental forming using shear spinning on lathe and Single Point Incremental Forming (SPIF) on CNC machine using four different environmentally sustainable lubricants was completed and part quality in terms of surface finish has been studied. For part geometries that are combination of basically axi-symmetric with certain asymmetric features, parametric study by above hybrid incremental forming to rapidly produce the parts is in progress.

Dr. C R Hota

1. **Title of the Project:** Efficient Peer-to-Peer Overlay Infrastructure for Secure Computing over the Internet
2. **Sponsoring agency.** UGC
3. **Write-up:** The midsem evaluation of the project was held in UGC office new delhi recently. The work progress of the project includes registering the project fellow into the PhD program of the institute. Two new algorithms were proposed to improve the search efficiency in unstructured overlays.

Dr. K V G Chandrasekhar

1. **Title of the project:** Synthesis and pharmacological evaluation of bishomo(hetero)aryl piperazines as atypical antipsychotic agents
2. **Sponsoring agency:** UGC
3. **Write-up:** Out of the three series of compounds proposed synthesis, characterization and pharmacological activity of series I is completed. Synthesis & characterization of series II is completed. Optimization of synthesis of series III compounds is underway. Outcome results from Quinoxaline series of compounds are published in Journal of Medicinal Chemistry Research.

Dr. Sajeli Begum

1. **Title of the project:** Quality control studies and standardization of safflower petals of different Indian cultivars as per world health organization (WHO) requirement.
2. **Sponsoring agency:** UGC
3. **Write-up:** The major objective is to assess the quality of safflower petals of different Indian cultivars used as herbal tea as per WHO guidelines. Establishment of phytochemical standards and development of analytical method for the standardisation of safflower tea extracts using HPLC as per ICH guidelines is currently under progress.

Dr. Ramakrishna Vadrevu

1. **Title of the project:** Exploring sequence and structural patterns of the catalytic b/a loops in TIM Barrel Proteins: Implications for Protein Engineering
2. **Sponsoring agency:** UGC
3. **Write-up:** Achievements so far include completion of Data-mining of the catalytic b/a loops from a TIM barrel protein database, identification and classification of the loop structures according to the size, amino acid composition.

Clustering and compilation of an inventory of loop structures for their evaluation of their exchange potential between TIM barrel proteins.

Part of the outcome of the research has been presented in International Conference on Advances in Biological Sciences (ICABS) March 15-17, 2012.

Dr. Punnarao Ravi

1. **Title of the Project:** Design, pharmacokinetic and pharmacodynamic evaluation of nanocarriers for selective estrogen receptor modulators (SERMs) delivery in effective treatment of post-menopausal osteoporosis
2. **Sponsoring Agency:** UGC
3. **Write-up:** The research project aims at design and development of nanocarrier formulations of Raloxifene HCl (a SERM) in order to improve the residence time of the drug in the body and increase distribution of the drug to bone tissues, thereby improving the effectiveness of the therapy.

Dr. Vidya Rajesh

1. **Title of the Project:** Characterization of the prenatal and perinatal risk factors of autism spectrum disorder in Indian autistic population
2. **Sponsoring Agency:** UGC
3. **Write-up:** Understanding and analyzing the probable risk factors that can contribute to ASD in children

Council of Scientific and Industrial Research (CSIR):**Prof. K S Raju**

1. **Title of the project:** Multicriterion Analysis for Ranking of Various General Circulation Models to Study Water Resources of India
2. **Sponsoring agency:** CSIR

3. **Write-up:** Development of integrated interactive Decision Support System as a solution methodology for ranking GCMS/ performance metrics for better analysis of the problem and effective decision making process that can be explored further for hydrological modeling applications.

Dr. A. Vasan

1. **Title of the Project:** Multiobjective Reservoir Optimization Using Swarm Intelligence Algorithms
2. **Sponsoring Agency:** CSIR
3. **Write Up:** The operation and management of NagarjunaSagar Reservoir is being optimized using swarm intelligence algorithm by formulating a multi-objective irrigation planning model. Distributed parallel computing is also explored in this project while generating pareto-optimal sets for the reservoir operation problem.

Dr. Sajeli Begum

1. **Title of the Project:** Investigation of Natural Coumarinolignans and their Newer Synthetic Analogs as COX-2 and TNF-alpha Inhibitory Agents in Rheumatoid Arthritis.
2. **Sponsoring Agency:** CSIR
3. **Write-up:** The research objective is to synthesize natural cleomiscosins and their newer analogs for cyclooxygenase (COX-2) and TNF- α inhibitory effect. Effective compounds will be identified through in vitro and in-vivo models. Fund sanctioned for this work is 21.0 lakhs.

Dr. PalashMandal

1. **Title of the project:** Novel Molecular Mechanism Involving Adenosine And Adenosine Receptors In Acceleration of Alcohol Induced Hepatic Fibrosis
2. **Sponsoring Agency:** CSIR
3. **Write-up:**

Specific Aim 1: Investigate the molecular pathways of ethanol-induced angiogenesis and the effect of the dysregulated angiogenesis on the induction and perpetuation of liver fibrosis.

Specific Aim 2: Determine the mechanisms by which ethanol exacerbates liver fibrosis and enhances hepatic stellate cell activation in response to CCl₄.

Specific Aim 3: Investigate the anti-fibrotic effect of A2A receptor antagonist in an in vivo mouse model of liver fibrosis as well as synthesis and development of more potent A2A antagonist to prevent liver fibrosis.

Dr. D Sriram

1. **Title of the Project:** Development of Novel DNA Gyrase Inhibitors Against Mycobacterium tuberculosis and other Non-tubercular Mycobacterial Infections
2. **Sponsoring agency:** CSIR
3. **Write-up:** In this project we synthesized some novel isatin & quinolone derivatives as MTB DNA gyrase enzyme inhibitors.

Dr. D Sriram

1. **Title of the Project:** Development and analysis of novel inhibitors against M. tuberculosis GlmU.
2. **Sponsoring agency:** CSIR-OSDD
3. **Write-up:** In this project we designed inhibitors for MTB GlmU at acetyl transferase & uridylyltransferase binding site. We also synthesized series of compounds as allosteric inhibitor for uridylyltransferase activity.

Dr. P Yogeeswari

1. **Title of the Project:** Design and synthesis of pharmacophoric hybrids as potential leads for the treatment of neuropathic pain
2. **Sponsoring agency:** CSIR
3. **Write-up:** A series of tetrahydropyrido-pyrimidine derivatives were synthesized and evaluated for neuropathic pain activity. The compounds were evaluated for neurotoxicity and peripheral analgesic

activity followed by assessment of antiallodynic and antihyperalgesic potential in two peripheral neuropathic pain models, the chronic constriction injury (CCI) and partial sciatic nerve ligation (PSNL).

Dr. N Suresh Kumar Reddy

1. **Title of the project:** Development of ES nano-solid lubricant coated tools for sustainable machining
2. **Sponsoring agency:** CSIR
3. **Write-up:** The performance of ESC experimental setup in terms of transfer efficiency is underway (about to complete in couple of weeks).

Department of Biotechnology DBT:

Dr. Vamsi Krishna Venuganti

1. **Title of the project:** Non-invasive delivery of siRNA to treat melanoma
2. **Sponsoring agency:** DBT
3. **Status:** Approved; yet to be sanctioned
4. **Objective of the project:** Treatment of melanoma using novel nanocarriers systems complexed to siRNA which will be administered topically through non-invasive fashion

Dr. G Savitha

1. **Title of the project:** Loop Modeling in Nucleic acid structures
2. **Sponsoring agency:** DBT,
3. **Write-up:** We have a built a secondary Database of Loops in nucleic acid structures from structures in the PDB. We have developed modules in html, php and a mysql database on a WAMP server. We are awaiting the algorithm developed at IITK using Inverse Kinematics for benchmarking the programme. We will make available the database on the public domain once we are ready.

Dr. P Sankar Ganesh

1. **Title of the project:** Studies on the characterization of engineered nanoparticles (ENPs) and their toxicological and biochemical effects on *Eiseniafoetida* earthworms.
2. **Sponsoring agency:** DBT,
3. **Write-up:** This study is designed to address the gaps that are existing in the evaluation of exposure-dose response which is critical to validate the toxicological assessment of engineered nanoparticles.

Dr. K V G Chandrasekhar

1. Title of the project: Synthesis and Biological Activity of Various Triazoles as Effective Antifungal Agents
2. Sponsoring agency: DBT
3. Objectives
 - ❖ Design novel antifungal agents by fusion of fluconazole intermediate and various heterocycles having antifungal activity.
 - ❖ Synthesize the designed hybrids using conventional methods or by Microwave Assisted Organic Synthesis or by Solvent Free Organic Synthesis giving more preference to greener methodologies.
 - ❖ Evaluate the new chemical entities synthesized for the antifungal activity against *Candida*, *Aspergillus* and *Cryptococcus neoformans* strains.
 - ❖ Carry out comparative structure activity relationship between compounds synthesized.

Dr. D. Sriram

1. **Title of the Project:** Structure-guided Design of New Antibacterial Agents against Dormant *Mycobacterium tuberculosis*
2. **Sponsoring agency:** DBT (Indo-Sweden)
3. **Write-up:** In this project we designed some novel small molecule inhibitor for dormant tuberculosis drug target enzymes like CysK1 & CysM. We have identified many hits with nM range.

Dr. D. Sriram

1. **Title of the Project:** Structure based rational design and Synthesis of Inhibitors For Various Enzymes of HIV
2. **Sponsoring agency:** DBT-ICMR
3. **Write-up:** In this project we will be designing some molecules for HIV-1 reverse transcriptase & integrase enzymes.

Dr. P Yogeeswari

1. **Title of the Project:** Discovery of Novel Modulators of NAD(+) Dependent Protein Deacetylase SIRT 1 for the treatment of Various Human Disorders
2. **Sponsoring agency:** DBT(SIRT)
3. **Write-up:** SIRT1 also known as NAD-dependent deacetylase sirtuin-1, the closest mammalian homolog of yeast Sir2, belongs to the family of the class III histone deacetylase. The involvement of sirtuins in various critical cellular pathways suggest them to be possible drug targets. Since the crystal structure of human SIRT1 is not available, the three dimensional model of catalytic domain of the hSIRT1 (Q96EB6; 244-498 AA) was developed by comparative modeling using PRIME homology modeling program. This model has 83.7% residues in most favored regions and ProSA-Web Z score of -6.38 similar to the template structure scores.

Dr. P Yogeeswari

1. **Title of the Project:** Structure-guided design of novel non-peptidic noncovalent selective inhibitors of the spinal microglial cathepsins for the treatment of neuropathic pain.
2. **Sponsoring agency:** DBT(Neuro)
3. **Write-up:** Drug discovery for the potent Cathepsin S inhibitors needs to be understanding of structural properties as well as profound conscientiousness about the elements of discovering novel, non-peptidic, non-covalent, selective inhibitors. Mainly, generation of ligand-based and structure-based Pharmacophore models and followed by virtual high-throughput screening of large chemical databases provides lead scaffolds.

Department of Information and Technology (DIT):**Dr. C R Hota**

1. **Title of the Project:** Automated Detection of Security and Privacy threats in P2P Networks
2. **Sponsoring agency:** DIT
3. **Write-up:** The First PSRG meeting was held on Oct 2012 at BITS, Pilani Hyderabad Campus. The team could achieve the targets in the first six months earlier set including procurement of resources, designing a privacy preserving P2P classifier, mounting attacks using Metasploit, and generating alerts using Snort.

Indian Council of Medical Research (ICMR):**Dr. D Sriram**

1. **Title of the Project:** Development of Newer Isoniazid Derivatives for the Treatment of Tuberculosis and Multi-drug Resistant Tuberculosis
2. **Sponsoring agency:** ICMR
3. **Write-up:** In this project we designed and synthesized series of isoniazid derivatives for the treatment of tuberculosis.

Prof. Suman Kapur

1. **Title of the project:** Developing low cost POC device for detection of blood glucose levels
2. **Sponsoring agency:** ICMR(POC)
3. **Write-up:** India is home to over 61 million diabetics projected to increase to 100 million by 2030. A new digital device, developed with the assistance of Indian Council of Medical Research, New Delhi, directly measures plasma glucose levels. It will cost significantly less ~Rs 2 per blood sample in comparison to the currently used glucose strips (~Rs 25/strip) and requires nearly 1,000 times less

blood than what presently available glucometers require. It takes only 10 seconds to measure blood glucose level. The device is portable and can also be integrated into other medical monitoring systems along with its application in conducting mass screening in a large population.

Pror. SumanKapur

1. **Title of the project:** Functional Mutation in the Opiate Receptors and their Impact on Immune Cell Function
2. **Sponsoring agency:** ICMR(MOR)
3. **Write-up:** Opiate drugs are known to suppress a variety of immunocyte cell end points such as proliferation, functional responses of both T and B cells and attenuation of the cytokine network. Identification and characterization of receptors and signal transduction pathways that account for some of the unique properties of opioid binding and subsequent immunomodulation represent a major research challenge. We hypothesize that many minor changes, present in the form of non synonymous SNP's, in opiate receptor/s expressed on immune cells can have cumulative impact on receptor mediated signaling and consequent functions of specific cells. This study focuses on functional mutation in opiate receptors types using receptor specific ligands & in vitro system for the study of different immunocyte functions.

Prof. Suman Kapur

1. **Title of the project:** Identification of Genetic Loci Associated with Risk for T2DM in Indians from Rajasthan
2. **Sponsoring agency:** ICMR(T2DM)
3. **Write-up:** Type 2 diabetes mellitus (T2DM) is recognized as one of the leading health problems throughout the developed world. The disease is known to involve multiple genes (polygenic), and it is believed that most T2DM results from the interaction of genetic variation at multiple different chromosomal sites with environmental exposures. The genetic approaches to unravel the pathophysiology of T2DM would complement physiologic attempts in understanding the disease. The project aims at ascertaining the role of identified loci on five chromosomes in the etiology of T2DM in north Indian population, candidate gene analysis and their association with the disease susceptibility so as to correlate the analyzed genes/loci with the risk for developing T2DM in Indians from Rajasthan.

AB Group (ABG):

Dr. D Sriram

1. **Title of the Project:** Structure Based Rational Design and Synthesis of Inhibitors for Various Enzymes of Mycobacterium tuberculosis
2. **Sponsoring agency:** ABG
3. **Write-up:** In this project we designed and identified novel inhibitor for MTB Chorismatemutase & Enoyl acyl carrier protein reductase enzymes. Further we synthesized analogues to get more potent compounds.

Dr. Vinayaka Rao

1. **Title of the Project:** Experimental and Numerical Investigations on Sandwiched Modular Multilayer Self Compacted Cement Concrete Pavements
2. **Sponsoring Agency :** ABG
3. **Write-up:** This study involves a comprehensive examination of self-compacted cement concrete to be used as a material alternative for cement concrete pavements through analytical as well as experimental investigations. The results obtained so far have been observed to be in line with the initial assumptions and the final product is expected to be resulting in cost effective and durable rigid pavement option to be used for high volume highways.

Dr. Balaji Krishna Murthy

1. **Title of the Project:** Reducing ruthenium crossover in Direct Methanol fuel cells
2. **Sponsoring agency:** ABG

Other Consultancy Projects:**Dr. D Sriram**

1. **Title of the Project:** Development of novel antitubercular drugs
2. **Sponsoring agency:** ASTRA ZENECA
3. **Write-up:** In this project we synthesized and characterized around 60 compounds for tuberculosis.

Dr. P Yogeeswari

1. **Title of the Project:** Development of Novel anti-inflammatory agents, Incozen Therapeutics Ltd., Hyderabad.
2. **Sponsoring agency:** Incozen

Prof. M B Srinivas

Sponsoring agency: Indian institute of Biotechnology pvt. Ltd.

Mr. U M Rao

1. **Title of the Project:** Matlab Modelling Of A Novel Battery System For Hyderabad Batteries Limited
2. **Sponsoring agency:** HBL Power Systems Ltd

Prof. Suman Kapur

Sponsoring agency: Indian institute of Biotechnology pvt. Ltd

Seed Grant:**Dr. R Krishanan**

1. **Title of the project:** Developing Supramolecular Complexes for Solar Energy Conversion and hydrogen generation,
2. **Sponsoring Agency:** BITS Seed Grant.
3. **Objectives:** Preparation and characterization of supramolecular molecular devices for solar energy harvesting. Developing chemical molecules which can harvest preferably the visible light part of the electromagnetic radiations. Application of supramolecular complexes for the solar energy to chemical conversions.

Dr. N S K Reddy

1. **Title of the project:** Development of innovative electrostatic micro-solid lubricant coated tools for green machining
2. **Sponsoring agency:** BITS-Seed Grant
3. **Write-up:** The project successfully completed the design and development of X-Y micropositioning table. In support with X-Y stage, to facilitate the transport of powder particles in a homogenized way, an AISI 304 stainless steel nozzle is designed and fabricated with a micro hole of 0.3mm diameter using EDM drill machine.

Dr. Souri Banerjee

1. **Project Title:** Site Specific Immobilization of a single DNA molecule
2. **Funding Agency:** BRNS-DAE
3. **Work done so far:**

We worked on simulating flow pattern where DNA molecules will be suspended under an ac bias. The work resulted in the following outcome:

- ✓ Published a paper titled “Multi-peaked velocity spectrum of a AC-electric-field-induced electrolytic flow with microelectrodes”

Authors: AsthaSethi, Pritesh Parikh, Samatha Benedict, Subimal Deb and Souri Banerjee.

Journal: Applied Mechanics and Materials Vol: **229- 231**, pp 957-960 (2012) .

- ✓ Conferences attended and published in conference proceedings:

- International Conference on Nanomaterials and Electronics Engineering (ICNEE), Kuala Lumpur, July 2012
- COMSOL International Conference, Bangalore, November 2012.

Dr. Meera Lal

1. **Project Title:** An evaluation of Development Policies for Tribals in Andhrapradesh and Dahod Tribles in Gujarat
2. **Funding Agency:** ICSSR

Prof. SumanKapur

1. **Title of the project:** Development of an Indigenous Chip for Testing Antibiotic Sensitivity of Pathogens found in Human Urinary Tract
2. **Sponsoring agency:** NPMAS-DRDO
3. **Write-up:** UTI being the second most infectious disease poses a great threat to public health in developing countries. Establishing a cost-effective strategy for the diagnosis and treatment of UTI that provides an accurate assessment of antibiotic sensitivity of the pathogens involved would result in good clinical outcomes and utilize the clinical care resources appropriately. The aim is to develop a rapid, accurate and cheaper point-of-care disposable device for detecting uropathogens' sensitivity and provide readout of sensitivity to a given antibiotic in the chosen panel will effectively control the menace of increasing antibiotic resistance and ensure long term efficacy of available antibiotics.

Prof. M B Srinivas

1. **Title of the project:** Variable Data Rate Digital Demodulator for 64QAM on virtex -5 FPGA
2. **Sponsoring agency:** DLRL

'Annexure B3-7'

(15 Pages)

Ref. AR 2012, Page No. B3-49

LIST OF EQUIPMENTS PROCURED DURING THE YEAR 2012

Item Description	Quantity	End User	Ledger Folder	Bill Amount
Printer Canon D520	1	Workshop	Printer	13231
Hot Plate Laboratory Rectangular (18"Wx24"L)	2	Biology	Equipment	29541
HP DL 380 G7 Server	1	Dr Ramakrishna Vadrevu	Computer	290000
HP 1.0TB (1024 GB) HDD	2			
18.5" HP TFT Monitor	1			
HP USB Keyboard with Mouse	1			
HP Laser Jet Printer	1			
LG REF Frost Free GL254AM5 Light Inox	4	Bio (3) Civil (1)	Equipment	58800
069822HF LIBERT MDT PRO LIFT WT	1 Pkg	Library Building	Equipment	19465
Function Generator 0.2Hz to 2 MHz	2	Physics Dept	Equipment	18938
AC Voltmeter Digital 0-10 volts	2			
Pendulum bobs. Iron	4			
Optical Bench Double rod length 1.5 meter with 4 sliders	1	Physics Dept	Equipment	15734
Laser Diode 5mW 650nm wavelength main operated	1			
Photo Diode with Graduated Scale	1			
Digital Microammeter 0-200 uA	1			
Round Stand for Screen	1			
Xilinx FPGA (Spartan 3E starter kit with essential accessories for programming) Digital Spartan 3E board with cable Installation Charges	4	EEE	Software	84006
5360000011	1	Biology	Equipment	455527
Exchangeable thermoblock for micro test tubes 24x1.5ml, complete with IsoTherm Rack and IsoTherm cool pack 0 Degrees C	1			
5366000013	1			
Exchangeable thermoblock for Falcon tubes for 8x15ml	1			
5365000010	1			
Exchangeable thermoblock for Falcon tubes for 4x50ml	1			
5427700005	1			
Rotor A-2-MTP, incl 2x MTP buckets and rotor lid	1			
5825711009	1			
Adapter for 96-well PCR plate, 2 pcs	1			
3115000003	1			
Pipette carousel for 6 pipettes	1			
4981000019	1			
Multipipette plus	1			
0030069285	1			
Assortment pack combitips plus - Standard	1			
5355000011	1			
Thermomixer comfort, basic device without exchangeable thermoblock, 100-240V/50-				

Item Description	Quantity	End User	Ledger Folder	Bill Amount
60Hz Serial nr: 5355AQ455148 5401000013 Centrifuge 5418R (refrigerated), 230V/50-60Hz, incl rotor FA-45-18-11 Serial nr: 5401BG805047				
Deform 3D Version 10.2 Software CD USB Hardware Lock # 7629	1 1	Dr NSK Reddy	Software	400000
Computerized 1 cylinder 4 stroke petrol engine test Rig, with eddy current dynamometer computerized 1 cylinder 4 stroke water cooled diesel engine test rig, with eddy current dynamometer	1 1	Mechanical Engg	Equipment	949926
1-8 items earlier received in MRN 416/157 DT 03-Feb-11 Kaplan turbine test rig (3kw) with standard pump set, l&t make fully automatic star delta starter, mechanical dynamometer & ss tank & digital tachometer	1	Mechanical Engg	Equipment	553333
06982811 Milestone ML404 VGA a Mat 04C 069821GX SHURE MX418 S/C GOOSENECK 04C 069821A8 Shure W/Less HH M/c PG24 04C 069821D9 B/AMP DSP NEX/A VC 04B 06982923 JBL Control 24C Ceiling S 04C 069821H2 Crown XLS1000 2ch Power A 04C 06982278 Equipment Rack 15U 04C	1 Pkg 1 Pkg 2 Pkg 1 Pkg 8 Pkg 1 Pkg 1 Pkg	Library Building	Equipment	347095.72
ELPLP50 Epson V13H010L50 Lamp Unit EB-84/85/825/826W	5	ESD	Equipment	96180
Revolutionary Research Centrifuge Witout Rotor Heads And Accessories Model No R-23 Swing Out Heads (With Glass Tubes) for above centrifuge R-230 A-2 Place wind shield swing out heads complete with metal carriers (Capacity 2xMicrotiter Trays) R-230A	1 1	CAL	Equipment	47218
Carrier Plate Cat No H 135.3 Quarter Reaction Vessel Cat No H135.310 Capacity 20ml Quarter Reaction Vessel Cat No H135.314 Capacity 30ml	1 2 2	Chemistry	Equipment	21464
3 1/2 Handheld Digital Multimeter Make: Mextech Model.No. DT 603 LICT 20 Microprocessor Based Linear Analog IC Tester SL No E-3592	10 1	EEE	Equipment	32550
U2405161N8-XPS Desktop 8300 XPS 8300 Direct Base - White Standard Fan and Heatsink(95W) 2nd Generation Inte® Core™ i7-2600	1 Total Set	CAL	Equipment	98814.93

Item Description	Quantity	End User	Ledger Folder	Bill Amount
Processor (3.4Ghz, 8MB Cache)				
AC/DC Module for use with COMSOL Multiphysics, Single User CPU-locked license (CPU), for one (1) computer. This is an addition to COMSOL license number 16073270 License No 16073270	1	Physics Dept	Software	36780
Vortex mixer (make-Labnet-USA) Optional Head Attachment 24x1.5/2.0ML, S0200-21 Optional Head Attachment for 8x12/13mm diameter tubes S0200-23 Optional Head Attachment for 6x50ML Tubes S0200-24	1 1 1 1	Central Analytical Lab	Equipment	27515
000413 SCORBOT-ER 4u 000609 Gripper attachment for round and square parts 001709 Teach Pendant 009234 Robocell Software 700001 License Key for Robo Cell	1 1 1 1 1	Mechanical Engg	Equipment	798439
Origin 8.6 Pro Single User Academic License	1	Physics Dept	Software	37800
9650892 FT902 230V/50-60Hz Immersion cooler	2	Chemistry & Pharmacy	Equipment	746512
Promivac Rotary High Vacuum Pump Direct Drive, Double Stage fitted with very reliable electric motor complete with gas ballast, inbuilt NRV and Handle as per following specifications	1	Chemistry	Equipment	43510
Heating Mantle - 500 ml 200W Circuit 1, Volts 230 Model No CIC 1D Heating Mantle - (1Lit, 300W) Model No CIC-1E Heating Mantle - (2Lit, 450W) Model No CIC-1F Regular	1 3 3	Chemical Engg	Equipment	16153
Nitrogen Cylinder with Gas No BiB467B-A19192	1	Chemistry	Equipment	11025
Nitrogen Cylinder with Gas No BiB467B-A18043 ESAB Mach Double Stage Regulator	1 1	Biology	Equipment	17838
New Hydrogen Cylinder with Gas G-C No 171101 New Nitrogen Cylinder with Gas G-C No BiB 467B-A19115 Argon Cylinder with Gas G-C No 432760 ESAB Mach Double stage Regulators Hydrogen 433-0196-525 Nitrogen 433-0196-515 Argon 433-0196-510	1 1 1 1 1 1 1	Chemistry	Equipment	54563
340-00400 - MODELING BASES, 24 UPRINT 3DP 345-10005 - MATL SPOOLS, 5 UPRINT P430IVR 345-20005 - MATL SPOOLS, 5 UPRINT P400-SR	1 PK 1 EA 1 EA	Mechanical Engg	Equipment	869048

Item Description	Quantity	End User	Ledger Folder	Bill Amount
540-10600 - KIT, IPRINT M&S TIP REPLACEMENT 680-30100 UPRINT, SYSTEM PKG STD 300-00600 - CNSBL, WW SOLUBLE CONCENTRATE	1 PK 1 EA 1 EA			
BSA 224 SCW Sartorius Analytical Balance S No 27090028, 27190427	2	Genetic Engineering Lab	Equipment	151200
BSA 224 SCW Sartorius Analytical Balance S No 27190440	1	Chemistry	Equipment	75600
High Temperature Attachment For Universal Testing Machine Make: MCS a) Split Type Furnance b) PID Type Pull Rods c) Enconel Tyupe Pull rods d) Load Rate, Strain Rate and Displacement Rate Control Software f) Contact Type High Temperature Extensometer	1 Set	Workshop	Equipment	735000
069823BY BOSCH AUTODOME PTZ CAMERA 06982744 Crestron CP2E Control Sys	1 Pkg 1 Pkg	Library	Equipment	286250
Ultra Sonic Tank Suitable for U print EATON E -Series 3KVA True Om-Line Double Conversion UPS System	1 1	Mechanical Engg	Equipment	391260
20.0 HP" AQUATEX" Open well submersible Pumpset, ASM - 33 SI No 18420853	1	Manintenance dept	Equipment	61950
Electronic Weighing Machine DS-451, 30kg, 1/6000, 360x276, hook for loading bucket M/C No. 45112111407	1	Civil Engg	Equipment	42122
Water Analysis Kit (Light Microscope) Cat No 12563530 Fisher Scientific "Micromaster" 1 Microscopes Compound Upright Digital USB 1.1 DigitalVideo Microscope: Brightfield: Eyepiece: 10 Widefield 18mm Fov: Stage LXW: 140x160mm Total Magnification: 10X/100X/400X/1000X	1	Chemical Engg	Equipment	148628
Rocker Oil Free Compressor Model: ROCKYVAC - 420 Tarson VACUUM TUBE, (Pack of 10 Mtrs), Size: 8x3 VT-83A	1 1	Chemistry	Equipment	18420
06938876 Panasonic PT FW430 EA	1 Pkg	ESD	Equipment	115645
Printer D520 HFA11167	1	Biology	Printer	13231
Date logger & Channel K-type thermocouple input with accessories A Interface cable B USB Lock	1	Mechanical Engg	Equipment	26809

Item Description	Quantity	End User	Ledger Folder	Bill Amount
Retort Stand with Clamp & Boss Head - Meduim	1			
559916 069821Fj Yanaha Stagepass 500	1 Pkg	ESD	Equipment	64692.5
559917 069821Fj Yanaha Stagepass 500	1 Pkg	ESD	Equipment	64692.5
Lenovo Workstation 7783RW6 # PBAF556 Lenovo 18.5" TFT Monitor 2580AT1 #V1GYG07	1 1	Mechanical Engg	Computer	74004
SS 304 X Nipples	15	Chemical Engg	Equipment	421337
SBI-UVT20 Transilluminator with Filter size of 10x10 consist of 6x8 watts UV lamps with total unisize of 48x35x9 cm SBI_WB10 Whote Box For Gel Staning Applications	1 1	Genetic Engineering Lab	Equipment	80293
Heat Exchanger Training Set Up:- Parallel/Counter Flow Heat Exchanger Shell & Tube Heat Exchanger Vapour in Air Diffusion Apparatus with Air Pump Wetted Wall Gas Absorption Column Gas Absorption Column Sedementation Studies Apparatus Water Coolign Tower Fluidizer Bed Dryer Vacuum Drum Filter Absorption Unit Multiple Pumping Set	1 1 1 1 1 1 1 1 1 1 1 1	Chemical Engg	Equipment	1309375
Fluid Friction Measurement Apparatus with data logging facility Fixed & Fluid bed apparatus plate type heat exchanger Plate type heat exchanger Heat exchanger teaching set-up / Heat exchanger service unit / Tabular heat exchanger / Plate type heat exchanger / Shell & tube exchanger Distillation column, with data logging faciltity & refractometer Liquid liquid extraction unit Fluid mixing apparatus Double effeect evaporator Natural Draft Tray Drier Plate & Frame Fitter Press Crystallizer	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Chemical Engg	Equipment	2466827
Printer Canon D520	1	Manintenance dept	Printer	13231
3810022 RCT Basic, Magnetic Stirrer with heating Make:IKA SI No 06.066613, 06, 065564 SI No 06.066612, 06, 066611 SI No 06.066597	5	Pharmacy Dept	Equipment	94500
Tissue Culture Rack MSW-168 Model: TCR - 5 (PT) No of Shelves: 5 Height in g In 4	1	Biology	Equipment	182588

Item Description	Quantity	End User	Ledger Folder	Bill Amount
Size of each shelf 40"x10" with photoperiodic timer Aerosol Disinfector MSW-361, Model - AD - 30 Cap-3 Ltrs Autoclave portable, MSW - 106 Model - PASCO - 20 with Basket with Spare heater & Gasket Autoclave Vertical MSW-No1, Model - AV- 50 Cap 50L with spare heater neoprene Gasket and Pressure control switch	1 1 1			
Water Still (Table pattern Barnste) MSW - 197, Model :- WSTP - 8 Cap : - 8 Ltr / hr	1	Biology	Equipment	32400
VDRL Rotator MSW - 303, Model VDRL - 303 VSMT Size 300x300mm Variable Speed with timer	1	Biology	Equipment	11138
PL-S25: 25"Lift (Standard), Over all demension (HxWxD): 25"x23.5"x23.5", Max travel: 22", Min clearance above ceiling: 25" Projector Accomodated size (HxWxD) 10" x18.5"x15"	1	ESD	Equipment	127266.85
Tripod 8'x6': Logic 120 inch MW (8x6) Screen with Tripod Stand	2			
W-PCA-01: VGA & VGA Audio Wall / Table Plate (Black Powder Coated)	1			
VP-200AK: 1:2 Computer Graphics Video & Stereo Audio Distribution Amplifier	1			
VGA Cable: Astroics VGA Cable	60			
SVX14/PG185 SVX Bodypack System, Includes SVx4 Single Diversity Received, SVX1 Bodypack Transmitter and PG185 Lavalier Mic	2			
SBI_WB10 Whote Box for Gel Staning Applications	1	Biology	Equipment	14312
Laboratory Trolley 2'x2' with two plate form	1	Biology	Equipment	29452
SRXP32-20 (Snake on Reels) (24+8 Pair Analog Snake Cable with Amphenol Connectors)	1 Pcs	SWD	Equipment	36567
Digital Storage Oscilloscope; 100NHZ 2ch, 2GS/s Colour Display with Standard Accessories C019576, C019556, C019557, C019559, C019583, C019572	6	EEE	Equipment	1407656
Machining of 600UTM specimes [CNc wire cut completed]	600	Workshop	Equipment	39000
069822HE LBRTY MDT SCRIN 119in	1 Pkg	ESD	Equipment	22900

Item Description	Quantity	End User	Ledger Folder	Bill Amount
SHOW 04C				
AIM-565-DG-C Ductility Testing Machine with Digital Display and Coiling Arrangement	1	Civil Engg	Equipment	575001
AIM-561-S1 Ring and Ball Apparatus, Semi Automatic	1			
AIM-577 Asphalt Mixer Vertical, 20Ltr	1			
AIM-408-2 Laboratory Cement Autoclave, analog with Pressure Gauge	1			
MIS-2115 Probe type Field Thermometer with Digital Display (0C to 400C)	2			
Non contact Digital Thermometer (Infrared) (0C to 600C)	2			
Temperature Resistant Aprons (Leather)	10			
Temperature Resistant Gloves (Leather)	10			
Xerox Work Center WC5745_CPS(COL)* 235525	1	ESD	Printer	305474.4
DGS-1210 [D'link 16 port Gigabit Switch Manageable with Cable]	1	Chemistry	Equipment & Software	94000
Aten 8 port USB KVM Switch for HPC	1			
Nodes with USB Cables - 7 nos	1			
19" LCD Monitor [19" LCD Monitor]	1			
Keyboard [Keyboard and Mouse]	1			
19" 42U Rack [HCL Rack 19" 42U/1000MM Depth with Accessories	8			
Patch Cord 7 Ft [CAT 6 2 Mtrs Patch Cords				
1 Box 7000.0010 AUT128N.v	1	Chemistry	Equipment	858642
6.1204.110 GC Electode Tip VA	1			
6.1241.060 El. Shaft for 61204xxx WOC	1			
SGJ	1			
6.2103.110 Contact Pin M3/2mm	1			
7000.2415 EQCM.REF.EL	1			
Cat No: MEBM10W Electroblob System	1	Genetic Engineering Lab	Equipment	133696.5
Cat No: MP-300V Power Supply	1			
Liquid Nitrogen Canister 30L with Transfer vessel 20L liquid nitrogen container Make: Thermo Fisher Scientific USA	1	Genetic Engineering Lab	Equipment	199980
Cat No: CK509x2 empty can	1			
Included: TY509x3 Thermo Can Empty				
Cat No: MEBM10W Electroblob System	1	Genetic Engineering Lab	Equipment	133696.5
Cat No: MP-300V Power Supply	1			
LENOVO Thinkcentre 1607G6Q	3	WILP	Computer	78750
L91MH87/L91MK10/L91MG21				
LENOVO 18.5" TFT Monitor 2580ATT1	3			
VIGNT73/V1GNV65/V1GNV61 with	3			
LENOVO DVD writers				
Make: Bio-Rad, USA	1	Pharmacy Dept	Equipment	1000000
Wide mini subcell GT system [cat no 1704485]				
Powerpac basic power supply [cat no 1645050]	1			

Item Description	Quantity	End User	Ledger Folder	Bill Amount
Mini protean tetra - 2 gel [Cat No: 1658002]	1			
Gel Doc Xr+System [Cat No: 1708195]	1			
White Light conversion Screen [cat no: 1708002]	1			
RZ 04671-23 Stirring Hotplate IKA RCT 230V	1	Chemistry	Equipment	23472
Cortisol DRG International Kit	2	Biology	Equipment	18900
90001434 Compressor Assy V-Series (BN65YEAMT) Serial Number DUMMY14, DUMMY15	2	Manintenance dept	Equipment	137400
90001434 Compressor Assy V-Series (BN65YEAMT) Serial Number DUMMY12, DUMMY13	2	Manintenance dept	Equipment	137400
Epson EB825 H Lamp module	4	ESD	Equipment	285056
NEC VT 595G Lamp Module	4			
Sanyo PLC XD 2600 Lamp Module	4			
Epson EB 825 Lamp Module	3			
PHXWNL021 Phoenix WinNonlin Node Annual Duration 12 months	1	Pharmacy Dept	Software	132991
DI Plant INDION Two bed Demineraliser model CA-60/U INDION Mixed bed polisher mode MB-25 Feed water pumps (1+1) HDPE Storage tank 1000 Ltrs	1 Set	Chemical Engg	Equipment	91600
Gaussian 09 for Linux Site License for one machine type with media and manuals	1	Biology Dept	Software	220500
Gauss View 5.0 for Linux single Computer with media and manuals	1			
Mini & MidiMACS Starting Kit CD11b MicroBeads, human and mouse	1 1	Biology Dept	Equipment	298200
Water bath DK - 332 Make Lab Tech	1	Biology Dept	Equipment	218000
24 deg CU pright Freeqer Model BFS 345 Swith suitable voltage stabilizer	1			
HP Z800 Workstation Intel E5640 (2.66GHz, Quad Core, 12MB L3 Cache) 24GB DDR3 1333ECC Memory/1.0TB SATA HDD/DOS/DVD-RW AMD Fire Pro V5900 2GB Graphics Card 3 Years Warrnaty P/N# FF825AV (SGH144P8TJ)	1	CAD Lab	Computer	147000
22" HP TFT Monitor 21.5:LED Monitor P?N# NK571AA S/N# CNK0491534	1			
IBM SPSS STATISTICS BASE - 20.0 (Ten Users)	1	CAD Lab	Software	832276
IBM SPSS ADVANCED STATISTICS (Ten	1			

Item Description	Quantity	End User	Ledger Folder	Bill Amount
10K 6Gbps SAS HDD 59Y3952 IBM System x3550 M3 R2 ODD Kit 46M1075 IBM 675W Redundant AC Power Supply 46M0901 IBM UltraSlim Enhanced SATA DVD-ROM 46C7526 IBM Virtual Media Key 39Y7327 Line Cord - 2.8M 10A/250V C13(2P+Gnd) (India)	5 5 5 5 10			
Implementation & Integration HPC Software Stack Installation and Implementation of Cent OS, Rocks Cluster Mangement Tools, N1 Grid Engine Scheduler, Open Processional Services Support for 3 Years Service Tax-MRS	1	Chemistry	Server	165000
HI98185-02 PH/ORP/ISE Waterproof Portable Meter, Hanna USA HI4110 ISE Electrodes - Fluoride Hanna USA HI4110-10 ISE Standard Solution 10mg/L (ppm) fluoride std. premixed with TISAB II, 500mL bottle HANNA USA HI4112 ISE electrodes - Lead Hanna USA HI4103 ISE electrodes - CADMIUM Hanna USA HI92000 software - windowss compatible software for logging ISE Meter HI98185-02 USB Cable for PC Connection	1 1 1 1 1 1 1	Chemistry	Equipment	158445
CPA225D Sartorius Semimicro balance SI No 27705581	1	Chemistry	Equipment	160650
Microwave 1600 Watt 230 VAC Part No WW 05015-02	1	Chemistry	Equipment	179820
QualNet 5.1 Network Simulation Software Research License Perpetual Multimedia and Enterprises Library Developer Library Wireless Library	1 1 1 1	CSIS	Software	346500
HP Proliant ML 110 G7 Server/Xeon E3-1220 16 Port Switch 1 Gbps D link dg 1016g UTP Patch Chord 1.5 m Dlink I/o Box 8 GB RAM DDR3 1333Mhz	3 1 3 3 3	CSIS	Equipment	194250
Server HP Proleint ML 11, G7 Interl xeon E3-1220, HP 16 Port switch d Link UTP Patch Cards I/O 8 GB Ram	3 1 3 3 3	CSIS	Equipment	194250
OptiPlex'M 9010 DT Base Intel(R)Core (TM) i7Labei	3	Dr.C R Hota	Computer	175263.1545
LOB: Power Edge Qty & Model # : 2 x R620	2	Dr.C R Hota	Computer	730547.66

Item Description	Quantity	End User	Ledger Folder	Bill Amount
Quote # : 26306142 Requirement: Power Edge R620 x 8 Chassis-1 TPM for R620-1 Intel Xeon E5-2667 2.90GHz, 15M Cache, 8.0GT/s QPI, Turbo, Data Base Servers				
Ice Flaking Machine Brice Italy	1	Dr.D Sriram	Equipment	150000
Acid Digestion Vessel 45 ML Required Accessories: Pin Spanner Wrench 2-1/2" Holding Fixture	1 1 1	Dr.N Rajesh	Equipment	110189.03
DELL OPTIPLEX 390 DT BASE N-SERIES COMPUTERS	18	EEE	Computer	462732
Micro Wave 1600 Watt 230 VAC	1	EEE	Microvave	179820
OptiPlex™ 390DT Base - N - Series Base 15R2WS1 JFM7WS1 DDP4WS1D4Q3WS1 BPN5WS1 B4Q3WS1 9FP4WS1 9FM7WS1 7PN5WS1 7PN5WS1 7FM7WS1 64Q3WS1 5FP4WS1 54Q3WS1 3PN5WS1 35R2WS1 2GM7WS1 25R2WS1	17	EEE AE & Deco Lab	Computer	437025.16
Compressor Assy V- Series BN65YEAMT 90001434 GAS R410 Casual Service labour Charges	5 93 kgs 1	Electrical Division	Equipment	500739
Supply of 3 Phase, 4 wire/5A CT Operated multifunction meter (Volts, Amps, Energy) in your existing panel boards with necessary copper wires, copper lugs etc (Make of Meter: SECURE)	74	Electrical Division	Equipment	478012
Wall mounted fans 12" supreme model make : Almonard	250	Electrical Division	Equipment	436531
TOYOTA INNOVA 2.5L D4D GX REG 8 CAR Accessories Leather Seat cover Sony-622 Reverse Camera front & Rear Bumper	1	GAU	Vehicle	1498949.425
Dual Face Plate Information Outlet AMP. Cat. 6 Cat 6 Patchcords	100 400 200	IPBI	Passive Components	123270.5
86-1566 Fans 90 CFM 230 VAC (Set OF 4) With Wiring	350	IPBI	Passive Components	1011003
235001-1 1 Port Sutterd Face Plate	50			
235001-2 Dual Face plates 3x3 size	800			
1859251-4 4Ft Patch Cords - Yellow for PSTN Rack	6			
CK5678-000 Black 12F 1U SC SM NO Pigtail Loaded	600			
1375055-8 Cat 6 I/O - yellow for user area	12700			
2121104-4 Tyco 4 Core Outdoor OFC 4				

Item Description	Quantity	End User	Ledger Folder	Bill Amount
Core Outdoor Fiber Cable 6348260-3 SC-SC SM Patch Cords 3M SRLC-8442-3 APW Smat Rack 42U 800/1000D SRLC-8442-3 smart Rack 42U 800/1000D with Front Rear Perforated Door with handle lock, (3) shelf 725mm, Castors and levelling legs and (1) mounting hardware pkt of 20, RCC Loops (2) PDU 10x5/15AMP With Indicator + MCB 32AMP+2.5 Meter Cable 3 Pin Plug	10 1			
OptiPlex™ 390DT Base - N - Series Base	45	IPBI	Computer	1156831.27
Toshiba Laptop satilite U840-x4310 Ulv core i5	2	IPBI	Laptops	115000
cyberoam 2500ing 1year total Value subscription for Cr2500 Ing	1	IPBI	Software/hardware	1151959
Mechatronics Sensor Training Kit Accessories Includes PLC Trainer Benix m-1000 EX Sensors kit MT-100 Sensor technology lab Humity Sensor (Molecular Capacitance Tupe)	1	Mechanical Engg	Equipment	395025
Lenovo think Center Edge 71 1607 G7Q L93Rx12, L93RW23, L93RW45, L93RG50, L93RF93, L93RF92 Lenovo 18.5 TFT Monitor 2580 AF-1 VIRLF12, VIRLD98, VIRLB03, VIRLD73, VIRLB06, VIRLD56	6 6	Mechanical Engg	Computer	157500
Tablet Dissolution Tested Model TDT - 08L CLEAR MERLON JAR Sr No 1206308	1	Pharmacy	Equipment	174375
ML 4856 PowerLab 26T, Teaching System including LabTutor 4 Suite Serial No: T26-4335: PTK11 Nerve and Muscle Kit MLA40 Manipulator with Stand MLA1203 Needle Electrodes (5) 29gauge ML301 Bridge pod Serial No: PBR4783 MLT0380/A Resuable BP Transducer	1 1 1 1 1 1	Pharmacy	Equipment	406781
Flash Chromatography EZ Purifier EZ Flash Purifier Systems Flow Rate - 5-100ml/min Pressure: 100Psi (7 Bar) with Detector Multiwave Length CCD Array (20-800mm) System Control & PC Software with computer Sas part of Standard Confir Free	1	Pharmacy	Equipment	620000

Item Description	Quantity	End User	Ledger Folder	Bill Amount
- 20 Nos O Of 2 gms Flash Cartridge (40-60um Silica)				
MRM 1120 AA Medimeas senior rotary Microtome Model MRM - 1120 MTP e 111 mEDIMEAS Microprocessor Tissue Processor	1 1	Pharmacy	Equipment	218789
Microwave Synthesis system Part No 355301 Start Up Kit All cables necessary for operation air hose	1 1	Pharmacy	Equipment	710294
Electro Static Charge item code: Ex - 9978 750 Interface, USB, HP Pro 3090MT Desktop computer item code: CI-7650 RC circuit item code Ex-9986 750interface, USB, HP Pro 3090 MT Desktop Computer item code: CI-7650 Coulomb's Law experiment Item code: Ex-9930 Manetic fore on wires experiment Item Code: Ex-9933 Item Code Ex-9913 Earth's Magnetic Field 750 interface, USB, HP Pro 3090 MT Desktop computer item code: CI-7650 Magnetic Fields of coils item code: Ex-9931 750 interfce, USB, HP Pro 3090 MT Desktop computer item code: CI-7650	1 1 1 1 1 1	Physics	Equipment	1020398
Dida Equipments Study of the physical Principles and technology of laser item code: Exp/ Las Make: Dida France	1	Physics	Equipment	640409
N2709700 BX43F Microscope Frame N1512000 U-TR30-2 Trinocular Tube N2717800 WHN10X Wide Field Eye Piece 10X N2717900 WHN10X-H Widefield Eyepeice 10X 5456300 U-SVRB-4 Mechanical Stage 5455300 U0SVRB-4 Mechanical Stage 5455700 U-HLDT-4 Specimen Holder 1460800 UYCP Power Cord 143826400 45-LBD-IF Light Balanceing Filter, 45mm Dia 281200 U-D6RE Sextuple Revolving nossepiece N1216600 PLCN4X Plan Achromat objective Lens 4X N1478600 UPLFLN40X Objective Lens 40X N1489500 PLAPON60Xo Objective Lens 60X 6424000 COVER-018 DUST Cover AV239000 Oil-8CC Immersion Oil 8CC N2673200 IMMOIL-F30CC Immersion Oil 30CC N2757000-UCMAD3 C Mount Adapter N2757400 U-TV1X-2 Video Adapter 1X N2710300 BX3-URA Universal Reflected Light Illumintor	1 1	Physics	Equipment	667670

Item Description	Quantity	End User	Ledger Folder	Bill Amount
N2738300 BX3-25ND25 Neutral Density Filter	1			
6652000 U-25ND50 Neutral Density Filter	1			
N2757800 U-LH100HG Lamp House for 100W Mercury Burner	1			
N1217800 USH103OL 100W Mercury Burner	1			
N2251000 U-RFL-T Power Supply unit for Mercury lamp	1			
1460800 UYCP Power Core 14	1			
Camera CS HQ2 1394 14bit AC 110/220V CSNAP HQ2 FW 14 AC	1	Physics	Equipment	637416
HOOD 3'X3' Filters 20"x17"	1 3	SWD Mess II	Equipment	559104
Magentic stirrer with porcelain enamel Hot Plate Make Remi Capacity 5 ltr. Model No 5 MLH Plus	4		Equipment	265020
Probe sonicator: Basic equipment ultrasonic generator converter, horn tips/probes, power cables.	1			
				40722302.85

BITS Pilani

annual report

2012

Part B4: Dubai Campus

CONTENTS

B4	HIGHLIGHTS OF DUBAI CAMPUS	1
B4.1	SENIOR OFFICERS	4
B4.2	ADMISSIONS	4
B4.3	DUAL DEGREES AND TRANSFER	4
	Dual Degree	4
	Transfer	4
B4.4	ACADEMIC CALENDAR	4
B4.5	REGISTRATION OF STUDENTS	5
B4.6	ACADEMIC COUNSELING BOARD (ACB)	5
	B4.6.1 Academic Counseling cell (ACC)	5
B4.7	AWARD OF DEGREES AND MEDALS	6
	B4.7.1 Award of Degrees	6
	B4.7.2 Award of Medals	6
	(i) Institute Medals for the Academic Year 2011-12	6
	(ii) Director's Medals for the Best All Round Achievement	6
	(iii) DIAC Award for the Best Academic Performance	7
B4.8	CAMPUS INTERVIEWS AND PLACEMENT	7
B4.9	COURSES OFFERED	7
	B4.9.1 Project-oriented Courses	7
	B4.9.2 New Courses	8
B4.10	INSTITUTIONAL ACTIVITIES	8
	B4.10.1 Chancellor's Visit to the Dubai Campus	8
	B4.10.2 Convocation 2012	8
B4.11	FACULTY PROFILE	9
B4.12	SPECIAL LECTURES, INVITED LECTURES	10
B4.13	INTERNATIONAL/NATIONAL CONFERENCES/WORKSHOPS	10
	B4.13.1 ICCTAM-12	10
	B4.13.2 Hackathon	11
	B4.13.3 Invited Lectures/Talks	11
B4.14	DEPARTMENTWISE REPORTS	12
	B4.14.1 Chemical Engineering	12
	B4.14.2 Electrical & Electronics Engineering	13
	B4.14.3 Mechanical Engineering	16
	B4.14.4 Computer Science	19
	B4.14.5 Electronics & Instrumentation Engineering	22
	B4.14.6 Biotechnology	24
	B4.14.7 General Sciences (Mathematics & Sciences Group)	27
	B4.14.8 Humanities and Social Sciences	29
B4.15	DIVISION/UNIT/CENTERWISE ACTIVITY HIGHLIGHTS	31
	B4.15.1 Research & Consultancy	31
	Ph.D. Thesis Submitted and Under Process of Evaluation	31
	Research Contributions through Higher Degree Dissertations	31
	Research Contributions through First Degree Theses	32
	Research Publications by Faculty, Staff and Students	32
	Some Note-worthy Achievements	32
	Consultancy	32

B4.15.2	Professional Body Activities	32
B4.15.3	Centre for Entrepreneurial Leadership (CEL)	34
B4.15.4	Practice School	35
	Practice School Programme	35
	PS-II Assignments: Institute's Contribution to Industrial Development	36
	Stipend	36
B4.16	CENTRAL FACILITIES	37
(i)	Central Library	37
(ii)	Infrastructure and Facilities	39
(iii)	Laboratories	39
(iv)	Engineering Services	40
B4.17	PROCUREMENT AND MAINTENANCE	42
B4.18	EQUIPMENTS AND ACCESSORIES	42
B4.19	STUDENTS ACTIVITIES, ACHIEVEMENTS, SCHOLARSHIPS, CULTURAL AND ACADEMIC FESTIVALS	43
	Hostel Committee	43
	Clubs	43
	Social and Environmental Club	43
	The Public Speaking and Literary Club	44
	Dance Club	44
	Quiz Club	44
	Music Club	44
	Astronomy Club	44
	ENGInuity and Technofest	44
	IFOR Report 2012	45
	BITS Sports Festival	45
	Ethnic Day	45
	SPARKS	45
	JASHN	45
	Hostel Day Celebrations	46
	Farewell Party	46
	Welcome Party	46
	SPIC MACAY	46
	Achievements and Commendations	46
	Scholarships	47
	Earn While You Learn	47

LIST OF ANNEXURES

1.	Annexure B4-1	Senior Officers of the Institute	B4:A-1
2.	Annexure B4-2	Details of admissions made during the year 2012	B4:A-2
3.	Annexure B4-3	Details of admissions made during the year 2012-2013 to pursue various Dual Degree Programmes	B4:A-3
4.	Annexure B4-4	Number of students registered	B4:A-4
5.	Annexure B4-5	Statement of degrees awarded	B4:A-5
6.	Annexure B4-6	70 th award of degrees	B4:A-6
		71 st award of degrees	B4:A-7
7.	Annexure B4-7	72 nd award of degrees to be approved	B4:A-8
8.	Annexure B4-8	List of Organisations which conducted Campus Interviews 2012	B4:A-9
9.	Annexure B4-9	List of Projects 2012	B4:A-11
10.	Annexure B4-10	Special Lectures given by invited Scholars during 2012	B4:A-28
11.	Annexure B4-11	List of faculty who attended conferences and presented papers during 2012	B4:A-30
12.	Annexure B4-12	List of Publications 2012	B4:A-36
13.	Annexure B4-13	List of Higher Degree Dissertations Completed during 2012	B4:A-38
14.	Annexure B4-14	List of First Degree Thesis Completed during 2012	B4:A-41
15.	Annexure B4-15	Details of distribution of PS I students and faculty over PS I stations during the summer 2012	B4:A-44
16.	Annexure B4-16	Some Practice School Statistics 2012	B4:A-47
17.	Annexure B4-17	Practice School Growth Statistics	B4:A-51
18.	Annexure B4-18	Facilities available at PS II Stations during the year 2012	B4:A-53
19.	Annexure B4-19	List of PS II assignments carried out during the year 2012	B4:A-56
20.	Annexure B4-20	Computing Facilities across the Campus	B4:A-76
21.	Annexure B4-21	List of Equipments Procured during the Year 2012	B4:A-80
22.	Annexure B4-22	New Courses offered during 2012	B4:A-81

BITS PILANI, DUBAI CAMPUS

HIGHLIGHTS FOR THE YEAR 2012

1. A student team of 8 students Deepan Kishore Kumar, R Varun Das, Rithwick Parthasarathy, Adarsh Venkataraman, Upala Banerjee, Shivam Sharma, Angad Oberai and Ajitesh Singh Parihar from BPDC participated in the Winter Symposium on Advanced Level MEMS Design – 2012 organised by BITS Pilani, Rajasthan during January 16 – 28, 2012. They gave a brief presentation on “Winter Symposium on Advanced Level MEMS Design- 2012” and “Nanomaterials and National MEMS Design Centre (NNMDC), BITS, Pilani”, on Thursday, 23 February, 2012. Faculty and students of BPDC attended the presentation.
2. During 3-4 March 2012, Sparks for the academic year 2011-12 was held at BITS Pilani, Dubai Campus. Around 200 students participated in various events in Dance, Drama and Music.
3. On 4 March 2012, a team from Dubai Electricity and Water Authority (DEWA) visited the Campus and gave a presentation on conservation of Water and Electricity. It was well received by the students, faculty and staff.
4. On 11 March 2012, Mr. Yatin Trivedi, Director, Standards and Interoperability Programs, Synopsys, CA visited the campus and addressed the faculty and students.
5. On 23-25 March 2012, Mr. Kris Ramachandran, Advisor to Chancellor and Mr. Asish Trivedi, Senior Executive and Mr. Sushil Modi, Corporate Finance, Aditya Birla Group, Mumbai, India visited the BITS Pilani, Dubai Campus and met the faculty and students.
6. On 20 March 2012, the 9th BITS Sports Festival (BSF) Prize distribution Ceremony was conducted and the Chief Guest of the Ceremony was Ms. Koneru Humpy, the Chess Grand Master and a recipient of Padmashri and Arjuna Awards.
7. On 26 March 2012, Prof. Dr.-Ing. Ralph Kennel, Technische Universität München, Electrical Drive Systems and Power Electronics Arcisstr. 21, 80333 Munich, Germany gave a lecture on “Predictive Control” to the faculty and students.
8. The Faculty Training session for WebEx was conducted during 2-5, April 2012 to all the campus faculty. It was personally conducted over the Cisco WebEx Cloud by Ms. Navintara Kamath from Cisco.
9. The IEEE student branch of BITS Pilani, Dubai Campus was recognized as one of the two largest student branches from UAE and listed within Region 8 in 2012.
10. On 4 April 2012, there was a video conference / Embryo Talk for the students of BPDC with Dr. S P Kothari, Dean, MIT, Boston on “Financial Crisis : Europe and U S A”.
11. During 6-9, April 2012, BITS Pilani, Dubai Campus hosted the Final Student Professional Development Conference (SPDC) Competitions on the request of ASME District-G for which BITS Pilani, Rajasthan was the chair for ASME District-G (Asia-Pacific). The Opening ceremony was inaugurated by the Director Prof. R K Mittal.
12. On 8 April 2012, Dr. Vinod Thukral , Independent Director Britton & Koontz Capital Corporation Natchez, MS, Chairman of Global Bancorp and Global Trust Bank (a commercial bank in Mountain View, California), former director of Louisiana Bancshares Inc., and a Professor at Tulane University, New Orleans, Louisiana visited the campus and interacted with the students and faculty. Also Mr. Mukut Sharma, (Alumnus, BITS, Pilani, India), Senior Vice-President, M/s. Primary Infrastructure, Gurgaon, Haryana, India gave a talk on ‘Sustainable development’ to the faculty and students.
13. On 8 April 2012, the Degree Certificates were distributed to the First Batch (2009-10 II Sem. Admitted batch) of Higher Degree successful Students of BPDC.
14. During 13-15 April 2012, around 300 students from 7 colleges and universities from across the UAE participated in JASHN 2012. It comprised 7 events organized by the Music, Drama and Dance clubs of the college, a fashion show, and a special performance by some of the leading rock bands of Dubai on the final day.
15. During 19-21 April 2012, BPDC participated in the Gulf Education and Training Exhibition (GETEX 2012) held at the Dubai International and Convention and Exhibition Centre, Dubai, UAE.
16. On 24 April 2012, Make A Difference Club conducted the sapling plantation by Prof. R K Mittal, Director, BITS Pilani, Dubai Campus.

17. During 26-29 April 2012, ENGINUITY, the annual techno-managerial and innovation festival and TECHNOFEST, an annual intra university technical festival were held at the BITS Pilani, Dubai Campus. Prof. R.K. Mittal Director, BITS Pilani, Dubai Campus was the chief guest for the function.
18. On 5 May 2012, 5 teams of 21 students participated in Engineering Students Renewable Energy Competition-2012 (ESREC-2012) at UAE University, Al Ain, UAE. The team of biotechnology students Jyotshna, Manisha, Arjun and Surya won the best idea prize and AED 2000/- cash award also.
19. BITS Pilani, Dubai Campus won the "Conservation Award – For A Better Tomorrow 2011-2012" by standing first in the University Category. The award ceremony was held on 8 May 2012. The competition was hosted by Dubai Electricity & Water Authority (DEWA) in association with Knowledge & Human Development Authority (KHDA). Around 25 educational institutions participated in the competition, out of which BITS Pilani, Dubai Campus won the first prize along with the Best Conservation Team award and Best Worker award. BITS Pilani Dubai Campus saved 191,703kWh (4%) of electricity, and 9,539,000 IG (47%) of water over the previous year.
20. During 8-11 May 2012, for the first time in the Dubai Campus, the hostel fest "Recharge: A Celebration of Hostel Life" was conducted for the hostel students. Mrs. Abha Mittal was the Chief Guest of the celebrations.
21. On 22 May 2012, Mr. Phil Bedford, CEO, The Referral Institute talked on 'Entrepreneurial Success – Role of Referrals'.
22. The finals of the intra-university boxing Championship were held on 20 May 2012. Prof. Dr. R.K. Mittal, Director, BITS Pilani, Dubai Campus congratulated all the athletes and teams who had won laurels for the institutes in sports such as basketball, cricket, volleyball, throw ball, athletics, badminton and table tennis. Faculty and staff tournament prizes were awarded by Ms. Abha Mittal and Prof. Dr. A. K. Giri BITS Pilani, Pilani Campus, India and the medals were awarded to the winners of the intra-university sports events including field and track events, cricket, throw ball, volleyball, football, badminton, chess and table tennis.
23. On 27 May 2012, Mr. Raju Reddy, a most successful Alumnus of BITS Pilani, Class of 1981 and Executive Vice-President for Global services at Hitachi Consulting and the former Founder and CEO of Sierra Atlantic visited the Campus and interacted with the students and faculty and sharing his experience as an Entrepreneur He is also the President & Chairman, Board of Trustees, BITSAA International Inc.
24. On 27 May 2012, the students Shamliya Shukkur, Dhvani Chotalia, Roopal Chouhan, Deepa Devanand, Aditya Shankar and Siddhart Swamy participated and won the prize worth of \$10,000-00 US dollars in the Nokia university application challenge held in UAE.
25. On 29 May 2012, "Know your Electives" (KYE) was organized by the Academic Counseling Cell (ACC) for the final year students of BITS Pilani, Dubai Campus. Prof. R K Mittal, Director addressed the students and the exercise was very well received by the students.
26. On 9 September 2012, the "Convocation 2012" was held at BITS Pilani, Dubai Campus with the Chief Guest Dr. Abdulla Al Karam, Chairman of the Board of Directors and Director General, Knowledge and Human Development Authority (KHDA), Dubai for its ninth batch of graduating students. Dr Kumar Mangalam Birla, Chancellor, BITS Pilani graced the ceremony and he visited the Dubai Campus for the first time. Prof. B N Jain, Vice Chancellor, the Directors Prof. K E Raman and Dr. V S Rao, Mr. Syed M Salahuddin, Vice-Chairman, BPDC Governing Council and Mr. Easa Al Ghurair, Member, BITS Pilani, Dubai Campus Governing Council, Dr. Ayoub Kazim, Managing Director of the Education Cluster of TECOM Investments and In charge of Dubai Knowledge Village and Dubai International Academic City, and many others graced the occasion.
27. On 2 October 2012, an interactive session on "What does it take to innovate?" by Dr. Osman Ahmed, Ph.D., P.E., VP and Head, Siemens Centre of Excellence for Smart Buildings in Masdar City, UAE was held and faculty and students attended the session.
28. On 3 October 2012, there was a Lecture & interactive session on "Transformational Leadership" by Padma Bhushan Col. S.P. Wahi (Retd.) Ex-Chairman, ONCG, Murdoch University, Dubai. Screening of film on real-life experience of Padma Bhushan Col. S.P. Wahi (Retd.) was telecasted.
29. On behalf of CEL (Centre for Entrepreneurial Leadership), an interactive session on "Entrepreneurial Ideas to Accelerate Global Accomplishment" was done on 9 October 2012 by Mr. Sajith Ansar, CEO, Spice Holding, Dubai.

30. The Dubai Campus participated in the International Education Show during 10-12 October 2012 in Sharjah, UAE for the first time.
31. SPARKS 2012, the intra college competition was held during 13-14 October 2012. The dance competition was divided into duet, eastern and western categories and many groups of students participated in these events enthusiastically.
32. On 8 October 2012, Mr. Martin Mohanty, Vice President – IT, Aditya Birla Group gave a talk on “Information Technology in Supply Chain Management” to the students and faculty.
33. The Social and Environmental Club organized “Pink Day” on 24 October 2012, to spread awareness among students and faculty for breast cancer.
34. The Foundation Day and Ethnic Day Celebrations went on Monday, 5 November 2012 and the faculty and student attended the function enthusiastically.
35. The IEEE Student Branch organized a special Guest lecture by Ms. Karen Bartleson, Senior Director of Community Marketing, Synopsys, USA and President Elect, IEEE Standards Association on 20 November 2012 and delivered talks on “Synopsys University Program” and “Global standards”.
36. Dr. D S Broca, Professor & Area Chair, POM Area, XLRI, Jamshedpur conducted a workshop on Business Process Simulation in CAD lab on 26 November 2012. Many students registered and attended the workshop.
37. On 26 November 2012, a blood donation camp was organized in association with Al Wasl Hospital, Dubai and this was arranged by the MAD club.
38. During 29 November-5 December 2012, 10th BITS Sports Festival (BSF) was held at the Campus. HE Mr. Lokesh Mysore Kapanaiyah, Ambassador of India to the UAE and Mr. Sushil Kumar, Silver Medalist at London Olympics 2012 and World Wrestling Champion graced the occasion and distributed the prizes on 5 December 2012 to the winners of various sports.
39. The International Conference on Cloud Computing Technologies, Applications and Management (ICCCTAM -12) was held in BITS Pilani, Dubai Campus during 8-10 of December 2012. Dr. Ayoub Kazim, Managing Director of Dubai Knowledge Village and Dubai International Academic City was the Chief Guest. Dr. Eesa Bastaki, Chairman, Emirates Science Club, Dubai and Ms. Maryam Al Thani, Chair, IEEE UAE Section were the dignitaries present on the occasion.
40. A Lecture/Seminar on Smart Grid applications was given by Dr. Anand Dabak, Texas Instruments, on 13 December 2012 by IEEE student Branch at BITS Pilani, Dubai Campus and IEEE UAE Section Power and Energy Society (PES) Chapter.
41. On 16 December 2012, an interactive session on “Entrepreneurial Experiences & Success Stories” by Mr. Prashant Gulati, Serial Entrepreneur & Trustee, Global Board of TiE was held on behalf of CEL (Centre for Entrepreneurial Leadership).
42. On 20-23 December 2012, Prof L K Maheswari, Advisor to Chancellor, BITS Pilani and ex-Vice Chancellor, BITS Pilani, delivered a talk on “An Overview of Electronics” and “BJT Amplifier Configurations”. Many students and faculty participated during the talks.
43. Dr. Kuldip Singh Sangwan, HOD, Department of Mechanical Engineering, BITS Pilani and Mr. Girish Kant, Lecturer, (Mech.) BITS Pilani visited Dubai Campus on 20 & 23 December 2012. Dr. Kuldip Singh Sangwan presented a talk on Lecture on ‘Unconventional manufacturing’ and ‘Lean Manufacturing & sustainable manufacturing’.
44. Bank of Baroda ATM, located at Gate No. 2 in BITS Pilani, Dubai Campus commenced its operations with effect from 17 December 2012.
45. Prof. R.K. Maheshwari, Professor Pathology and Coordinator Indo-US Activities, Uniformed Services, University of Health Sciences (USUHS), Bethesda, USA, visited Dubai campus during 16 - 26 December 2012, and presented a series of lectures including “An overview of Indo-US Collaboration on education and research”.

Several VIPs, distinguished scholars and eminent speakers visited the Dubai Campus and addressed the students & faculty, during the period of report. The chronological list as follows:

- i. 20 March 2012 – Mr. Dil Sukh Jain, Deputy Director, SDAPSA, National Remote Sensing Centre, Indian Space Research Organisation, Government of India, Hyderabad, India
- ii. 8 April 2012 – Mr. B Suresh, President & Whole time Director, Mahindra Consulting Engineers Ltd., Chennai, India

- iii. 29 April 2012 – Dr. Nikholas Mavridis, Ass. Professor of Computer Engineering, New York University, Abu Dhabi, UAE
- iv. 21 May 2012 – Dr. Mustaque Ahamad, Professor, Georgia institute of Technology, Atlanta, USA
- v. 21 May 2012 – Mr. Nasir Memon, Professor of Computer Engineering, New York University, Abu Dhabi, UAE
- vi. 7 June 2012 – Mr. Abdul Aziz Abdul Razaq Al Mutawa, Sr. Vice President/Technology innovation, Etisalat Group, Abu Dhabi, UAE
- vii. 16 July 2012 – Mr. Harsh Bhargava, BITS, Pilani - Alumnus (1968-73 batch)
- viii. 8 October 2012 – Mr. Martin Mohanty, Vice President – IT, Aditya Birla Group
- ix. 16-26 December 2012 – Prof. Dr. R. K. Maheshwari, Coordinator Indo-US Activities, Uniformed Services, University of Health Sciences (USUHS), Bethesda, USA.
- x. 20-23 December 2012 – Prof L K Maheshwari, Advisor to Chancellor, BITS Pilani and ex-Vice Chancellor, BITS Pilani.

B4.1 SENIOR OFFICERS

DIRECTOR

Prof. R K Mittal

1. Prof. T G Thomas, Dean, Academic and Registration
2. Prof. G Vijaya, Dean, Research and Consultancy
3. Prof. Priti Bajpayee, Dean, Student Welfare
4. Prof. D J Shariff, Dean, Instructions
5. Prof. Tanmay Panda, Dean, Practice School and Placement
6. Dr. K Kumar, Registrar

(Details are given in Annexure B4-1)

B4.2 ADMISSIONS

Admissions were made twice during the year 2012, in January 2012 for the second semester 2011-2012 for the Higher Degree programmes and in August 2012 for the first semester 2012-2013 (Details are given in Annexure B4-2). The admission summary is given below:

	Integrated First Degree Programmes	Higher Degree Programmes	Doctoral Programmes (Ph.D.)	Total
Second Semester 2011-2012	-	35 (7)	3 (2)	38 (9)
First Semester 2012-2013	383 (131)	-	3 (2)	386 (133)

Number of female students is given in brackets.

B4.3 DUAL DEGREES AND TRANSFER

(a) Dual Degree

During the academic year 2012-2013, 2 students were permitted to work concurrently for two first degrees under Dual degree Scheme. (Details are given in Annexure B4-3)

(b) Transfer

During the academic year 2011-2012, 5 students to transfer within First degree were permitted.

B4.4 ACADEMIC CALENDAR

During the Calendar year 2012, the second semester 2011-2012 started on 01.02.2012 and ended on 14.06.2012. The first semester 2012-2013 started on 02.09.2012 and will end on 10.01.2013. The second semester 2011-2012 PS II started on 01.02.2012 and ended on 15.07.2012. The Summer Term 2011-12

started on 14.06.2012 and ended on 08.08.2012. Also PS I started on 14.06.2012 and ended on 08.08.2012. The first semester 2012-2013 PS II started on 01.08.2012 and will end on 10.01.2013.

	Starting Date	Ending Date	Number of Instruction days (excluding examination days)
Second Semester 2011-2012	01/02/2012	16/06/2012	88
First Semester 2012-2013	02/09/2012	10/01/2013	82
Summer term 2011-2012	14/06/2012	08/08/2012	40

B4.5 REGISTRATION OF STUDENTS

The registration for the second semester 2011-12 was held on 01st February 2012 and that of the first semester 2012-13 was done on 2nd September 2012. In on-campus programmes, 1471(462) students were registered in the first semester 2012-2013. Details of registration for the first semester 2012-2013 are given in Annexure B4-4.

	Number of students registered
Second Semester 2011- 2012	1607 (507)
First Semester 2012 - 2013	1471 (462)
Summer Term 2011 - 2012	388 (108)

Number of female students is given in brackets.

B4.6 ACADEMIC COUNSELING BOARD (ACB)

During the year 2012, the Academic Counseling Board estimated the extent to which students under its purview fell short of the minimum academic performance, drew up a time-frame within which afflictions were to be removed, determined the package of courses for their registration in each semester and laid down the necessary stipulations for achieving intermediate targets. It further monitored their progress and applied necessary mid-course corrections, wherever required. The statistical summary of the number of On-campus students under its purview during the year is given below:

	I Semester 2011- 2012	II Semester 2011- 2012
1. Total number of students under the purview of ACB at the beginning of the semester	118	136
2. No. of students declared out of its purview at the end of the semester	16	36
3. No. of students who left the institute during the semester	3	7
4. No. of students who came under the purview of ACB at the end of the semester	37	15
5. Total No. of students under the purview of ACB during the next semester	136	108

B4.6.1 Academic Counseling Cell (ACC)

Academic Counseling Cell (ACC) consisting of faculty and Student Counselors facilitates counseling services for students' who need counseling with prior appointment with a counselor. Counseling services are confidential services to the students. Also if necessary, a Professional Counselor (PC) is arranged.

B4.7 AWARD OF DEGREES AND MEDALS

B4.7.1 Award of Degrees

During the year 2012, 534 degrees were awarded as given below: Statistical details of these degrees are given in Annexure B4-5, B4-6 and B4-7.

	Number of Degrees Awarded
70 th Award (vide Board of Governors meeting -26 th February 2012)	47(15)
71 st Award (vide Board of Governors meeting-22 nd July 2012)	495(174)
Total	542(189)

72 nd Award (subject to approval of Board of Governors in the next meeting)	53(10)
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B4. 7.2 Award of Medals

(i) Institute Medals for Academic Year 2011-2012

List of students for award of medals from amongst the students graduated at the end of first semester, second semester and summer term 2011- 2012.

S. No	ID. No.	NAME	SEX	CGPA OBTAINED	POSITION OBTAINED	TYPE OF MEDAL TO BE AWARDED
Integrated First Degree Programmes (No. of students:505)						
1.	2008AAPS435U	RITIKA BIPIN SINGH	F	10.00	FIRST	GOLD
2.	2008A7PS506U	SHITIJ VASIST	M	9.98	SECOND	SILVER
3	2008A4TS184U	GATHA DAS	F	9.96	THIRD	} (Bracketed) BRONZE
4	2008A7PS106U	B AISHWARYA	F	9.96	THIRD	
5.	2008A8PS335U	MRINALINI GOVINDANKUTTY MENON	F	9.96	THIRD	
6.	2008AAPS284U	KRISHNA MANJUNATHA DIXIT	M	9.96	THIRD	

(ii) Director's Medals for the Best All Round Achievement

In addition to the Institute Medals, at Dubai Campus Director's medals are awarded to one male and one female student for the best all-round achievement, in every graduating batch. For the 2012 graduating batch, the Director's medals were awarded to the following students:

S. No.	ID. No.	NAME	SEX
1	2008AAPS289U	LADHA SAURABH	M
2	2008AAPS435U	RITIKA BIPIN SINGH	F

(iii) DIAC Award for the Best Academic Performance

The "DIAC Award for the Best Academic Performance" for the universities located in DIAC (Dubai International Academic City) was given to the following students for the year 2012:

S. No.	ID. No.	NAME	SEX	CGPA	DIVISION
1.	2008AAPS435U	RITIKA BIPIN SINGH	F	10.00	DISTINCTION
2.	2008A7PS506U	SHITIJ VASIST	M	9.98	DISTINCTION

B4.8 CAMPUS INTERVIEWS AND PLACEMENT

Efforts were made this year to have more and more industries visit the campus for placement interviews. Despite economic slowdown in Dubai, 44 organisations conducted campus interview and made offers to students (Details are given in Annexure B4-8).

Number of companies which conducted campus interviews	44
No. of interviews	628
No. of offers made	91

Employed of Graduates during the Year 2012

Programme	Number Graduated	Employed/ Higher Studies	Unemployed as on October 2012	Those neither informed nor sought help in placement
On-Campus Programme				
B.E. (Hons.)				
Biotechnology	32	12	2	18
Chemical	20	8	1	11
Computer Science	141	63	30	48
Electronics & Communication	130	51	28	51
Electrical & Electronics	63	22	21	20
Electronics & Instrumentation	24	11	4	9
Mechanical	84	35	16	33
Total	494	202	102	190

B4.9 COURSES OFFERED

The number of courses offered during the year 2012 is as follows:

	Number of courses offered
Second Semester 2011- 2012	155
First Semester 2012 – 2013	167
Summer Term 2011 - 2012	21

B4.9.1 Project-oriented Courses

During this year, many students worked on time-bound projects of various types. The information about the projects done and the names of the students who worked on the projects and the names of the instructors are given in Annexure B4-9. A statistical summary is given below:

S.No.	Course No.	Course Title	No. of Students	
			II Sem. 2011-12	I Sem. 2012-13
1	BITS C313	LAB ORIENTED PROJECTS	33	34
2	BITS C323	STUDY ORIENTED PROJECT	57	41
3	BITS C331	COMPUTER PROJECTS	123	77
4	BITS C335	COMPUTER PROJECTS	1	-
5	EEE C491	SPECIAL PROJECTS	3	2
6	CS C491	SPECIAL PROJECTS	5	4
7	ME C491	SPECIAL PROJECTS	5	5
8	BIOT C491	SPECIAL PROJECTS	4	1
9	ECE C491	SPECIAL PROJECTS	4	3
10	INSTR C491	SPECIAL PROJECTS	2	1
11	ET C491	SPECIAL PROJECTS	-	11
TOTAL			237	179

B4.9.2 New courses

During the year, 72 new courses were offered. (Details are given in the Annexure B4-22)

B4.10 INSTITUTIONAL ACTIVITIES

B4. 10.1 Chancellor's Visit to the Dubai Campus

BITS Pilani, Dubai Campus had the privilege of having the first visit of the Chancellor Dr. Kumar Mangalam Birla on 8th September 2012 to the campus. His extensive tour around the campus commenced with a tree plantation at the Academic Block close to Library Building. He visited with keen interest to all the facilities of the Institute including Library, Laboratories, Auditorium & VIP Lounge, a HoD's chamber, Indoor and Outdoor sports facilities, Institute's photo Exhibition (that depicts institutes growth via pictures and media clippings) and the Hostel facilities that include: student accommodation, Dining, Laundromat, Gym).

During his tour he spared time to inaugurate the Centre for Entrepreneurial Leadership Cell (CEL) amidst student's jubilation & gracious presence of the Vice Chancellor, Prof. B.N. Jain and the Director Prof. R.K. Mittal. On 9th September, 2012 soon after Convocation 2012, he held closed door interactions with a cohort of 50 all the three tiers First Degree, Higher Degree and Ph.D. students of Dubai Campus.

B4.10.2 Convocation 2012

The "Convocation 2012" was held at BITS Pilani, Dubai Campus with the Chief Guest Dr. Abdulla Al Karam, Chairman of the Board of Directors and Director General, Knowledge and Human Development Authority (KHDA), Dubai on Sunday, 9th September 2012 for its ninth batch of graduating students. Dr Kumar Mangalam Birla, Chancellor, BITS Pilani graced the ceremony. Prof. B N Jain, Vice Chancellor, the Directors Prof. K E Raman and Dr. V S Rao, Mr. Syed M Salahuddin, Vice-Chairman, BPDC Governing Council and Mr. Easa Al Ghurair, Member, BITS Pilani, Dubai Campus Governing Council, Dr. Ayoub Kazim, Managing Director of the Education Cluster of TECOM Investments and In charge of Dubai Knowledge Village and Dubai International Academic City, and many others graced the occasion.

In his speech, the Chancellor Dr. Kumar Mangalam Birla congratulated the graduating students and shared his vision and mission on BITS. Dr. Kumar Mangalam Birla, Chancellor of Birla Institute of Technology & Science (BITS) Pilani stated that BITS Pilani, Dubai Campus is on track to become the leading "Engineering" institution in the Middle East. During the convocation, Dr. Kumar Mangalam Birla stated that, "Today is your day. I congratulate each one of you who will graduate from BITS Pilani, Dubai campus. I urge you all to bring passion to your endeavors; bring the fire in you and the sparkle in your eyes to every task you set yourself to". Dr. Birla addressed a gathering of over 1000 people at the grand "Convocation 2012" event that included students, parents, senior government officials and dignitaries from various organisations.

Bidding farewell to the students, Prof. Bijendra Nath Jain, Vice Chancellor, BITS Pilani stated that, "I would like my faculty and staff to join me in congratulating all our students who will be graduating today from our campus in Dubai. The institution is ranked amongst the top 10 publicly or privately funded engineering institutions in India as also among the top few in UAE. Going forward, we aspire to be listed as a top-class research-led university in Asia and in the world, and not simply in India or UAE. And to realize that dream we

are implementing a number of projects under the umbrella project, called “Vision 2020, Mission 2012”, that will enhance our capability and capacity to excel in both teaching and in research.”

Speaking at the occasion, Prof. R K Mittal, Director, BITS Pilani, Dubai Campus mentioned that, “From a modest beginning, in 2000 with 61 students in two first degree programs, Dubai Campus has traversed twelve glorious years. This iconic campus, since its inception, has been tirelessly working to fulfill its mission of imparting quality education to the students in Gulf region and selfless service to the society. It is constantly taking into its fold new areas of education and research.” He also shared several accolades the Dubai Campus of BITS has won through its students and faculty during 2011-12 such as “Conservative Award-for a better tomorrow 2011-12” for the second time, US \$10,000/- won by the students in “Nokia University Challenge”, etc.

The Degrees were conferred on the first batch of 29 higher degree graduates from M.E. (Microelectronics, Design Engineering) and M.B.A. Also Degrees were conferred on 505 Graduates who graduated in the following disciplines of Engineering; Chemical Engineering, Electrical and Electronics Engineering, Mechanical Engineering, Computer Science, Electronics and Instrumentation Engineering, Electronics and Communication Engineering and Biotechnology. Also 3 students of the same batch were conferred with their Provisional Certificates. Many VVIPs, Guests, Parents of graduating students, faculty and staff attended the Convocation, apart from the graduating students.

B4.11 FACULTY PROFILE

There were 87 faculty in BITS Pilani, Dubai Campus at the start of the Academic Year 2011-2012. Out of these, 63 are teaching faculty and 24 are lab instructors. Out of these 63 teaching faculty, 53 are Ph.D. holders with several years of teaching experience and 10 have appropriate Master’s Degrees with several years of teaching experience. There are 1 Sr. Professor, 10 Professors, 22 Associate Professors, 20 Assistant Professors, 6 Senior Lecturers and 4 Lecturers. Three of these faculty members are on deputation from BITS Pilani. There is a constant endeavor to add to the strength of the faculty appropriate to the requirements.

During the year, the teacher – student ratio was 1:17.78. The faculty has been intensely involved in all the facets of BITS, namely, teaching, research, Practice School and educational administration.

Some Faculty Statistics

(i)	Percentage of teaching staff (Lecturer & above) possessing Ph. D / made good progress towards Ph.D.	100
(ii)	Percentage of teaching staff working for Ph.D.	16
(iii)	Percentage of teaching staff who participated in Practice School Programme in the year	83

Faculty Development Programme

Technical contributions from faculty and students

There are a total of 68 contributions which include 22 in various international Journals and 46 in various Conferences. The complete list of research contributions made by the faculty, staff and students, is given in Annexure B4-11 and B4-12.

Some Note-worthy Achievements

1. Prof. R K Mittal, Director, BITS Pilani, Dubai Campus was a member of the Advisory Committee for “National Conference on Business Analytics and Business Intelligence” (NCBIA), organized by “The Institute of Public Enterprise (IPE) held on 6-7 January 2012 at Hyderabad, India.
2. Prof. R K Mittal, Director, BITS Pilani, Dubai Campus was a member of the Advisory Board for the Workshop on: “Fatigue, Creep and Fracture analysis of Engineering Materials”, organized by Mechanical Engineering Department, BITS Pilani, Pilani Campus, during 27-28 February 2012.
3. Prof. R K Mittal, Director, BITS Pilani, Dubai Campus was Patron and Program Chair for International Conference on Cloud Computing Technologies, Applications and Management (ICCCTAM) held during 8-10 December 2012 held at BITS Pilani, Dubai Campus.
4. Dr. Anand Kumar, Associate Professor was Program Co-Chair for the International Conference on Cloud Computing Technologies, Applications and Management (ICCCTAM) held during 8-10 December 2012 held at BITS Pilani, Dubai Campus. Dr. B Vijaya Kumar, Associate Professor, Computer Science, Dr. Jagadish Nayak, Assistant Professor, ECE, Dr. Santosh Kumar, Assistant

Professor, Computer Science, Dr. K Nithyanandan, Dr. A S Rao, Associate Professor, Management, Dr. R Swarnalatha, Assistant Professor, EIE and Dr. Kalaichelvi, Assistant Professor, EIE were Co-chairs for various sessions of International Conference on Cloud Computing Technologies, Applications and Management (ICCCTAM) held during 8-10 December 2012 held at BITS Pilani, Dubai Campus.

5. Dr. Gomathi Bhavani has been chosen during February, 2012, as reviewer for the IEEE Transactions on Systems, Man and Cybernetics Part A: Systems and Humans Journal.
6. Prof. Dr. Vijaya Gunturu, Dean Research and Consultancy of BITS Pilani, Dubai Campus has been nominated as the Chairman, Publications IEEE UAE Section during February, 2012.
7. Dr. M V N Sankaram of Mechanical Engineering Department of Dubai Campus, by nomination of the Director BPDC: Prof. R K Mittal continued to represent BPDC for the 4th consecutive year as a Steering Team member of the UAE University's annual event: Engineering Students Renewable Energy Competition (ESREC 2012) held on 5 May 2012 at UAE University, Al Ain.
8. Ms. Mahati Gunturu (2008AAA7201U) represented IEEE Student Branch of BITS Pilani, Dubai Campus & the UAE Section Student Members at the Student Branch Congress (SBC 2012) scheduled during 25-29 July 2012 at Mardid, Spain. She received financial support from IEEE Region-8 SBC fund for her Registration and Accommodation in Mardid, Spain.

The details are given in B4.10 and B4.11.

B4.12 SPECIAL LECTURES, INVITED LECTURES

Many eminent scholars and distinguished alumni visited the Campus and delivered lectures. Details are given in Annexure B4-10.

B4.13 INTERNATIONAL / NATIONAL CONFERENCES / WORKSHOPS

B4.13.1 International Conference on Cloud Computing Technologies, Applications and Management (ICCCTAM-12):

BITS Pilani, Dubai Campus held its first ever International Conference on Cloud Computing Technologies, Applications and Management 2012 (ICCCTAM-12) during 8-10 December 2012. The conference was technically sponsored by IEEE UAE Section. The conference was sponsored by the Platinum Sponsor L&T; Silver Sponsors GWT, Murano Lighting and Zajil Telecom; and other sponsors i.e., Ibtesamah Tourism, Procal, ePromis, AHI Carrier, ETA Ascon Star and VProV.

ICCCTAM-12 had over 80 paper submissions from countries namely Iran, Kazakhstan, Japan, China, South Korea, Malaysia, Egypt, Algeria, Mauritius, Bangladesh, Saudi Arabia, Pakistan, UK, UAE and India. After a rigorous and blind review process by about 47 eminent external and international expert reviewers from countries viz., Australia, India, UAE and USA, 52 papers were accepted for presentation. The paper submission, paper review, registration and publication processes were fully automated using in-house developed conference portal. Forty six delegates and numerous other dignitaries were among those who attended the conference which had eight sessions covering the sub areas viz., Services, Architecture and Deployment, Applications, Enabling Technologies, Management, Security and Scheduling & Performance. About four authors could not make it to the conference because of visa related issues. Over 60% of the papers presented were by authors from outside BITS Pilani, Dubai Campus.

The Conference commenced with an inauguration ceremony that included lamp lighting, inaugural speeches and varied cultural program. The Chief Guest, Dr. Ayoub Kazim's (Managing Director- Education Cluster of TECOM Business Parks) presence during the inauguration added glitter to the first day of the proceedings. Ms. Al Thani (IEEE UAE Section Chair) gave advance information on IEEE activities in the UAE. Dr Bastaki (Chairman, Emirates Science Club and Honorary Chairman, IEEE UAE Section) laid the foundation with his keynote address on Cloud Computing and Applications where he highlighted the role of ICT in the Cloud, Cloud Statistics and legal issues and UAE's own Ankabut that is Cloud centered. Dr. Osman Ahmed (VP and Head, Center of Excellence Smart Buildings MASDAR City, Siemens, Abu Dhabi, UAE) gave us a unique perspective of the Cloud from his passion – to view all matters from processes and systems existing in nature. Dr. Ahmed Dabbagh (Technology and Services Development Manager, Ankabut, UAE) presented the ANKABUT project and system as a local illustration of an educational cloud in the UAE. Prof. Peter Varman (Professor, Electrical and Computer Engineering, Rice University, Houston, TX, USA and Scholar-in-Residence, VMWare, USA) presented research results for Resource Management and Quality of Service parameters for Virtualization. Prof. Wathiq Mansoor (Professor, Computer Engineering, American University in Dubai and IEEE UAE Section Board Member) worked tirelessly to support ICCCTAM-12 over the last one year with his valuable inputs to ensure that IEEE's requirements of the conference organizers were met.

The Conference concluded with the Valedictory Function that included prize and certificate distribution with Prof. Peter Varman being the Guest of Honor. Three papers were judged as best of the best papers presented after much deliberation. Ms. Omniyah Gul with her Framework of a National Level Electronic Health, Dr. Yashvardhan Sharma with his Building a Data Warehousing Infrastructure based on Service Oriented Architecture and Mr. Nand Kumar with his Cloud Computing Setup for a Campus Environment were recipients of these awards.

The organizing committee comprising of a team of faculty worked over the last one year from conceptualizing and detailing to successfully conducting the conference via realizing the vision of BPDC Director: Prof. R K Mittal, who also was the Conference's Program Chair. In addition, there were additionally ten other committees that worked tirelessly which comprised of the entire faculty of BITS Pilani, Dubai Campus from across departments. Over 70 student volunteers contributed commendably not only in terms of effort and time but brought in the much needed enthusiasm and creativity in terms of conference website, conception and implementation of the Hackathon and so on.

B4.13.2 Hackathon

For the first time in BITS Pilani, Dubai Campus, a 12-hour Hackathon was held as part of the ICCCTAM-12 Conference in collaboration with the Center for Entrepreneurial Leadership (CEL) and Infinite Loop. The Hackathon was organized by a team of student organizers with 30 participants who brought a variety of skills to the table coming from a variety of engineering majors.

Although many multi-national companies around the globe organize company-wide Hackathons frequently, Hackathon was perhaps the first of its kind in the UAE, conducted in the context of a Conference Theme and perhaps the first of sorts being organized by an academic institution. The Hackathon theme was to build a solution or improve an existing solution. A significant part of the Hackathon was to identify and formulate a problem requiring such a solution. After more than an hour of brainstorming, the team chose an integrated traffic system that uses GPS to monitor traffic and control traffic light durations for design prototyping using a cloud. The team structure and operation changed dynamically as the day progressed. The participants started enthusiastically and it was remarkable that they were as enthusiastic at the end after a grueling 12 hour session; this enthusiasm was reflected in half the participants continuing for another two hours to bring the design to a reasonable logical completion. Programming was done to test out feasibility of specific design techniques. The participants expressed that they had learnt teamwork skills in addition to algorithm development and design expertise.

B4.13.3 Invited Lectures/Workshop/Talks:

A consolidated list of BPDC faculty participated in many International and National Workshops along with the details are given in Annexure B4-11 and B4-12.

Also the following faculty have participated in Invited Lectures / Workshop /Talks / Panel Discussions / Chairing the session in International Conferences held during the year:

1. Dr. B Muralidharan, Associate Professor, Chemistry Department delivered an invited lecture on "Chemistry in Alan Turing's – 'The Chemical Basis of Morphogenesis'" at an International Workshop hosted by UAE University, Al-Ain on 27 February 2012.
2. Dr. B Vijay Kumar, Associate Professor, Computer Science delivered a key-note speech at the International Conference on Recent Advances in Computing and Software Systems (RACSS – 2012) organized by SSN Campus and Co-sponsored by HCL & IEEE Chennai Section, Chennai during 25-27 April 2012.
3. Dr. R Karthikeyan, Associate Professor, Mechanical Engineering Department delivered an invited lecture on "Application of design of experiments in materials processing" at American University of Sharjah in May 2012.
4. Dr. S Vadivel, Professor, Computer Science Engineering Department attended a workshop on "Windows Azure Cloud Computing" conducted by Microsoft Gulf, Dubai, during 24-25 March 2012.
5. Dr. S Vadivel, Professor and Dr. V Santhosh Kumar, Assistant Professor, Computer Science Engineering Department attended a workshop on "HTML5", conducted by Microsoft Gulf, Dubai, during 15-17 March 2012.
6. Dr. Adhir Baran Chattopadhyay, Associate Professor, Electrical and Electronics Engineering Department delivered a keynote address on "Machine learning mechanisms for controlling smart electrical drives" & "Machine learning mechanisms in electrical machines: power electronics and power systems control based", at the First International symposium on "Recent Trends on Information Security, social network privacy issues, cloud computing and machine learning", Raipur, Chhattisgarh State, India during 14-15 December 2012.

B4.14 DEPARTMENTWISE REPORTS**B4.14.1 Department: Chemical Engineering**Number of faculty members (as on 31st December 2012)

Senior Professors, Professors	-
Associate Professors	03
Assistant Professors	02
Lecturers	-
Visiting Faculty	-

Head of the Department: Dr. Bharat B. Gulyani**Contact details:** gulyani@bits-dubai.ac.ae**Number of PhD Scholars:** NIL**Ph.D. Thesis Submitted during the year:** NIL**A. Sponsored Research activities:** NIL**B. Publications:**

Veena Valsamma Daniel, B B Gulyani, B G Prakash Kumar, "Usage of date stones as adsorbents: A review", Journal of Dispersion Science and Technology, 33, Page No. 1321-1331, 2012

C. Conferences attended/papers present.ed:

1. Arshia Fathima, Dey Shramana Subrata Kumar, Ankit Sachdeva, Gourav Sehgal, Fouzan Abbas Thakur and B G Prakash Kumar, "Low temperature Distillation Using Sand Beds as a Source of Stored Thermal Energy", participated in 3rd Engineering Student Renewable Energy Competition (ESREC 2012) held at UAE University, Al Ain, UAE, on 5 May 2012.
2. B G Prakash Kumar, Roseline and Lima Rose Miranda, "Photocatalytic Degradation of Remazol Brilliant Red by TiO₂-UV Process", International Conference on Chemical and Environmental Engineering (ICCEE 2012), 25-26 April, 2012, Paris, France.
3. Mohammed Al Hasan Khan, Shreyas Jaikhanani and B G Prakash Kumar, "Applications of Cloud Computing In Remote Oil and Gas Operations", International Conference On Cloud Computing Technologies, Applications and Management (ICCCTAM 12), 8-10 December 2012.

D. Books Published/Edited during the year: NIL**E. Conferences, seminars & workshops conducted:** NIL**F. Invited Talks given by BITS faculty:** NIL**G. Invited talks arranged in the department:** NIL**H. Awards and recognitions won by faculty and students:** NIL**I. Faculty Development, International Collaboration & Industry Immersion:** NIL**J. Significant new equipments/experimental facility added during the year:** NIL**K. Departmental association/club activities:**

1. Chemical Engineering Department organized freshmen function for 1st year chemical engineering students on 26 September 2012.
2. CHEMICAL ENGINEERING STUDENTS ASSOCIATION (ChESA), formed and executive board meeting held on 10 October 2012.

B4.14.2 Department: Electrical & Electronics EngineeringNumber of faculty members (as on 31st December 2012)

Senior Professors, Professors	02
Associate Professors	05
Assistant Professors	03
Lecturers	01
Visiting Faculty	-

Head of the Department: Dr. R Mary Lourde**Contact details:** marylr@bits-dubai.ac.ae**Ph.D. Thesis Submitted during the year:** NIL**Number of PhD Scholars:** 01**Ph.D. Proposal Submitted during the year:** NIL**A. Sponsored Research activities:****(i) Ongoing projects:** NIL**(ii) Projects sanctioned during the year**

iGenius, USA sanctioned a project on "Design of smart phone applications on three platforms: iPhone, Android and Windows" to four students with Dr. Anandkumar as the Principal Investigator.

(iii) Projects completed this year: NIL**B. Publications:**

1. Prashant Vaidyanathan, Nitish Malhotra, Jagadish Nayak, "A new encryption technique for the secured transmission and storage of text information with medical images", Engineering Review, Scientific Journal of Croatia, Vol No. 32(1) Page No.: 57-63, March 2012.
2. Sunil Thomas and Dr. Adhir Baran Chattopadhyay, "A twenty years survey on general modeling of synchronous motor and its stability studies: Part I - partial literature review", (reference no: 11010a), Association for the Advancement of Modeling and Simulation Enterprises (A.M.S.E) Journal, France (Accepted for Publication).
3. Sunil Thomas and Dr. Adhir Baran Chattopadhyay, "A twenty years survey on general modeling of synchronous motor and its stability studies: Part II - partial literature review", (reference no: 11010b), Association for the Advancement of Modeling and Simulation Enterprises (A.M.S.E) Journal, France (Accepted for Publication).
4. Deepan Kishore Kumar, Dr. Anand Kumar and Prof. R K Mittal, "An Adaptivriculum for Higher Education", Proceedings of EDULEARN12 Conference, 2-4 July 2012, Barcelona, Spain.

C. Conferences attended/papers presented:

1. Dr. Jagadish Nayak attended a workshop on LABVIEW in Manipal Institute of Technology, Manipal, India, 20-26 July 2012.
2. Ajith Kumar, Dr. Anand Kumar and Prof. R K Mittal, "Parameters to Diffusion of Cloud Computing in India", Public Policy and Governance, 2012, IISc, Bangalore, India.
3. Dr. Anand Kumar, "Automatic critical health care service system using wireless communication, positioning and/or RF ID", Third International Conference on Computer and Communication Technology, 2012, MNNIT, Allahabad, U.P.

4. Gautham Badhrinathan, Anish Agarwal, Dr. Anand Kumar, "Implementation of Distributed Chess Engine using PaaS", International Conference on Cloud Computing Technologies, Applications and Management, BITS Pilani, Dubai Campus, Dubai, 8-10 December 2012.
5. Dr. Anand Kumar and Prof. R K Mittal, "An User-Centric Billing Model for Cloud Computing", International Conference on Cloud Computing Technologies, Applications and Management, BITS Pilani, Dubai Campus, Dubai, 8-10 December 2012.
6. Robin Singh, Aditya Jain, Pratik Sen, Vivek Radhakrishnan and Dr. Anand Kumar, "Autonomous Unmanned Aerial Vehicle for Reconnaissance based on Robotic Operating System", IARC Symposium 2012, North Dakota.
7. Prof. R K Mittal and Dr. Anand Kumar, "Robotics at BITS Pilani, Dubai Campus", NYU Abu Dhabi Workshop: Robotics, Intelligent Systems and AI in the GCC and Beyond, 18 June 2012, New York University, Abu Dhabi.

D. Books Published/Edited during the year: NIL

E. Conferences, seminars & workshops conducted

- The EEE/EIE department students association organised a student workshop on "MEMS – An introduction to Modeling" on 12 November 2012 which was conducted by Adarsh Venkataraman, a third year EEE student.

F. Invited Talks given by faculty:

Dr. Adhir Baran Chattopadhyay delivered a keynote presentation on "Machine Learning and Magnetic Levitation & Propulsion", at the first International Symposium on Cyber Security, Cloud computing and Machine Learning during 15-15 December 2012 in ITM University, Raipur, India

G. Invited talks / technical visits arranged by the department:

1. Prof. L K Maheswari, Advisor to Chancellor, BITS Pilani delivered two lectures on the topics "Electronics an overview" and "BJT Amplifier Configurations", 22-23 December 2012 at BITS Pilani, Dubai Campus, Dubai.
2. An Electrical substation visit at the institute was arranged for the faculty and students of the Electrical Science branches on 12 November 2012. The visit was very effective and well appreciated by the students.
3. Dr. Anand Dabak gave an IEEE talk at BITS Pilani, Dubai Campus. Dr. Dabak is a Manager at Texas Instrument's (TI) Research and Development in Dallas, TX spoke on Powerline communications in Smart Grid applications, narrow band OFDM communications in the 40-490 kHz band.

H. Awards and recognitions won by faculty and students

1. Dr. Mary Lourde was appointed as an external examiner of a Ph. D. thesis for PRIST University, Thanjavur, Tamil Nadu, India and evaluated a Ph.D. Thesis titled "Design analysis and implementation of digital controllers for front end and power converters of srm drives".
2. Dr. Mary Lourde was also a reviewer of IEEE Sensors Journal and reviewed research papers in 2012.
3. Dr. R Gomathi Bhavani has been serving as reviewer for IEEE Transactions on Systems, Man, and Cybernetics- Part A Systems and humans since 2012. The impact factor for the journal is a whopping 2.123.
4. Dr. Adhir Baran Chattopadhyay reviewed a research manuscript "Application of soft magnetic composite materials in rotating electrical machines and finite element simulation", for Electric Power Components and Systems Journal, Taylor and Francis, UK in December 2012.
5. Dr. Adhir Baran Chattopadhyay examined a Ph. D. thesis titled "Design, Analysis and Implementation of Digital Controller for DC-DC Converter in Continuous and Discontinuous Conduction Modes", submitted to Prist university, Thanjavur, India in July 2012.
6. The following students who graduated in 2012 have been offered admission at universities and programmes mentioned against their names.

1.	Saurabh Ladha	Stanford University, USA
2.	Supriya Ananthakrishnan	Dartmouth
3.	Sasank Syamala	University of Kansas, USA
4.	Keerthi Duraikannan	Drexel University, USA
5.	Sana Zaman	IIM, Kolkatta, India
6.	Shreeya Verma	XLRI, India
7.	Nimit Pradhan	University of Maryland, USA
8.	Ashok Vydyanathan	University of California at San Diego, USA
9.	Robin Singh	University of Michigan, USA

I. Faculty Development, International Collaboration & Industry Immersion

1. Keerthi Aditya Duraikannan's first degree thesis Reverse Engineering a roll around series robot through analysis of its structure, function and operation led to completion of 95% of the repair of the Roll Around Robot from Lamcy Plaza during 2012.
2. Ashok Vydyanathan's first degree thesis Optimization of the pressure transmitter manufacturing line At Rosemount DMMC Emerson Process Management was to make the semi-automated manufacturing line at Emerson more efficient.
3. R K Pranav's first degree thesis Coherent Optical OFDM DSP Channel Estimation came from iCoreTec – a start-up company in Bangalore that is working to defined standards for Next Generation Networks (NGN) based on 112 Gbps Optical Fiber Communication. Vijay Mehra, the founder of iCoreTec is a BITS Pilani Alumnus.
4. Harish Sanjeev's Higher Degree Dissertation Neural Network Modeling, Simulation and Prediction of Innovation Growth in United Arab Emirates was initiated and supported by Dr. Osman Ahmed, VP and Head Siemens Centre of Excellence for Smart Buildings- MASDAR City.
5. Nilay Vinod Acharya and Jithu Lissi Raju did their dissertations entitled Ultra Low Power CMOS Design Technology: Analyzing Power and Reliability of 2 input XOR Gate and Ultra Low Power CMOS Design Technology: Analyzing Power and Reliability of 3 input Majority Gate in solving a research problem that was funded by Semiconductor Research Corporation (SRC), UAE to UAE University during 2012.
6. First steps have been taken in collaborating with Prof. Dr. Peter Varman at Rice University, Houston, TX, USA for research on areas of mutual interest and possible funding from funding agency in the USA.
7. Dr. Anand Kumar reviewed two ICT Fund Research Proposals during 2012 and one R & D Institute Proposal. All 3 proposals were pertaining to Cloud Computing.
8. Dr. Anand Kumar submitted research proposal for funding to ICT Fund. Proposal rejected during pre-screening due to lack of minimum UAE National representation in the research team during 2012.
9. Dr. Anand Kumar planned and organized the UAE leg of International Robotics Challenge for which the finals was part of IIT Mumbai Techfest. The two teams that were qualified for the finals could not make it since the Finals in Mumbai were in the first week of January which was when most UAE Universities had semester ending exams.
10. Dr. Adhir Baran Chattopadhyay reviewed one research proposal for ICT fund, titled "Green self-powered low power circuit (GSPLPC)", in 2012.

B4.14.3 Department: Mechanical

Number of faculty members (as on 31st December 2012)

Senior Professors, Professors	03
Associate Professors	05
Assistant Professors	06
Lecturers	-
Visiting Faculty	-

Head of the Department: Dr. C. Perisamy

Contact details: *perisamy@bits-dubai.ac.ae*

Number of PhD Scholars: 01

Ph.D. Thesis Submitted during the year: NIL

A. Sponsored Research activities:

Total number of Sponsored Projects in the department: 01

- (i) **Ongoing projects:** 01
Redesigning of cable pulling wrench for Elfit Arabia, Ajman, UAE
- (ii) **Projects sanctioned during the year:** NIL
- (iii) **Projects completed this year:** NIL

B. Publications:

1. V Srinivasan, Dr. R Karthikeyan, G Ganesan, B. Asaithambi, "Comparative study on the wear behavior of long and short glass fiber reinforced plastics", *Metals and Materials International*, May /2012; 16(2), Page No.: 205-212.
2. C Senthilkumar, G Ganesan, Dr. R Karthikeyan, "Optimization of ECM Process Parameters Using NSGA-II", *Journal of Minerals and Materials Characterization and Engineering*, 2012, Page No.: 931-937.
3. D Kanagarajan, K Palanikumar, Dr. R Karthikeyan, "Effect of Electrical Discharge Machining on strength and reliability of WC-30% Co composites", *Materials & Design*, Volume 39, August 2012, Page No.: 469-474.
4. Dr. V Kalaichelvi, Dr. R Karthikeyan, D Sivakumar and V Srinivasan, "Tool Wear Classification Using Fuzzy Logic for Machining of Al/SiC Composite Material", *Modeling and Numerical Simulation of Material Science*, 2012, Vol. 2, No.2, Page No.: 28- 36.
5. Dr. V Kalaichelvi, Dr. R Karthikeyan, D Sivakumar, "Analysis of Gas metal arc welding process using GA tuned Fuzzy Rule Based System", *International journal of Intelligent and Fuzzy Systems* (Accepted for publication).
6. Dr. R Udayakumar and Chandra Bhushan Kasera, "Combustion Analysis of a Diesel Engine Operating With Performance Improvement Additives", *International Refereed Journal of Engineering and Science*, ISSN 2319-1821 Volume 1, Issue 2 , 2012, Page No.: 11-16.

C. Conferences attended/papers presented:

1. Vyas. P and Prof. R K Mittal, "Eliciting additional safety requirements from use cases using SFTA - Recent Advances in Information Technology (RAIT)", 1st International Conference, 15-17 March 2012 .
2. Deepan Kishore Kumar, Dr. Anand Kumar & Prof. R K Mittal, "An Adaptive Curriculum For Higher Education", 4th International Conference on Education and New Learning Technologies, EDULEARN 12, 2-4 July 2012, Barcelona (Spain).

3. Maheshwar Dwivedy and Prof. R K Mittal, "An investigation into e-waste flows in India", online paper, Journal of Cleaner Production, Volume 37, December 2012, Page No.: 229-242.
4. Nand Kumar and Prof. R K Mittal, "Cloud Computing Setup for a Campus Environment", International Conference On Cloud Computing Technologies Application And Management (ICCTAM-12) during 8–10 December 2012, BITS Pilani, Dubai Campus, Dubai.
5. Dr. Anand Kumar and Prof. R K Mittal, "An User-Centric Billing Model for Cloud Computing", International Conference On Cloud Computing Technologies Application And Management (ICCTAM-12) during 8–10 December 2012, BITS Pilani, Dubai Campus, Dubai.
6. Ajith Kumar Vasudevan, Dr. Anand Kumar and Prof. R K Mittal, "Parameters to Diffusion of Cloud Computing in India", International Conference on Public Policy and Governance 2012, , Indian Institute of Science, Bangalore, India, 4-6 September, 2012.
7. Dr. R Udayakumar and Ankit Roongta, "Computer Modelling and Simulation of Diesel Engine Processes", International Conference on Computer application and Technology, Sousse, Tunisia, 20-22 January 2012 (Accepted for presentation).
8. Dr. R Udayakumar and Ramesh Ponnusamy, "Computer aided design and analysis of Disc brake rotors for passenger cars", International Conference on Computer Application and Technology, Sousse, Tunisia, 20-22, January 2012.
9. Dr. A M Surendrakumar and Shylaen Keshwani, "Analysis of Biogas Using Leucaena and Manure as Biomass Source", International Conference on Desalination and Renewable Energy, ICDRE 2012, Paris, France, 27-28 June, 2012.

D. Books Published/Edited during the year: NIL

E. Conferences, seminars & workshops conducted:

1. A one day workshop on Business Process Simulation by Prof. Broca, XLRI, Jamshedpur was conducted on 26.11.12, and the workshop was organized by the Department of Mechanical Engineering.

F. Invited Talks given by BITS faculty:

Dr. R Karthikeyan presented an invited lecture on "Application of design of experiments in materials processing" at American University of Sharjah, UAE in May 2012.

G. Invited talks arranged in the department:

1. Prof. Kuldip Singh Sangwan, HOD, Mechanical Engineering, BITS Pilani, Pilani Campus delivered a talk on "Unconventional manufacturing", on 20 December 2012.
2. Prof. Kuldip Singh Sangwan, HOD, Mechanical Engineering, BITS Pilani, delivered a talk on "Lean and sustainable manufacturing", on 23 December 2012.

H. Awards & Recognitions Won By Faculty & Students

1. Prof. R K Mittal was a member of the Advisory Committee for National Conference on Business Analytics and Business Intelligence (NCBIA), organized by the Institute of Public Enterprise (IPE) held on 6-7 January 2012 at Hyderabad, India.
2. Prof. R K Mittal was a member of the Advisory Board for the Workshop on: "Fatigue, Creep and Fracture analysis of Engineering Materials", organized by Mechanical Engineering Department, BITS Pilani, Pilani Campus during 27-28 February 2012.
3. Dr. A M Surendrakumar was a member in the Scientific Committee and Editorial Review Board, World Academy of Science, Engineering and Technology, WASET from March 2012.
4. Dr. C Perisamy was selected as an editor for the International Journal of Research in Engineering and Technology from May 2012.
5. Dr. R Udaya Kumar was selected and inducted into the editorial board for the International Journal of Physical Sciences and International Journal of Applied Energy from September 2012.
6. Dr. A M Surendrakumar chaired two sessions at the ICDRE 2012: International Conference on Desalination and Renewable Energy held in Paris, France during June 27-28, 2012.
7. Dr. R Karthikeyan Reviewed papers for

- a. International Journal -Composites part B
 - b. International Journal -Measurement & control
 - c. International Journal of Mechanical & Materials Engineering
8. The following nineteen students of 2012 graduating batch have been offered admission at universities mentioned against their names:

S.No.	NAME	UNIVERSITY
1	Abhay Ranganathan	University of Pennsylvania
2	Ankit Roongta	The University of Texas at Dallas
3	Chava Krishna Chaitanya	North Carolina State University
4	Devdatt Maganty	University of Pennsylvania
5	Faraz Ahmad	University of Ottawa
6	Gandhi Nimit Rajesh	Virginia Tech
7	Harish Babu A P	Georgia Institute of Technology
8	Jadhav Nehash Vasant	University of Michigan, Ann Arbor
9	Keshwani Shylaen Salim	University of Pennsylvania
10	Lohith Mohan	Brunel University
11	M R Praveen Kumar	Arizona State University
12	Mario Steve Paul	Herriot Watt University
13	P Anirudh Raju	Rochester Institute of Technology
14	Sanket B Mehta	Imperial College London
15	Saumya Nimesh Lokhandwala	Institut Supérieur de l'Aéronautique et de l'Espace (ISAE)
16	Shinde Suryabhan Ramesh	The University of Warwick
17	Srinivas Sathish Babu Suresh	Texas A&M University, College Station
18	Vikram Badrinarayanan	Herriot Watt University
19	Zubin Leons Puthur	The Robert Gordon University

9. Engineering Students Renewable Energy Competition 2012 (ESREC 2012):

Dr. M V N Sankaram, Associate Professor in Mechanical Engineering represented BITS Pilani, Dubai Campus as a member of steering committee for the third successive year in the Engineering Students Renewable Energy Competition 2012 (ESREC"2012).

10. ASME SPDC District-J Final Results:

All the members of BPDC ASME Student Section successfully completed their visit to Lebanon and won the competitions in spite of many hurdles as this time without filtration at region level (SPDC SEMIFINALS) and all students of this ASME District-J (Middle East, Africa region) participated directly at SPDC finals during 11-13 May 2012 at Beirut, Lebanon, hosted by Lebanese American University. Vidur Khurana, BPDC ASME Student participated and won the first place in the competition "Old guard Oral presentation" in the entire UAE region. He along with other students won the third place in Design Competition in the whole District-J.

11. ASME Leadership Meet at American University in Dubai (AUD):

Dr. M V N Sankaram, Faculty Advisor along with student representatives Anshul Singhal and Ananth Kolladikkal Premanadhan attended ASME student leadership meet held during 20-21 October 2012, conducted by AUD.

I. Faculty Development, International Collaboration & Industry Immersion:

Dr. N K Millerjothi carried out Preliminary Energy Conservation Audit on 4 December 2012 at Al Rawabi Dairy Co LLC, Dubai.

J. Significant new equipments/experimental facility added during the year:

The following were installed and commissioned in the Mechanical Laboratories during 2012.

1. Universal Testing Machine
2. Ultrasonic Flaw Detector
3. Disc Polishing Machine
4. Optical Microscope
5. Hydraulic Press

K. Departmental association/club activities:**(i) ASME Student Chapter****1. First ever American Society of Mechanical Engineers (ASME) Student Professional Development Conference-2012 Final Competition (SPDC) in DUBAI:**

1. Birla Institute of Technology & Science, Pilani, Dubai Campus (BPDC) hosted ASME SPDC-2012 for the Distinct-G (Asia-Pacific) during 7-8 April 2012. In this conference, both the faculty and students from India, Pakistan and Taiwan participated. During these two days, Student design competition, Old Guard Oral Presentation, Poster Presentation and Technical Web Page Design were conducted for the winners in SPDC semifinals conducted in these countries. Prof. R K Mittal, Director, BPDC and Mr. M Riazuddin, Director, ETA-NET attended the Awards Ceremony held on 8 April 2012 and congratulated the winners.
2. **ASME IMPROMPTU Competitions:** Highflyers: Highflyers was an event held by BPDC ASME Student chapter on 15 December 2012 during Technofest. This was a competition testing the design and the performance of the gliders made by about 20 enthusiastic participants.
3. **WEAPONER:** The weaponer event, which was conducted on 16 December 2012 during Technofest-2012 was a huge success and it was aimed at bringing out the best out of future designers. About 5 teams participated to design a weapon which can be used with today's technology and materials.

B4.14.4. Department: Computer Science

Number of faculty members (as on 31st December 2012)

Professors	01
Associate Professors	02
Assistant Professors	03
Senior Lecturers	04
Lecturers	01
Visiting Faculty	-

Head of the Department: Dr. S. Vadivel

Contact details: vadivel@bits-dubai.ac.ae

Number of Ph.D. Scholars: 03

Ph.D. Thesis Submitted during the year: 01

A. Sponsored Research activities:

Total number of Sponsored Projects in the department: *NIL*

B. Publications:

1. Dr. M Madiajagan, "Virtual e-Medi: A cloud based Medical Aid", World Academy of Science, Engineering and Technology, Paris, pISSN 2010-376X, eISSN 2010-3778, Issue 71, November 2012, Page No.: 2141-2145.
2. Dr. M Madiajagan, " ERP on cloud- Implementation strategies and challenges", International Conference on Technologies, Applications and Management (ICCCTAM-12) during 8-10 December 2012.
3. Dr. M Madiajagan, " Security & Privacy Architecture as a Service for Small and Medium Enterprises", International Conference on Technologies, Applications and Management (ICCCTAM-12) during 8-10 December 2012.
4. Dr. M Madiajagan, " Cloud Computing: Exploring security design approaches in Infrastructure as a Service", International Conference on Technologies, Applications and Management (ICCCTAM-12) during 8-10 December 2012.
5. Dr. M Madiajagan, "Qmulus – A Cloud Driven GPS Based Tracking System for Real-Time Traffic Routing", World Academy of Science, Engineering and Technology, Switzerland, 14-16 January 2013.
6. J. Alamelu Mangai, Dipti S Kothari & Dr. V Santhosh Kumar, "A Supervised Discretization Algorithm for Web Page Classification", Proceedings of the 8th International Conference on Innovations in Information Technology, IEEE, Page No.: 226 – 231, March 2012.
7. J. Alamelu Mangai, Dr. V Santhosh Kumar and S Appavu alias Balamurugan, "A Novel Feature Selection Framework for Automatic Web Page Classification", International Journal of Automation and Computing, Springer-Verlag, Vol. 9, No.4, Page No.: 442 – 448, August 2012.
8. J. Alamelu Mangai, Dipti D Kothari and Dr. V Santhosh Kumar," A Novel Approach for Automatic Web Page Classification Using Feature Intervals", International Journal of Computer Science Issues, Vol. 9, Issue 5, No 2, Page No.: 282 – 287, September 2012.
9. Siva Manaswini Malladi, Dr. S Vadivel, "Designing and Deploying a Hospital Management Application in Google Cloud and Performance Study of the application," ICCCTAM-12, 8-10, December 2012 held at BITS Pilani, Dubai Campus, Dubai.
10. Mohit Athani and Dr. S Vadivel," Facial Detection and Recognition on iPhones using Intel OpenCV Library" MobiCONA 2012 - 2nd Annual International Conference on Mobile Communications, Networking and Applications, 18-19 June 2012, held in Singapore.
11. Sandeep Ganapa and Dr. S Vadivel, " Integrating Facebook Platform Features into an Android Application", MobiCONA 2012 - 2nd Annual International Conference on Mobile Communications, Networking and Applications, 18-19 June 2012, held in Singapore.
12. Dr. Sujala D Shetty, Shikhar Shethi, Dr. S Vadivel, "Development of REST Web Service to help organizations promote customer involvement in online corporate social responsibility", International Conference on Technologies, Applications and Management (ICCCTAM-12) during 8-10 December 2012 held at BITS Pilani, Dubai Campus, Dubai.
13. Dr. Sujala D Shetty, Dr. S Vadivel, Nirav Gandhi, "A Cloud enabled online quiz application deployed on Google Cloud", International Conference on Technologies, Applications and Management (ICCCTAM-12) during 8-10 December 2012 held at BITS Pilani, Dubai Campus, Dubai.
14. Ms. S Susila and Dr. S Vadivel," Broker Architecture for web service selection using SOAPUI", International Conference on Technologies, Applications and Management (ICCCTAM-12) during 8-10 December 2012 held at BITS Pilani, Dubai Campus, Dubai.

15. Adithya Mehta, Dr. B Vijayakumar," Implementation of Content Management System for Institution LINUX USERS GROUP using JOOMLA under UBUNTU LINUX" , IN-TECH 2012, ISBN 978-953-6326-77-8, Croatia, 26-28 September 2012.
16. V Varunkumar, Dr. B Vijayakumar," Design and Implementation of Search Algorithm for DNA Sequence Database", IN-TECH 2012 ISBN 978-953-6326-77-8 221-224, Rijeka, Croatia, 26-28 September 2012.
17. Nilaykumar Kiran Sangani, Dr. B Vijayakumar," Cyber Security Scenarios and Control for Small and Medium Enterprises Informatica Economica", Vol. 16, Iss.2, 2012 ISSN 1453-1305, 58-71.
18. Aksheta Mehta, Dr. B Vijayakumar," Implementation of a Prototype Client-Server Model for a Generic Database Application over a Network UACEE Int. Journal of Computer Science and its Applications", Vol. 2, Iss. 3, 2012 ISSN 2250-3765.
19. S Nand Kumar, Prof. R K Mittal," Cloud Computing Setup for a Campus Environment", International Conference on Cloud Computing Technologies, Applications and Management 2012 (ICCCTAM-12), 8-10, December 2012 held at BITS Pilani, Dubai Campus, Dubai.

C. Conferences attended/papers presented:

Dr. Sujala D Shetty presented a paper in Athens, Greece on " A study on security in Cloud computing" at the 6th Annual International Conference on Business and Society in a Global Economy, held between 17- 20 December 2012.

D. Books Published/Edited during the year: NIL

E. Conferences, seminars & workshops conducted: NIL

F. Invited Talks given by BITS faculty: NIL

G. Invited talks arranged in the department:

1. Mr. Martin Mohanty, Vice President - IT at Ultratech Cement Limited, Aditya Birla Group gave a talk on "IT in Supply Chain Management", 8 October 2012.
2. Mr. Siva Gurunathan, nFusion gave a talk on "Starting from Scratch", 1 November 2012.

H. Awards and recognitions won by faculty and students

1. Mr. S Nand Kumar won the award for the best paper among the papers presented in the International Conference on Cloud Computing Technologies, Applications and Management 2012 (ICCCTAM-12), 8-10, December 2012 held at BITS Pilani, Dubai Campus, Dubai.
2. Won prize in software trade show conducted by University of Wollongong, Dubai
3. Mohit Athwani has won the third prize in Software Development Tradeshow 2012 held in Wollongong University, Dubai on 28 May 2012. Three teams from BPDC participated in the above event as given below: 1.Mohit Athwani, "facial detection and recognition on iPhone with blink gestures" 2. Aditya Mehta, "Let Us order", 3. Thomas Binu and Prashant Nair, "Automation of a University Internship Program". Totally 17 teams from various reputed universities all over UAE participated in the above tradeshow. Aditya Mehta's "Let us order" application caught the eye of a BBC (Arabic) producer, who came to cover the event, recorded the demo along with 2 other demos from other universities. The recorded demos will be sent to his office in London for approval to broadcast in a TV show called "4tech" on BBC (Arabic) in near future.
4. The student teams of BITS Pilani, Dubai Campus participated in the Nokia university application challenge held in UAE on 27 May 2012 and won the prize worth of \$10,000-00 US dollars. They were given 2 days intensive training on Nokia platforms for developing applications by eminent developers from Nokia Corporation and given 7 weeks time to develop innovative applications. They rose to the occasion and were able to contribute 11 innovative applications out of total 19 applications from the entire UAE universities. Then after further short listing the top 10 applications done by the top technical team, it was found that the following 4 applications from BPDC were in the shortlisted list.
 1. "Pocket Masjid" by Shamliya Shukkur
 2. "My Metro" by Dhvani Chotalia and Roopal Chouhan

3. "Jobless" submitted by Deepa Devanand

4. "Rage Comics" submitted by Aditya Shankar and Siddhart Swamy

I. Faculty Development, International Collaboration & Industry Immersion: NIL

J. Significant new equipments/experimental facility added during the year:

BPDC entered into MSDN academic alliance with Microsoft at Gulf for another 3 years. Through this alliance the students and faculties in BITS Pilani, Dubai Campus are entitled to use the latest Microsoft software packages which can be used as tools for developing software applications in emerging areas like cloud computing, mobile computing and web applications development.

K. Departmental association/club activities:

Club 1: DotNet club

The DotNet Club ensured that the Microsoft Gulf sponsored the following event called, " Mobile application contest "in the Enginuity programme held during the year 2012. DotNet Club has initiated steps to conduct workshops on emerging Microsoft technologies within the college campus.

B4.14.5 Department: Electronics & Instrumentation Engineering

Number of faculty members (as on 31st December 2012)

Senior Professors, Professors	02
Associate Professors	01
Assistant Professors	02
Lecturers	-
Visiting Faculty	-

Head of the Department: Dr D V PRASAD

Contact details: prasad@bits-dubai.ac.ae

Number of PhD Scholars: NIL

Ph.D. Thesis Submitted during the year: NIL

A. Sponsored Research activities: NIL

B. Publications:

1. Dr. V Kalaichelvi and Ahammed Shamir Ali, "Application of Neural Networks in Character Recognition", International Journal of Computer Applications, Vol.52, No.12, doi:10.5120/8251-1770, Page No.:1-6, 2012.
2. Dr. V Kalaichelvi, Dr. R Karthikeyan, D Sivakumar and V Srinivasan, "Tool Wear Classification Using Fuzzy Logic for Machining of Al/SiC Composite Material", Modeling and Numerical Simulation of Material Science, Vol. 2, No.2, Page No.: 28- 36, doi:10.4236/mnsms.2012.22003, 2012.
3. Dr. V Kalaichelvi, Dr. R Karthikeyan and D Sivakumar, "Analysis of Gas metal arc welding process using GA tuned Fuzzy Rule Based System", International journal of Intelligent and Fuzzy Systems (Accepted for publication).

C. Conferences attended/papers presented:

1. D V Prasad, R Swarnalatha, Natasha Giridhar, "Prediction of Onset of Epileptic Seizure by Analysis of Pre-Ictal State of EEG", International conference on innovative technologies, IN-TECH 2012, Rijeka, September 2012.

2. Aditya Mehta, Dr D V Prasad, "Developing an iOS application for Restaurant Menu Cards, International conference on Innovative Technologies", IN-TECH 2012, Rijeka, September 2012.
3. Deepan Kishore Kumar, Anomitra Banerjee, Dr. S Swaminathan, Mustafa Mahesri, "MEMS Modeling of the Posterior Semicircular Canal for treating Benign Paroxysmal Positional Vertigo", accepted for oral presentation at International Conference of IEEE – NEMS, 7 - 10 April, 2013, China.
4. Niyati Parameswaran, Bharathi Muthu and Dr. S Swaminathan, "Neuro-Nimbuzz – An Epileptic Seizure Prediction and Prevention System using Cloud Deployment and Real-Time Analysis", accepted for oral presentation at the 2013 2nd International Conference on Network and Computer Science (ICNCS 2013), April 1-2, 2013, Singapore.
5. Deepan Kishore Kumar, R Rama Jeyaraj, R R Varun Das and Dr. S Swaminathan, "A simplified Micro Cantilever based Actuator model for the Middle Ear using COMSOL", accepted for presentation at International Conference on Emerging Technologies - Micro to Nano, ETMN-2013, 23-24 Feb. 2013, Goa, India.
6. Seba Sara Varghese, Adarsh Venkataraman Ganesan Dr. S Swaminathan, "A QUCS Model for a MEMS Capacitive Pressure Sensor", accepted for presentation at International Conference on Emerging Technologies - Micro to Nano, ETMN-2013, 23-24 Feb. 2013, Goa, India.
7. Deepan Kishore Kumar, Anomitra Banerjee, Dr. S Swaminathan, Mustafa Mahesri, "MEMS Modelling of the Utricle for studying Benign Paroxysmal Positional Vertigo, accepted for presentation at International Conference on Emerging Technologies - Micro to Nano, ETMN-2013, 23-24 Feb. 2013, Goa, India.
8. Adarsh Venkataraman Ganesan and Dr. S Swaminathan, "Design of MEMS based flow sensor for continuous blood flow monitoring", COMSOL Conference, Bangalore, India, Nov 1-2, 2012.
9. Adarsh Venkataraman Ganesan, Dr. S Swaminathan and N N Sharma, "A Low Cost CMOS Compatible MEMS based Fingerprint Sensor Design", COMSOL Conference, Bangalore, India, Nov 1-2, 2012.
10. Dr. S Swaminathan and Seba Sara Varghese, "Modeling of Lateral Comb-drive Actuator using Open Source Circuit Simulator QUCS", International Conference on Automation, Robotics and Mechatronics (ICARM), Florence, Italy, February 28 – 29 2012.
11. Anant Mithal and Dr. S Swaminathan, "Application of Microcontroller in Glucose Sensing and Control" International Conference on Biomedical Science and Engineering, Madrid, Spain, March 2012.

D. Books Published/Edited during the year: NIL

E. Conferences, seminars & workshops conducted: NIL

F. Invited Talks given by BITS faculty: NIL

G. Invited talks arranged in the department: NIL

H. Awards and recognitions won by faculty and students:

The following have taken up jobs:

S. No.	Name	Name of the Company
1	Aadersh Sathyan Kizhakkidath	JBK Controls International FZE, Dubai, UAE
2	Aliasgar Sirajbhai Kagalwala	L&T - Electrical & Automation FZE, Dubai, UAE
3	Ayan Soni	Barnard Controls, Dubai, UAE
4	Bhansali Dhruva Nilesh	JBK Controls International FZE, Dubai, UAE
5	Dipti Dhope	ICAPL, Mumbai, India

6	Divya Kumar Sharma	Emirates Industrial Gas Co. LLC, Dubai, UAE
7	Divyanshu Kathuria	Orion Global FZC, Dubai, UAE
8	Mrinalini Govindankutty Menon	ABB Industries, Dubai, UAE
9	Saxena Kriti Rajeev	L&T - Electrical & Automation FZE, Dubai, UAE

The following students have been offered admission in the universities mentioned against their names.

S. No.	Name	Name of College/ University
1	Princy Kamalesh Jain	Imperial College, London
2	Natasha Giridhar	SP Jain center for Management , Dubai

I. Faculty Development, International Collaboration & Industry Immersion: NIL

J. Significant new equipments/experimental facility added during the year: NIL

K. Departmental association/club activities: NIL

B4.14.6 Department: Biotechnology

Number of faculty members (as on 31st December 2011)

Senior Professors, Professors	01
Associate Professors	01
Assistant Professors	02
Lecturers	-
Visiting Faculty	-

Head of the Department: Dr. Neeru Sood

Contact details: *sood@bits-dubai.ac.ae*

Number of PhD Scholars: 01

A. Sponsored Research activities: NIL

B. Publications:

1. Dr. Trupti Gokhale, A Wali, Parikh S & Dr. Neeru Sood, "Research of marine isolates in development of Biosensors for environmental pollutants", Engineering Review, Vol. 32, Issue 1, Page No.: 17- 22, 2012.

C. Conferences attended/papers presented:

1. Kiran Menon presented a paper on "Cloud computing: Applications in biological research and future prospects," International Conference on Cloud Computing Technologies, Applications and Management (ICCCTAM-12), December 8-10, 2012, BITS Pilani, Dubai Campus, Dubai, UAE.
2. Arpita Neogi, Dr. D J Shariff, "Assessment of genetic counseling understanding at the preconception stage in UAE and India", Human Genome Meeting, March 2012, Sydney, Australia.
3. Arpita Neogi, Aishwarya & Dr. D J Shariff, "Attitudes and Practices of an undergraduate population from India", 62nd American Society of Human Genetics Annual Meeting, San Francisco, November 6-10, 2012.

D. Books Published/Edited during the year: NIL**E. Conferences, seminars & workshops conducted: NIL****F. Invited Talks given by BITS faculty: NIL****G. Invited talks arranged in the department:**

There has been a MoU between BITS Pilani- Dubai Campus and USUHS, Maryland since February 2011. As a part of the inter-university program, Prof. R K Maheshwari (Coordinator, Indo-USUHS activities) visited the Dubai Campus during 16 - 26 December 2012 and he delivered 7 lectures. These lectures were attended by students and faculty from all disciplines of BITS Pilani, Dubai campus on the following topics:

1. Overview of 30 years of INDO-USUHS Programs- Presented a summary of prior and existing collaborations of USUHS with Indian institutes such as Central Drug Research Institute (CDRI), Lucknow, BITS Pilani and Indian Toxicology Research Centre (ITRC) with an idea of faculty and student exchange program in future.
2. Development of second generation viral vaccines- Gave an informative talk on the current direction of vaccine development and the on-going projects (such as INA inactivation and inactivation by irradiation) in this area at the USUHS laboratories.
3. Antimalarials, Co-Infections and Environmental Agents Increase Disease severity: Implication in Public Health- Spoke about the paradoxical effects of some medicines such as chloroquine and tunicamycin in aiding viral infections, increasing disease severity and attenuating the effect of interferon therapy followed by a discussion about the significance of these findings in terms of public health and future scope for research in the area.
4. Micro RNA as Diagnostic Biomarkers in Traumatic brain injury- An introduction to the importance of microRNAs in research and diagnostics in present day followed by an overview of the ongoing project at USUHS to identify microRNA biomarkers of traumatic brain injury.
5. Role of angiogenesis in wound healing and cancer- The importance of angiogenesis, inhibiting angiogenesis in case of cancer and promoting it for wound healing. Also the effect of natural extracts such as Curcumin, Green tea polyphenols and Brahmarasayana on the molecular mechanisms of angiogenesis were discussed.
6. Antiviral interferon mechanisms against enveloped viruses including HIV.
7. Grant and paper writing- The most important points to keep in mind when writing grant applications, white papers and scientific papers were discussed. Also briefed the step-by-step process of applying, possibilities of funding, areas to focus on, etc. This lecture was attended by faculty and research scholars of all disciplines.

H. Awards and recognitions won by faculty and students:

1. Jyotsna Kumar, Manisha Ramaseshan, Arjun Thomas and Surya R Chockalingam, won the best idea prize for their paper on "Biomass based renewable energy resources and energy conservation strategies in UAE", 3rd Engineering Students Renewable Energy Competition (ESREC2012), 5 May 2012, UAE University, Al Ain, UAE.
2. Arpita Neogi received a tuition scholarship of 30,000 USD (for one year) from University of California, Irvine for Masters Program in Genetic Counseling.
3. The following students were offered admission at universities mentioned against their names for a higher degree program.

S.No.	Name	Name of College/ University	Program
1	Balasubramani Madhumitha	Kings College, London	M. Sc. Forensic Science
2	Jyotsna Lakshmi Kumar	Drexel School of Biomedical Engineering, Sciences and Health Systems, Philadelphia, USA	Masters Biomedical Science
3	Shruthi George	University of Bedfordshire, UK	M. Sc. Biomedical Engineering

S.No.	Name	Name of College/ University	Program
4	Arpita Neogi	University of California, Irvine, California ,USA	M. Sc. Genetic Counseling Student and Intern
5.	Manisha Ramaseshan	SRM University, Chennai, India	Masters in Genetic Engineering

The following students were working in industries as mentioned:

S.No.	Name	Name of Company	Designation
1	Ketul Sanghvi	Affluence Commodities Pvt. Ltd, Gujarat , India	Technical Analyst in Agri-commodities
2	Ankita Das	Sanbook Quality Consultancy, Quisais Industrial Area 3, Dubai, UAE	Marketing Engineer and Consultant
3	Farha Khatoon	ETA Ascon, Dubai, UAE	Project Trainee
4.	Mohammad Nawaz Baig	Life Cell Arabia FZ LLC, Dubai,UAE	Relationship Executive
5.	Shahil Kandathil Padappilakath	Life Cell Arabia FZ LLC, Sharjah, UAE	Relationship Executive
6.	Johny Johnson	Al Zahrawi -Molecular biology Division, Abu Dhabi, UAE	Product Specialist
7.	Apeksha Asthana	Piramal Healthcare, Mumbai, India	Senior executive
8	K T T Arjun	Geo Chem, Dubai, UAE	Microbiologist
9.	Reshma Ahmed Thakur	Sanbook Technical Consultancy Center, Qatar	Health and Safety Consultant
10.	Aishwarya Mahesh	Dubaioimics, Dubai, UAE	Literature Researcher

I. Faculty Development, International Collaboration & Industry Immersion:

- MoU Renewal with ICBA on 29 November 2012:** Both the Institutes will venture into collaborative research in the areas of mutual interest. The laboratory facilities and fields at the two Institutions will be shared for joint projects and collaborative research. Ph.D. students at either of the Institutions can be guided by BPDC faculty and ICBA scientists jointly as Supervisor and Co-supervisor. BPDC will provide opportunities for staff of ICBA to pursue their higher education and research in the area of Biotechnology, through its M.E. and Ph.D. programmes.
- MoU Signed between RAKMHSU and BPDC on 19 December 2012:** Both the institutions would facilitate training for specific periods of each others' students in their related institutions / organizations / hospitals etc. which may include practical training in the areas of
 - Medical microbiology and Pathology
 - Biopharmaceuticals /Pharmaceutical biotechnology
 - Bioactive compounds- laboratory analytical studies
 - Health care and diagnostics.

J. Significant new equipments/experimental facility added during the year: NIL

K. Departmental association/club activities: NIL

B4.14.7 Department: General Sciences (Mathematics and Science Group)Number of faculty members (as on 31st December 2012)

Senior Professors, Professors	03
Associate Professors	08
Assistant Professors	06
Lecturers	01
Visiting Faculty	-

Head of the Department: Prof. Dr. R. Roop Kumar**Contact details:** roopkumar@bits-dubai.ac.ae**Number of PhD Scholars:** 01**Ph.D. Thesis Submitted during the year:** Nil**A. Sponsored Research activities:**Total number of Sponsored Projects in the department: *NIL***B. Publications:**

1. Suhel Ahmad Khan and Byung Soo Lee, Vector implicit quasi complementarity problems; Arab Journal of Mathematical Sciences dx.doi.org/10.1016/j.ajmsc. 2012. 08.001 (sciencedirect.com)(In Press).
2. Suhel Ahmad Khan, Q H Khan and Farhat S, Generalized Vector Mixed Variational-Like Inequality Problem Without Monotonicity; Thai Journal of Mathematics ,Volume 10 (2012) Number 2 : 245–258.
3. Dr. S Laya and Dr. B Muralidharan, "A study on the Impact of Non-aqueous Solvent Mixtures on the Crystallinity of Polyester/Cotton Composite Fibre", International proceedings of Chemical, Biological & Environmental Engineering Vol.38 pp. 51-57, ISBN 978-981-07-2124-4, ISSN: 2010-4618, 2012.
4. Rusal R Francis and M. A. Neelakantan, "A Brief Review of Interaction of Schiff base Complexes with DNA-A Perceptive to Anti Cancer Agents", In Press, Current Trends in Clinical Research, December 2012.
5. S Kavitha and E Thandapani, "Oscillation criteria for second-order nonlinear neutral difference equations of mixed type", Advances in Difference Equations, 2012:4 (2012), 1-15.
6. S Kavitha and E Thandapani, "Comparison and oscillation criteria for second order nonlinear neutral difference equation of mixed type, Dynamic Systems and Application", 21 (2012), 83-92.
7. S Kavitha and E Thandapani, "Oscillatory behavior of solutions of certain third order mixed neutral difference equations", Acta Mathematica Scientia (accepted).

C. Conferences attended/papers presented:

1. Dr. B Muralidharan & Dr. S Laya, "An Investigation on the impact of azeotropic solvent mixture pretreatment on the fibre composite of a natural and synthetic origin", S--Polymat 2012, organized by European Polymer Federation , Kerkrade, The Netherlands, May 20-23, 2012.
2. Dr. S Laya & Dr. B Muralidharan "A study on the physico-chemical modification of polyethylene terephthalate fabric", S-Polymat 2012, organized by European Polymer Federation , Kerkrade, The Netherlands, May 20-23, 2012.

3. Dr. S Laya & Dr. B Muralidharan, "A study on the Impact of Non-aqueous Solvent Mixtures on the Crystallinity of Polyester/Cotton Composite Fibre", International Conference on Chemistry and Chemical Engineering- ICEEE 2012, Jeju Island, South Korea, June 29-30, 2012.
4. Dr. S Karthiyayini, Fouzan Abbas Thakur and Gourav Sehgal "Theoretical Investigation of Ultrasonic Velocity of Nanomaterials from Mechanical Properties", 4th International Conference of Solid State Science and Technology, ICSSST2012, 18 – 20 December 2012 , Holiday Inn Malacca, Malaysia.
5. Rusal R. Francis, "Reliability of Cloud Computing In Quantum Chemistry Calculations", International Conference on Cloud Computing Technologies, Applications and Management (ICCTAM-12), BITS Pilani, Dubai Campus, 8-10, December 2012.
6. Rusal R. Francis, "Synthesis, Spectral, Electrochemical and Biological Studies of VO(II) Schiff Base Complexes", World Academy of Science, Engineering and Technology, Paris, April 25-26, 2012.
7. Rusal R. Francis, "Spectral and DNA binding studies of Cu(II)-OVTRY and Cu(II)-OVTRY-1,10-PHEN complexes", DRDO sponsored National Level Workshop on Recent Trends in Inorganic Materials, National Engineering College, Kovilpatti, Tamilnadu, India, March 9 & 10 2012.
8. Dr. R Roop Kumar, Chockalingam Surya, "Development of bioactive coatings of HA-G-Ti composites for in vivo studies", Innovations of Biomedical Materials 2012 Conference, 10-13 September, 2012, North Carolina, USA.
9. Dr. Maneesha Bhagchandani and Dr. Priti Bajpai, "A Study of Traffic Management at Toll Plaza on Delhi Gurgaon Expressway", 2nd International Conference on Mathematical Sciences and Applications (ICMSA-2012), New Delhi, 15-16 December 2012, to be published in American Journal of Mathematics and Sciences, Vol 2, Number 1, January 2013.
10. Dr. Priti Bajpai and Dr. Maneesha Bhagchandani, "A Study of Clinic for Public Sector Bank's staff and Family", International Conference: Mathematical Science and Applications, 26 – 31 December, 2012, Abu Dhabi University, UAE.
11. Dr. K K Singh and Dr. S Karthiyayini, "Longitudinal Structure Function of nucleon Using Thermodynamical Bag Model", International Conference on High Energy Physics 2012, University of Melbourne, Australia, 4-11 July 2012.
12. Dr Shashi Bhushan, Dr. Maneesha Bhagchandani & Dr. R Karan Singh, "On Unbiased Jack-Knifed Regression Type Estimator of Finite Population Mean", National Conference on Statistical Inference, Sampling Techniques & Related Areas, Aligarh Muslim University, 11-12 February 2012.
13. Dr Shashi Bhushan, Dr. Maneesha Bhagchandani & Dr. R Karan Singh, "An Efficient Jack-Knifed Regression Type Estimator for Finite Population Mean", National Seminar on New Dimensions in Statistics: Concepts & Issues (NDSCI-2012), Banaras Hindu University, Varanasi, 2-4 March, 2012.

D. Books Published/Edited during the year: NIL

E. Conferences, seminars & workshops conducted: NIL

F. Invited Talks given by BITS faculty:

Dr. B Muralidharan presented an invited talk on "Chemistry in Alan Turing's -The Chemical Basis of Morphogenesis", International Workshop hosted by UAE University, Al Ain on 27 February 2012.

G. Invited talks arranged in the department: NIL

H. Awards and recognitions won by faculty and students: NIL

I. Faculty Development, International Collaboration & Industry Immersion: NIL

J. Significant new equipments/experimental facility added during the year: NIL

K. Departmental association/club activities:

- (i) Inter College Quiz Competition at Technofest 2012, 15-16 December 2012.
- (ii) Astroclub – Star gazing activity was conducted in the month of September and November 2012.

B4.14.8. Department: Humanities & Social Sciences

Number of faculty members (as on 31 December 2012)

Senior Professors, Professors	01
Associate Professors	02
Assistant Professors	01
Senior Lecturers	02
Lecturers	01
Visiting Faculty	-

Head of the Department: Dr. Shazi Shah Jabeen**Contact details:** shazi@bits-dubai.ac.ae**Number of PhD Scholars:** NIL**Ph.D. Thesis Submitted during the year:** NIL**A. Sponsored Research activities:** NIL**B. Publications:**

1. R Aqila and Zafar Alam. "Islamic Banks and Conventional Banks in the UAE Before and After Recession", International Journal of Financial Management (IJFM), 1(1), 70-79, 2012.
2. Dr. A S Rao, "Problem to Opportunity – The Journey of Irshikaahues". International Journal of Innovations in Business, Vol.1, No.2, August 2012.
3. Aksheta Mehta and Pushkala Muralidharan, "Creating a Web-based Model for Financial Planning and Forecasting", UACEE International Journal of Computer Science and Its Applications (ISSN 2250-3765), Vol. 2, Issue 3, December 2012, Page No.: 370-374.
4. Dr Tanmay Panda and Yadav Priyanka Teja, "Study of Shoppers" Attitude towards Private Labels in Dubai", International Journal of Research in Computer Application & Management (IJRCM), Vol. 2(2012), Issue No. 06 (June), ISSN 2231-1009, Page No.: 8-14, 2012.

C. Conferences attended/papers presented:

1. Mubeena Rahman, "Communication in the Hospitality Industry: A Case Study of Dubai", Proceedings of the 2nd Interdisciplinary Tourism Research Conference, Fethiye, Turkey; 24-29 April 2012.
2. Saru Saseedharan and Pushkala Muralidharan, "Information and Communication Technology in 3PL Organizations" Proceedings of International Conference on Innovative Technologies IN-TECH 2012 (ISBN 978-953-6326-77-8) Rijeka, Croatia, 26-28 September 2012 page no.: 251-255.
3. Phani Teja Marpaka and Pushkala Muralidharan, "A Study of Successful CSR Practices of Industry Leaders", Proceedings of International Conference on Business Management & Information Systems 2012 (ISBN: 978-93-82563-39-6) Singapore, 22-24 November 2012, page no.: 528-534.

D. Books Published/Edited during the year:

Two issues of the in-house publications of Dubai Campus were released during the year.

- (i) @bitsdubai (Institute's newsletter) - Volume 9 Issue 1 (2011-2012)
- (ii) Perspectives @bitsdubai (Institute's journal) - Volume 1 Issue 2 (2011-2012)

E. Conferences, seminars & workshops conducted: NIL**F. Invited Talks given by BITS faculty:**

Dr. Tanmay Panda conducted a workshop on "To be a Contributing Employee" for the DCE Club Members at Bank of Baroda/ India Club on 6 March 2012.

G. Invited talks arranged in the department:

- i. Mr. Yogesh Bakshi, General Manager, Al Tajir Glass Company gave a talk on "My Corporate Journey", on 8 November 2012.
- ii. Mr. Nilesh Sarkar, Manager - Learning & Development, Bank, Muscat gave a talk on "Let's Talk Money – A Key To Personal Finance", on 28 November 2012.

H. Awards and recognitions won by faculty and students:

1. The Tessaract team consisting of 4 students - Anish Agarwal, Gautam Nagarajan, Gautham Badhrinathan, Sarthak Garg mentored by Ms. Pushkala Muralidharan from BITS Pilani, Dubai Campus was shortlisted to compete in the Middle East Regional Finals of CIMA Global Business Challenge 2012. They were placed fourth in the Middle East finals that took place on May 31, 2012 in Dubai.

I. Faculty Development, International Collaboration & Industry Immersion: NIL**J. Significant new equipments/experimental facility added during the year: NIL****K. Departmental association/club activities:****a) Business Leadership Challenge:**

The BLC was organized as a two-day program during Technofest 2012. The students participated in teams of twos and threes. A total of 28 students participated in 11 teams and were tested for their business aptitude by five events. Each team was assigned a Fortune 500 company such as Boeing, Apple Inc, Microsoft, Infosys and others. The events like Office Tiff Not Anymore?, Game of Brands, Going..Going..Gone!, The Garage Sale, Business Leadership Panel etc. were held.

b) Expressions:

1. The Inter Year Debate is one of the most popular events hosted by Expressions that gives all the participants an opportunity to compete for supremacy over the other years and to hone their debating skills. This year witnessed unprecedented participation and after a rigorous audition process, the number of participants was narrowed down to 3 per team i.e., the introduction, rebuttal and conclusion speakers. The third year team secured 1st place. Omar Sultan of first year won the award for the best speaker.
2. The Canadian University Story Writing Competition was conducted by the Canadian University of Dubai in the month of November, 2012. The story needed to have one hundred words and had to be submitted by electronic mail to the event coordinator at the Canadian University of Dubai. The stories were first subjected to internal judging. The stories shortlisted during internal judging were then judged by an external panel to select the winners. Mohamed Atyab of BITS Pilani, Dubai Campus won the 2nd Place in University Category.
3. The 9th American University of Sharjah Debating Championship was conducted in the month of November and December 2012. Two teams of four members each represented BITS Pilani, Dubai Campus. The debates were conducted in the British Parliamentary format and were judged by staff of various colleges and members of Toastmaster International. The finals and the award ceremony was held on the 13th of December 2012. The BPDC Team 2 comprising of Mohamed Atyab, Arush Gupta, Aseem Prashar and Rahul Philip won the Runners Up award. BITS Pilani Dubai Campus won the Best Spirited College Award. Niyati Parameswaran won the overall tournament Best Speaker award. Omar Sultan, Niyati Parameswaran and Rahul Philip won individual best speaker award for Round 1, Round 2 and the Semi-finals respectively.
4. Just a Minute (JAM) was conducted by Expressions on 12 December 2012. The competition had 17 participants from all years. All participants were required to think quickly and speak without any grammatical errors or pauses. There were several rounds which were held to

test the enunciation of the participants. JAM required the participants to be constantly on the alert, being creative and using their language to the best of their ability else they would be jammed. The First place was awarded to Pavit Ramesh of first year.

5. Pass the Buck was a Writing Relay conducted by the Literary Section of Expressions on 12 December 2012 which tested team work and literary skill amongst the participants. Students had to register in teams of 3. The 1st member of every team was provided with the 1st line of the story. The other team members had to work towards completing the story, keeping their work coherent and distinct while also attempting to decipher possible hints their fellow teammate(s) had left in the concluding sentence. The event was held during Technofest. The first place was secured by Suhan Attavar, Syed Aamir and Kevin Raj. The second place was secured by Akshat Gaur, Ananth Prem and Sai Harish.
6. The Talking Heads was a 2 member debate conducted by Expressions on 12 December 2012. The topic for the debate was decided before the event. One member of the team spoke for the motion and the other against the motion. Participants prepared speeches for over 2-3 minutes and then faced a 1 minute rebuttal. No counter questions were allowed and the validity and accuracy of every reply to every question was judged by the judges. Criteria for judging the teams included the average performance of both speakers. Speakers were judged individually as well as part of the team. The results were:
 Best Team: Shared by Rahul Philip & Shreyas Jaikhani and Mir Anwar Ali & Shaikh Saif
 Runner's Up: Eliath Fernandes and Jonathan Justin
 Best Speaker: Shaikh Saif
 Best Speaker: Aakash Gopal
7. MUN was conducted by Expressions on 12 December 2012 to highlight its functioning. The General Assembly was depicted and students were allotted different countries. Each student was required to speak, answer questions and present his papers to the panel. The general assembly discussed about combating terrorism and how to bring about nuclear disarmament. Ishani Prajapati won the best speaker award and Nilay Doshi won the best paper award.
8. Crossfire was conducted by Skyline University, Dubai on 5 March, 2012. Two teams of four members each represented our college. Each team consisted of one speaker and three researchers. BPDC was placed 2nd in the Debate. They were awarded with the Runner's up cup. Fahad Khan won the Best speaker award.

B4.15 DIVISION/ UNIT/ CENTERWISE ACTIVITY HIGHLIGHTS

B4.15.1 Research & Consultancy

Ph.D. Thesis Submitted and Under Process of Evaluation

S.No.	Name	Title
1	Mubeena Rahaman	Significance of Written English in Business Communication: An Analytical Study with Reference to Star Hotels
2	K. Jeyalatha	Design, Analysis and Implementation of Algorithms for Web Mining Support Functions

Research Contributions through Higher Degree Dissertations:

First batch of M.E and MBA students who were admitted at Dubai Campus during Second Semester of 2010-11 carried out a total of 44 Dissertation Projects over a period from June 2012 to December 2012; out of which 17 were carried out during Summer Term of Academic Year 2011-12; 18 were carried out during I Semester of Academic Year 2012-13 and 9 were carried out during both Summer Term of Academic Year 2011-12 and I sem. of Academic Year 2012-13. The list is given in Annexure B4-13.

Research Contributions through First Degree Theses:

A total of 51 students completed their first-degree theses during both the semesters of the calendar year 2012. The thesis course is a one-semester course and a student is involved full time for this research involvement. Besides faculty members of the Institute, scientists from R & D labs and other professionals also supervise the thesis work. The complete list is given in Annexure B4-14.

Research Publications by Faculty, Staff and Students:

There were a total of 68 contributions which include 22 in various international Journals and 46 in various Conferences. The complete list of research contributions made by the faculty, staff and students is given in Annexures B4-11 and B4-12.

Some Note-worthy Achievements:

1. Prof. R K Mittal, Director, BITS Pilani, Dubai Campus was a member of the Advisory Committee for "National Conference on Business Analytics and Business Intelligence" (NCBIA) , organized by "The Institute of Public Enterprise (IPE) held on 6-7 January 2012 at Hyderabad, India.
2. Prof. R K Mittal, Director, BITS Pilani, Dubai Campus was a member of the Advisory Board for the Workshop on: "Fatigue, Creep and Fracture analysis of Engineering Materials", organized by Mechanical Engineering Department, BITS Pilani, Pilani campus, during 27-28 February 2012.
3. Prof. R K Mittal, Director, BITS Pilani, Dubai Campus was Patron and Program Chair for International Conference on Cloud Computing Technologies, Applications and Management (ICCCTAM) held during 8-10 December 2012 held at BITS Pilani, Dubai Campus.
4. Dr. Anand Kumar, Associate Professor was Program Co-Chair for the International Conference on Cloud Computing Technologies, Applications and Management (ICCCTAM) held during 8-10 December 2012 held at BITS Pilani, Dubai Campus.
5. Prof. Dr. Vijaya Gunturu, Dean Research and Consultancy of BITS Pilani, Dubai Campus nominated as the Chairman, Publications IEEE UAE Section during February, 2012.
6. Institute received approvals from BITS Senate and the Knowledge and Human Development Authority (KHDA), Government of Dubai, Dubai to commence the Ph.D. Programme.

Consultancy:

1. Dr. N K Miller Jyothi carried out a preliminary Energy Conservation Audit on 4 December 2012 at Al Rawabi Dairy Co. LLC, Dubai.
2. **Refurbishing of Entertainment Robot of Lamcy Plaza, Dubai:** Mr. Parthasarathy, the Maintenance Manager, Lamcy Plaza approached BITS Pilani, Dubai Campus for repair of a 13 year old Roll Around Robot which they purchased from USA. By reverse engineering the robot, the same was repaired by Keerthi, a student of BPDC, in the absence of Robot's design documentation. The solution offered for the Robot's head movements include replacement of an optical encoder and microcontroller board designed around Arduino chip. Currently the students are working on fixing certain other minor problems upon returning the Robot to Lamcy Plaza for testing.
3. Redesigning of cable pulling wrench for Elfit Arabia, Ajman, UAE

B4. 15.2 Professional Body Activities

1. IEEE Student Branch

- a. **Technical Talk by Ms. Karen Bartleson:** The IEEE SB BPDC had the honor of hosting an invited talk by the Senior Director, Community Marketing, Synopsis USA and the 2013 President Elect, IEEE Standards Association: Ms. Karen Bartleson on (i) the Synopsis University Program and (ii) Global Standards on 20 November 2012. She was the recipient of Marie R Pistilli Women in Design Automation Award in 2003. She also authored "The Ten Commandments for Effective Standards" published in 2003. During her visit, Ms. Karen interacted with Deans, Faculties and IEEE volunteers. Ms. Karen spoke, as part of talk, on (i) Synopsis University Program and (ii) Global Standards through an interesting power-point presentation followed by interactive discussions with the faculty and student of BITS. She did explain about Synopsis University Program tools, packages and curriculum. During the second session she impressed all on the importance of standards in our day-to-day lives and encouraged to be more familiar with standards while enlightening the audience with the Modern Standards Paradigms. Her fluency of thought provoking convictions, confidence, and content won everyone in the audience. BITS Pilani, Dubai Campus had the privilege of having a very distinguished & very supportive BITS Alumnus: Mr. Subash Thakkar, M.D. Scan Technologies, Dubai, as

Guest of Honour during the event. The lecture concluded by the Director Prof. R K Mittal, expressing his gratitude by presenting a memento as a token of appreciation to Ms. Karen. Ms. Karen highly appreciated the excellence and the standard BITS Pilani, Dubai Campus set in both academic and co/extra-curricular spheres.

- b. Ms. Sree Geethi, an IEEE Student Member got nominated as the Chair Person of the Women in Engineering (WIE) Affinity Group at BITS Pilani, Dubai Campus.
- c. IEEE Student Branch of BITS Pilani, Dubai Campus participated in the 6th edition of the IEEE Xtreme, a 24 hour programming Challenge which commenced on 20 October 2012 and concluded on 21 October 2012. Out of a total of 1941 participated world over, the following four teams from BPDC were only participated from within UAE:(1)Team Electryon: Abhishek Ravichandran, Abishek Krishnamoorthy, Mr.Varun Dubey; (2) Team ASCII Rangers: Yeshasvi Vedula, Gaurav Madan;(3) Team NaN: Gouthaman Kumar,Rahul Philip; (4) Team DARKnight: Ayuch Chordia, Ronak Sumbaly, Dipanshu Gupta; They secured world rankings namely 341, 343, 437 and 935 respectively. In this edition of IEEE Xtreme there were 21 questions with the significantly higher level of difficulty as compared to previous editions and included more programming language tools like C#, Python, Ruby and PHP.
- d. On 1 April 2012, IEEE UAE Section Chair: Engineer Maryam Ali Al Thani congratulated IEEE Student Branch of BITS Pilani Dubai Campus for being “one among the two largest student branches from UAE and listed within Region 8”.
- e. Ms. Mahati Gunturu (2008AAA7201U) represented IEEE Student Branch of BITS Pilani, Dubai Campus & the UAE Section Student Members at the Student Branch Congress (SBC 2012) scheduled during 25-29 July 2012 at Mardid, Spain. She received financial support from IEEE Region-8 SBC fund for her Registration and Accommodation in Mardid, Spain.
- f. Ms. Mahati Gunturu (2008AAA7201U) of BITS Pilani, Dubai Campus received a Richard E. Merwin Scholarship US \$1,450 on 19 December 2012 from the IEEE Computer Society, Washington DC, USA in recognition of her excellent academic achievements, exemplary involvement in student chapter activities and her willingness to act as an IEEE student ambassador.

2. ASME Student Branch

- a. ASME student chapter of Dubai Campus had the privilege of hosting for the first time, the final competitions for the District-G (Asia-Pacific) American Society of Mechanical Engineers (ASME) Student Professional Development Conference (SPDC) 2012 during April 7-8, 2012 in which both faculty and students from ASME Chapters of countries namely India, Pakistan and Taiwan participated. Student Design, Old Guard Oral Presentation, Poster Presentation and Technical Web Page Design are the Competitions held, to name a few. The competitions were judged by Prof. Tariq, Head, Mechanical Engineering, MASDAR, Abu Dhabi, UAE and Mr. Usman, a successful entrepreneur from Pakistan and Prof. R K Mittal, Director, BPDC. Winners of these competitions are those who competed with the other ASME District toppers for the top world ranks at the International Mechanical Engineering Congress-2012 (IMECH-2012) held in November 2012 in TEXAS, USA. During the closing ceremony, Dr. Chih-Hung Li, Director International Affairs, Minghsin University of Science and Technology, Taiwan, Dr. Riffat Asim Pasha, University of Technology Pakistan commended BPDC and its ASME Chapter at BPDC for successfully conducting ASME District G's SPDC 2012. Student Leadership and Business Development Seminars also were held during District-G SPDC 2012 held at Dubai Campus.
- b. BPDC continued its participation in 2012 edition of the Engineering Students Renewable Energy Competition (ESREC) conducted annually by the UAE University to promote application of renewable energy concepts by students through innovative/design projects. The Final year Biotechnology students team consisting of Jyostna Laksmi Kumar, KTT Arjun, Manisha Ramaseshan and Surya R Chockalingam of BITS Pilani, Dubai Campus under the mentorship of Dr. S Ramachandran, Assistant Professor in Biotechnology won the best idea prize at ESREC'2012. This competition was held at UAE University, Al Ain on 5 May 2012, organized by UAE University's Faculty of Engineering. In this competition about 30 teams from various universities and colleges across the UAE. Dr. M V N Sankaram, Associate Professor in Mechanical Engineering represented BITS Pilani,

Dubai Campus as a member of steering committee, nominated by Prof. R K Mittal, Director.

- c. **ASME SPDC District-J Final Results:** The Members of BPDC ASME student chapter successfully attended a region level SPDC semifinals of ASME District-J held during 11-13 May 2012 at Beirut, Lebanon hosted by Lebanese American University and won following competitions, as listed below:
 - (i) Mr. Vidur Khurana, BPDC ASME Student Chair, a fourth year B.E. (Hons.) Mechanical Engineering student competed against twenty participants and secured (a) 1st place in UAE and (b) 5th place in ASME's District-J region at the competition titled: OLD Guard Oral Presentation.
 - (ii) A team of four BPDC students: Mr. Vidur Khurana (Final year Mech. Engg.), Mr. Anant Mithal (Final year EEE), Mr. Nimit Pradhan (Final Year ECE) and Mr. Kanishk Sharan (Final Year CS) having competed with twenty teams across ASME's District-J region, won a US \$150 cash award for the 3rd place secured in the Student Design Competition.
 - d. **ASME Leadership Meet at American University in Dubai (AUD):** Dr. M V N Sankaram, Faculty Advisor along with student representatives Anshul Singhal and Ananth Kolladikkal Premanadhan, all third year Mechanical Engineering students, attended ASME student leadership meet held during 20-21 October 2012, conducted by American University in Dubai (AUD). During the meet Mrs. Marian Heller, Manager, ASME, New York, Mr. Joseph George Saad, student chair, District-J and student representatives from other ASME student sections in the district also participated.
- 3. Linux Users Group (LUG):** Led by the faculty Advisor: Dr. B Vijayakumar with its Core Executive Members Satej Wagle (2009A7TS261U), Manas Jog (2009A7PS156U) and Bharath Kumar R (2010A7PS201U). The LUG has actively organized and collaborated events with other clubs and associations.
- (i) In the 3rd week of February 2012 a small meeting was held for all LUG student members wherein Mr. Manas Jog and Mr. Satej Wagle spoke to a great extent on the uses and benefits of the Linux Operating systems. This meeting showcased the variety of features present in the Ubuntu operating system along with its open source benefits. At the beginning of the First Semester in September 2012, a meeting was held by the Linux Users Group to welcome the incoming batch. This meeting spoke about in great detail about the use of Open source and its benefits.
 - (ii) In the Month of April 2012, the LUG group in collaboration with the Infinite Loop Programming club organized a 3-hour programming competition called "Debuggers Confused". The competition tested the programming language learning skills of all students and was an instant success, attracting over 37 teams (approx 70 students). The LUG members also proactively helped in all the other Technofest and Eginuity events specifically the Paper Presentations.

B4.15.3 Center for Entrepreneurial Leadership (CEL)

Center for Entrepreneurial Leadership (CEL), ranked amongst the top entrepreneurship cells of India and that at Pilani Campus of BITS is a recognized Centre of Excellence by BITS. Continuing with the spirit of inculcating entrepreneurial thinking among Dubai Campus students also, BITS Pilani, Dubai Campus took the initiative of establishing CEL. At Dubai Campus, about 100 students enrolled as members with 7 students on its Executive Board led by its founding President: Mr. Deepan Kishore Kumar (ID No. 2010AAPS068U), a 3rd Year ECE student and Dr. A. Srinivasa Rao, Associate Professor, Management, as the Faculty In-Charge.

The CEL at Dubai Campus was inaugurated on 8 September 2012 by Dr. Kumar Mangalam Birla, Chancellor of BITS Pilani, in the presence of several dignitaries including the Vice Chancellor, BITS Pilani (Rajasthan), India: Prof. B N Jain, and the Director, BITS Pilani, Dubai Campus; Prof. Dr. R K Mittal and Institute officials.

The Table below summarizes the activities held by CEL during the Academic Year 2012:

S. No.	Date	Activity
1	22.05.2012	Lecture by Mr. Phil Bedford, CEO, The Referral Institute on "Entrepreneurial Success : Role of Referrals"
2	01.10.2012	Talk by Dr. Osman Ahmed, SBU Head, Siemens Innovation Centre, Abu Dhabi on 'Innovation & Entrepreneurship'
3	03.10.2012	Interactive session by Col.(Dr.) S.P. Wahi, Chairman and Founder of S.P. Wahi Management and Technology Consultants Pvt. Ltd. On 'Transformational Leadership'
4	09.10.2012	Lecture by Mr. Sajith Ansar, CEO, Idea Spice on 'Entrepreneurial Growth : Success Story'
5	01.11.2012	Talk by Mr. Sivagurunathan Sankaranarayan, a BITS Pilani, Dubai Campus Alumnus on 'Entrepreneurial Journey'
6	28.11.2012	Lecture by Mr. Nilesh Sarkar, Bank of Muscat, Sultanate of Oman on 'Personal Finance'
7	November 2012	3 Teams enrolled from BITS Pilani, Dubai Campus for TiE's International Business Plan competition in association with Rice University in Houston, Texas. One team reached to Finals
8	16.12.2012	A talk on "Entrepreneurial Experiences & Success Stories" by Mr. Prashant Gulati along with the Launch of e-INK, CEL Newsletter by him & Prof. Dr. R K Mittal, Director, BITS Pilani, Dubai Campus

B4.15.4 PRACTICE SCHOOL

Practice School Programme

All first degree students have the option of Practice School. The past statistics show that almost all the students opt for this programme. PS-II was conducted at 76 stations with 242 students and 60 faculty during February – June 2012 and at 40 stations with 144 students and 38 faculty during August 2012-January 2013. PS-I was conducted at 76 stations with 294 students and 28 faculty during June - August 2012.

Categorization of PS stations is given below:

S. No.	Category of Organizations	No. of Organizations	
		PS-II	PS-I
1.	Design, Development, Consultancy and Software Organization.	46	28
2	Trading	05	06
3	Production, Manufacturing and Maintenance	29	34
4	Other	6	8
	Total	81	76

With the present annual PS intake of 680 students, the PS programme covers almost entire eligible student population of the Institute. It is worthy to note that the Practice School operation at the Dubai Campus has been conducted successfully since 2002. The statistical details of the distribution of students and faculty at PS-I stations are given in Annexure B4-15 followed by the details of the Statistics of PS-II are given in Annexure B4-16. The Growth statistics of PS-I, PS-II are given in Annexure B4-17, while facilities available at various PS-II stations are given in Annexure B4-18. The growth of PS stations is depicted in the graph 1.

Following is the breakup of students who were registered in PS-I, PS-II.

PS-I	Summer Term 2012	294
PS-II	II Semester 2011-2012	242
PS-II	I Semester 2012-2013	144
Total		680

PS-II Assignments: Institute's Contribution to Industrial Development

Apart from developing skills in Professional judgement, data-handling, documentation, decision making ability etc. in students, the PS-II assignments also relate to real life problems of the host organisation. PS-II assignments listed in Annexure B4-19 were completed by the students at their respective PS-II stations during the year 2010.

These assignments have been implemented to fulfil the ongoing production, modernization, design, development and research needs of the participating industries; thus, directly contributing to the requirements of industrial R & D.

Stipend

In appreciation of the contribution made by our students towards the professional wellbeing of the organization, a stipend / out of pocket allowance is paid to the students by the organizations. In addition, other facilities like accommodation, subsidized lunch, transportation, insurance, TA & DA, foreign travel expenses are also provided by some of the organizations.

During the year under review, the PS activities grew further with the some new PS II stations (Table1).

Graph 1

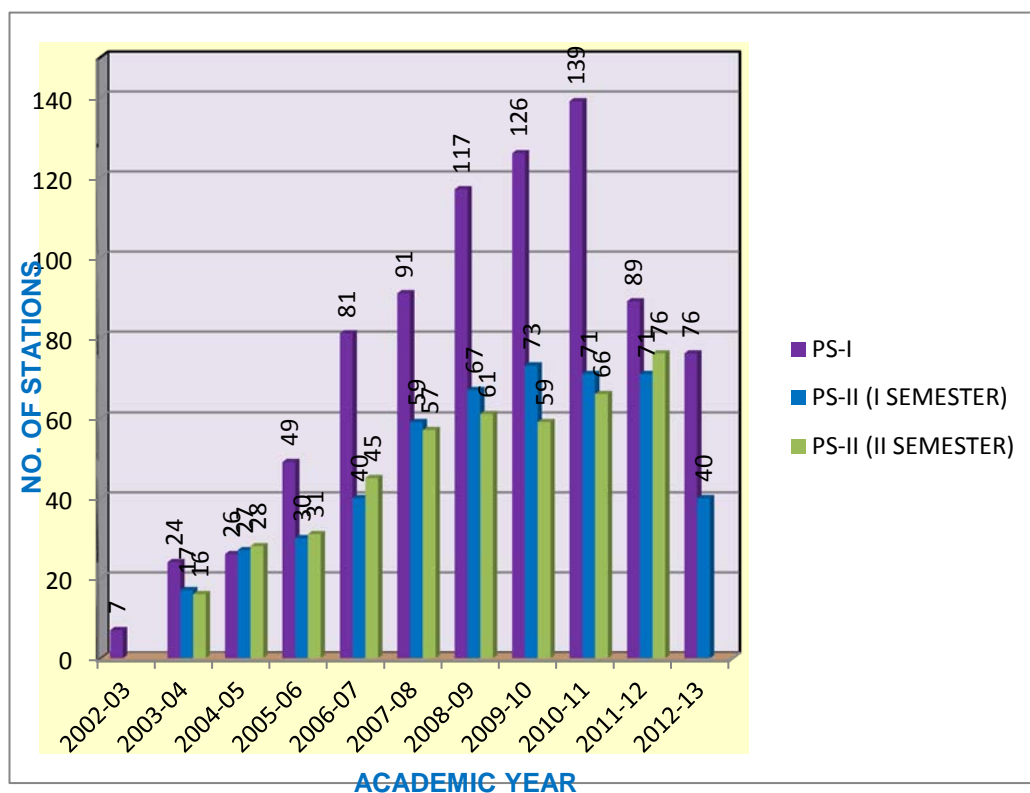


Table1 PS-II Stations Added during the year 2012

Sl. No	PS-II Stations	Monthly stipend/out of pocket allowance in AED
1	3i Infotech Ltd., Dubai, UAE	-
2	AC Neilson & Company, UAE	2000
3	Ashkhar Metals FZE, Sharjah, UAE	1000
4	Azbil Corporation, Dubai, UAE	1000
5	Citibank	1500
6	Doosan Project JBL 'M'	Free Lunch
7	Elcome International	2000
8	Elfit Arabia, Ajman	-
9	Granteq LLC	1000
10	Has Engineering	-
11	Honeywell Middle East Co. Ltd., Abu Dhabi	-
12	Inspectorate	1500
13	Jones Lang LaSalle, Abu Dhabi	4000
14	Maxtouch Computer LLC	1000
15	Microhard Infotech FZ LLC	1000
16	Microsoft	-
17	N Computing, Silicon Valley, USA	US\$ 2500
18	Neo Pharma, Abu Dhabi	-
19	Oriental Dynamic Solutions	750
20	Quality International Co. Ltd. FZC	2000
21	Scientech	1000
22	Sibca Electronics, Abu Dhabi	2000
23	Star Cement LLC, Abu Dhabi	1000
24	TE connectivity	-
25	Teknoware LLC	750
26	Topnet Distribution FZ LLC	1000
27	USUHS, Maryland, USA	-

B4.16 CENTRAL FACILITIES

(i) Central Library

BITS Pilani, Dubai Campus Library, a gateway to knowledge resources, is located in a separate building with two floors and area of about 14,840 sq. ft. It has a contemporary design with reading halls, stacking area, faculty lounge, digital library with 22 computers, internet browsing centre with 22 computers, 50 individual study carrels, and exclusive 8 (ground and first floors) systems for OPAC. It has a seating capacity of more than 300.

The Library remains open from 7.30 AM to 10.00 PM on all working days and 10.00 AM to 10.00 PM on Saturdays. The Library is closed on Fridays and national holidays.

The Library is completely automated using the AUTOLIB Library Management Software and all the resources are bar-coded for quick and easy service to the user community. The Online Public Access Catalogue (OPAC) is accessible across the campus and users can search the resources and check their account.

The mission of the Library is: to collect, organize, preserve and provide access to the information necessary for the institute, to achieve its educational, research and service goals; to improve and enhance access to information in all forms, using innovative technology thereby having a broad based collection, to assist in meeting the needs of students, faculty and staff.

The Library renders standard services such as borrowing / lending, reference, referral services, etc. Library provides photocopy, scanning and printing facilities to the patrons.

Acquisition Section

At present the library has a collection of around 15,000 books. The collection of the library is growing continuously on a regular basis. Around 1,000 new volumes of books were added to the existing collection during the year in major disciplines of engineering and sciences. The new titles include emerging areas like Communication Engineering, Nanotechnology, Artificial Intelligence, Biochemical Engineering, Bioinformatics, Software Engineering, Robotics, Energy Engineering, Data and Web Mining, Business and Management. The Library procures good number of Fictions and General Aptitude books such as TOEFL, GRE, SAT, IELTS. Books on Islam and Arabic are also added every year.

E-resources

- a) The Library subscribes to "IEL Online" IEEE Xplore Digital Library which provides full text access to the world's highest quality technical database in Engineering and Technology. It contains more than 33 lakh full text documents of journals, transactions, and conference proceedings.
- b) The Library provides online access to American Society of Mechanical Engineers (ASME) database which covers 32 online journals and its archives since 2000.
- c) The Library enables an online access to International Telecommunication Union (ITU) database.
- d) The Library has digitized the question papers of all examinations since 2003 and these are available at library home page (<http://bitslib/lib/quest.htm>) through intranet.
- e) The Library subscribes to the following e papers:
 1. Times of India,
 2. Economic Times,
 3. The Hindu.
- f) The Library holds 4000 free e books.

Reference Section

- a) The Library procured latest editions of Encyclopedias, Dictionaries and Hand books on core disciplines of Engineering, Technology, General Sciences and General Knowledge.
- b) The Library subscribes to print version of 12 international journals, 24 magazines and a couple of local newspapers.
- c) The Library has back volumes of about 305 journals which were subscribed since the inception of Dubai Campus.
- d) Library has more than 1100 CD-ROMs on engineering courses and there are 3 computer terminals exclusively meant for the accessing these.
- e) Library has 200 EDD notes which were prepared and published by Education Development Division (EDD) from BITS Pilani, India.
- f) The Library has separate collection of Text Books under Book Bank scheme for the benefit of the students.
- g) The Library has an MOU with the Al Ain University of Science and Technology in UAE for the mutual benefit of both the institutions.
- h) The Library also offers Inter Library Loan (ILL) facilities to the users.

Other Services

- a) The Library has Wi-Fi facility within the library which enables the students to use their laptops for internet browsing / project / thesis work.
- b) The Library provides Selective Dissemination of Information (SDI) and Current Awareness Services (CAS) to the staff and students.

- c) Useful articles, news, newspapers clippings related to education are being displayed on the library notice board for the benefit of students and faculty.
- d) The Library organized a book exhibition during 26 – 30 April 2012 for the benefit of the students and faculty of the Campus.

Facts about the Library

The library collection has grown steadily. Some of the significant statistical data about the library are as follows:

Sl. No.	Items	Total
1	Number of books	15,000
2	Average number of books circulated per day	100
3	Books added during 2011-2012	1075
4	Number of print periodicals subscribed	37
5	Online Databases made available on library site	3
6	CD-ROM collection	1100
7	Total no of back volumes of journals	305

Library Staff Achievements:

1. Dr. N Radhakrishnan, Chief Librarian, BITS Pilani, Dubai Campus was the guide for a Ph. D. thesis on the topic "Impact of E resources among the research scholars of Anna University of Technology, Coimbatore and its affiliated colleges" by Dr. L. Santhi, February 2012.
2. K Manjunatha; K N Sheshadri and D Shivalingaiah, "Research on Consortium and Library Network in India: A Study of Library and Information Science Doctoral Dissertations", International Research: Journal of Library & Information Science, 2(1), Page No.: 116-130, 2012.
3. R Sivakumar, V Geetha and R Senthilkumar presented a paper titled "Information Literacy Programmes in Higher Educational Institutions in UAE to enhance Knowledge – A study" in the International Conference on Knowledge Management and Resource Sharing held at Waljat College of Applied Science, Muscat, Sultanate of Oman during 27-28 February 2012.
4. D Shivalingaiah and K N Sheshadri, "Application of cloud computing for resource sharing among academic libraries", Proceedings of the International Conference on Cloud Computing Technologies, Applications and Management (ICCCTAM – 12) BITS Pilani, Dubai Campus, Dubai, UAE during 8 – 10 December 2012.
5. Dr. N Radhakrishnan, D Ramkumar and N Poorna Selvan, "Utilization of Cloud computing in e learning systems", Proceedings of the International Conference on Cloud Computing Technologies, Applications and Management (ICCCTAM – 12) BITS Pilani, Dubai Campus, Dubai, UAE during 8 – 10 December 2012.

(ii) Infrastructure and Facilities

The campus has world-class, state-of-the-art facilities with well-equipped labs and workshops, separate Library block, Academic Block, Sports Complex, Canteen, Clinic, Gymnasium, etc. The Campus has hostel facility for boy and girl students with single occupancy, centrally air-conditioned furnished rooms and a full-fledged mess which serves both vegetarian and non-vegetarian food. The underground LPG storage tank of 2500Litres capacity was installed to supply LPG supply to the kitchens of the Hostel Mess and the Institute canteen. This facility was commissioned on 16 November 2012 and therefore the usage of LPG cylinders was discontinued in both places. This was done to meet the requirements of Dubai Civil Defense Authorities and to improve the operational economy.

(iii) Laboratories

The Institution's laboratories are of international standards and they have grown from 2 to 27 in the last 10 years, each well-equipped with the latest equipment and machines. The following table gives the discipline wise details of various laboratories:

S. No	Discipline	Laboratory
1.	Biology	Measurement Techniques I (Biology)
2.	Biotechnology	Instrumental Methods of Analysis
3.		Genetic Engineering
4.		Microbiology
5.		Industrial Microbiology
6.	Chemical Engineering	Selected Chemical Engg. Operations
7.		Heat Transfer Operations
8.	Chemistry	Measurement Techniques I (Chemistry)
9.	Computer Science	Computer Programming -I
10.		Computer Programming -II
11.		Microprocessors Programming & Interfacing
12.	Electrical And Electronics	Electro Mechanical Energy Conversion
13.		Digital Electronics And Computer Organization
14.		Analog Electronics
15.		Communication Systems
16.		Measurement Techniques II (EEE)
17.	Electronics And Instrumentation	Process Control
18.		Electronic Instruments & Instrumentation Technology
19.	Mechanical	Workshop Practice
20.		Prime Movers And Fluid Machines
21.		Engineering Graphics
22.		Production Techniques
23.		Computer Aided Design
24.		Transport Phenomena
25.		Measurement Techniques II (Non EEE)
26.	Physics	Measurement Techniques I (Physics)

(iv) Engineering Services

(a) Communication and allied facilities

The following facilities are available for the benefit of students and staff:

1. Telephones

The Panasonic EPABX System TDA 600 is equipped with 640 Extensions and maximum 64 trunk lines, among them 140 extensions and 20 trunk lines are in use and Dialguard V.2.0 (Call Logging & Accounting Software) is being used to monitor and control telephone calls based on extensions.

2. Fax

Separate Fax Machines are available in Boys Hostel and Girls Hostels. Fax Machines are also available in the Director's Office, Admissions, Administration, Accounts and Facilities Department.

3. Internet and Email

Presently the institute has 30 Mbps shared internet leased line connectivity through DU (Service provider) for Email and Internet Facilities. Facilities available through this are Electronic Mail, Remote Login and Internet Browsing. Email and Internet Browsing is made available to all the Faculty and Staff. Admission data has been made available on internet.

4. Campus Network

The computing facilities across the Institute are given Annexure B4-20. The central facilities in the server room are

S.No.	Hardware	QTY	SOFTWARE
	Equipment		
1	Intel Xeon Quad Core E5310 1.60Ghz/1066 Mhz,8MB,IBM 146Gb SFF Non Hot Swap 10K SAS HDD,2Gb(2X1Gb) PC2-5300 667 MHz ECC Chipkill DDR2,Qlogic 4Gb SFF Fibre Channel Expansion Card for IBM eServer Blade Center	2	Windows Server 2003 R2-Enterprise x64 edition, Domain Controllers
2	Intel Xeon Quad Core E5310 1.60Ghz/1066 Mhz,8MB L2,2X1GB Chipkill, O/Bay SAS,2Gb(2X2Gb) PC2-5300 667 MHz ECC Chipkill DDR2,IBM 146Gb SFF Non Hot Swap 10K SAS HDD FBDIMM,4gb SFF Fibre Channel Expansion card for IBM eServer Bladecenter	3	Windows Server 2003 R2-Enterprise x64 edition, Microsoft Exchange 2007 (HT,CA and MB)
3	Intel Xeon Quad Core E5420 80W 2.50GHZ/133Mhz/12Mb L2,2X1Gb chk, O/Bay SAS,2Gb(2X1Gb) PC2-5300 667 MHz ECC Chipkill DDR2 FBDIMM,IBM 146Gb SFF Non Hot Swap 10K SAS HDD	3	Windows Server 2008 Enterprise, DNS,DHCP
4	Intel Xeon Quad Core E5310 1.60Ghz/1066 Mhz,8MB,IBM 146Gb SFF Non Hot Swap 10K SAS HDD,2Gb(2X1Gb) PC2-5300 667 MHz ECC Chipkill DDR2,Qlogic 4Gb SFF Fibre Channel Expansion Card for IBM eServer Blade Center	1	Windows Server 2008 R2-Enterprise x64 edition, Exchange Server 2010 TEST
5	Intel Xeon Quad Core E5310 1.60Ghz/1066 Mhz,8MB,IBM 146Gb SFF Non Hot Swap 10K SAS HDD,2Gb(2X1Gb) PC2-5300 667 MHz ECC Chipkill DDR2,Qlogic 4Gb SFF Fibre Channel Expansion Card for IBM eServer Blade Center	1	Windows Server 2003 R2-Enterprise x64 edition, Mathworks-Matlab
6	3.06Ghz P4 Intel Xeon Processor, 2 GB RAM and 80Gb Hard disk	1	Windows Server 2003-Standard Edition, AutoCAD
7	3.05GhzP4 Intel Xeon Processor,1Gb RAM and 80Gb Hard disk	1	Windows Server 2003-Standard Edition, WEB SERVER
8	3.6GhzP4 Intel Processor, 1.72Gb RAM and 80Gb Hard disk	1	Windows Server 2003-Standard Edition, Catia
9	2.40Ghz P4 Intel Xeon Processor, 1Gb RAM and 80Gb Hard disk	1	Windows Server 2003-Standard Edition, Tally
10	Intel Core 2Ghz,1GB Ram,160Gb HDD	2	Windows Server-2003-Enterprise Edition, App Test & Student Projects
11	Panasonic TDA 620	3	
12	Panasonic TDA 600	1	
13	Panasonic TVM 200	1	
14	TALLY SERVER-ACER, Intel Core 2, 2GB, 1 GB RAM, 150 GB Hard Disk	1	Windows Server 2003-Standard, Tally 9.0

B4.17PROCUREMENT AND MAINTENANCE

Facility Management Department is in-charge of Procurement, Maintenance and modification of the infrastructure and facilities in the campus. Procurement actions are initiated by the FM Department after the approval for the procurement is finalized by the Director with respect to new equipment, spares and consumables and repairs and modifications of the existing equipment. Any modifications to the infrastructure are taken up by FM Department as per the approval of the Director, BITS Pilani, Dubai Campus.

During the year 2012, the following jobs of up-gradation / repairs of the existing facilities were done.

1. Converted Cyberoam into firewall mode from existing transparent mode in March 2012 and removed Cisco ASA & three proxy servers from service.
2. Replaced McAfee Anti Virus with Kaspersky Anti Virus in May 2012.
3. Added 11 CCTV outdoor cameras in the campus and 6 outdoor cameras in Hostels.
4. Upgraded the existing link of 30 Mbps from Du to 50 Mbps in April 2012.
5. College email Ids were provided to all the students.
6. Steps were taken to provide link from MDF (Telephone room, Mechanical Block, ground floor) till the proposed ATM near Gate No. 2. Etisalat (service provider) installed their devices in Telephone Room (Mechanical Block, ground floor) to provide link to the proposed ATM.
7. In order to centralise the email access across all campuses of BITS Pilani, email solution from google was launched. The same will be in the process of implementation in Dubai Campus.
8. Empower, the district cooling Service provider for the DIAC area commissioned the primary chilled water circulation pumps and the energy metering for the consumption of cooling energy by commissioning their Plate Heat Exchangers. Thus the chilled water circuit was separated into Primary and Secondary circuit from 18 April 2012.
9. Subsequently the Variable Frequency Drives (VFD) for the chilled water pumps were serviced and commissioned during November 2012.
10. The single pump irrigation water pumping unit was replaced by a standard unit with two pump unit. Due to the absence of TSE (Treated sewage effluent) water from DIAC during the summer months, a separate fresh water pipe line was laid to supply water to the irrigation storage tanks.
11. Three chemical storage cabinets in the Microbiology lab were provided with forced ventilation facility as required by the statutory authorities to expand the present storage capacity.
12. In the Main Academic Block, the roof mounted Chilled water pipe lines were provided with new Fibre Glass insulation by replacing the worn out rubber pipe sections.
13. Six solar powered street light units were installed on the walkway from the hostel to the institute with automatic timer operation.
14. The "Emergency escape route plan drawings" of A3 size were mounted with acrylic frames to in strategic places on the corridors to cover the academic buildings and residential buildings. Four places were identified as "Fire Assembly Points" and boards were installed accordingly. The booklet was prepared with guidelines to facilitate the smooth evacuation of the buildings in the event of an emergency.
15. About 100 trees and plants were added to the existing greenery in the campus landscaped area.
16. The corridors of the main academic block were repainted during the summer vacation.

B4.18 EQUIPMENTS AND ACCESSORIES

A large number of equipments and accessories were purchased for BITS Pilani, Dubai Campus. The list of major equipments is included in the Annexure B4-21.

B4.19 STUDENTS ACTIVITIES, ACHIEVEMENTS, SCHOLARSHIPS, CULTURAL AND ACADEMIC FESTIVALS

Hostel Committee

Block A	Vinit Dharamshibhain Bediya
Block B	Monit Kothari
Block C	Akshay Chaturvedi
Block D	Anomitra Banerjee
Block G	Arushi Mittal

Clubs

Quiz (FLUMMOX'D)	Sweekriti S
Dance	Lethin Prasad
Programming (INFINITE LOOP)	Gautham Badrinathan
Art (ARTEX)	Sahil Gupta
Social & Environment (MAD AND PEACE)	Rinnie Aggarwal
Drama (PARIBHASHA)	Larina Dsouza
Public Speaking & Literary Club (EXPRESSIONS)	Niyati Parameswaran
Photography (REFLEXIONS)	Al Ameen
Sports	Jhankar Agarwal
Music	Nilay
Astronomy	Amritansh Varshney
Gaming	Kushal Nagar

Student Activities

BITS Pilani, Dubai Campus encourages student to meet each other in a friendly atmosphere to conduct professional / scientific activities such as institute-wide technical festival, Technofest, and also participate in scientific and professional bodies of international repute such as a Student Branch of the IEEE, SAE, ASHRAE, Dot-Net, Linux Users Group. There were 12 clubs namely Dance Club, Arts Club, Public Speaking & Literary Club, Music Club, Quiz Club, Drama Club, Astronomy Club, Social & Environment's Club, Gaming Club, Programming Club and Sports Club. The following were some of the important activities held during the year 2012.

1. **Social & Environment Club:** The club organized many social activities as follows: .Around 30 members of the club participated in a Walkathon organized by Dubai Cares at Jumeira Beach Park, Dubai on 17 February 2012. A can collection drive was started on 20 February 2012, to encourage recycling. On 8 April 2012, the club in association with IEEE organized a lecture on "Sustainable Development" by Mr. Mukund Sharma, Senior Vice President, M/s Primary Infrastructure, Haryana, India. On 22 April 2012, EARTH DAY was celebrated by planting trees. Director Prof. R K Mittal along with other faculty members and students enthusiastically came forward and planted trees all over the campus, taking a step towards greener campus. Hand Printing was also held where the students and faculty came together to vent their views on conservation of resources, painted their hands, and wrote messages. The Club organized many events like Henna Painting, Face Painting, Football Mania, Milkshake Mania, Donut's Sale, Cheese bun's sale and Plant's sale to raise funds for Dubai Cares. A Dandiya Night on 18 October 2012 was also organized for the same. The Club held Paper-Bag Making Session 31 October 2012, to supply them to the canteen and grocery on campus in order to replace the plastic bags being used currently. A Paper Recycling Campaign was also started. All the waste papers, magazines, newspapers etc were collected and sent for recycling at the end of semester. The Breast Cancer Awareness Campaign, also called the PINK DAY, was organized on 24 October 2012, to raise awareness amongst the students and faculty. Student Volunteers of the Club got an opportunity to be a part of the Open Day on 21 November 2012, at Dubai Centre for Children with Special Needs. A Ballroom Dance Workshop for Help Age India was organized in association with the Ocean Kids Institute on 25 & 27 November 2012 and 9 & 11 December 2012. The Club Volunteers participated in clean up drives organized by Dubai Municipality on 22 November 2012 and Emirates Environment Groups on 12 December 2012. Blood Donation Camp was held on 26 November 2012, to help patients of Thalassaemia. The Club in association with the ASTER group of medicals organized a session on "Basic Life Support" on 6 December 2012, with the motto "BE EMPATHETIC, ACT TIMELY, YOU TOO CAN SAVE LIVES". A team from DEWA visited BITS Pilani, Dubai Campus and gave a presentation on conservation of Water and Electricity. It was attended by students, faculty and staff.

2. **The Public Speaking and Literary Club:** A team from the club participated in Skyline Competition - Crossfire held on 5 March 2012. Fahad Khan won the Best Speaker award and BPDC won the runners up trophy. The club organized the Intra-College Model United Nations competition on 28-29 March 2012. Malavika Karthik was the Best Delegate and Tariq Nahdi was the Most Enthusiastic Delegate. Nilay Doshi won the prize for Best Position Paper. The Inter Year Debate competition was a public speaking event conducted by the club on 11 October 2012 where the 3rd year team won the competition. BPDC Debate team won 6 awards at the 9th American University of Sharjah Debating Championship held from 29 November 2012 to 13 December 2012. Two teams participated. Team 2 won the Runner's up award. BPDC also won the best Spirited College award. Niyati Parameswaran won the overall tournament best speaker award. The Canadian University of Dubai conducted a story writing competition during the month of November 2012. Six students participated from BITS Pilani, Dubai Campus. Mohamed Atyab won the second place in University Category.
3. **Dance Club:** On 10 February 2012, a team of ten students from BITS Pilani, Dubai Campus participated in Eastern Dance competition in Skyline Carnival 2012 organized by Skyline University College, University City, Sharjah, UAE and won the first prize in that category in which 4 universities took part. On 23 February 2012, Munzer Mustafa, Lethin Prasad and Avinash Krishna of BPDC won the 'DIAC Got Talent' cash prize of AED 1000/- held during the 'DIAC Week of Welcome'. A team from dance club also won the first and second prize at Vaudeville organized by IMT Dubai on 15 March 2012.
4. **Quiz Club:** On 23 February 2012, BITS Pilani, Dubai Campus secured the First and Third positions in Labyrinth, an open quiz for enthusiasts ranging from students of the 11th grade to working professionals organized by SP Jain School of Global Management. On 1 March 2012, the Department of Media and Communications of Manipal University, Dubai organized the first Inter University Moviola Competition. The BPDC Team called "The Usual Suspects" consisting of Devatt Maganty and Anirudh Raju won the first prize. Over thirty teams from across the UAE took part in the written elimination round from which six teams were chosen to take part in the final On-Stage-Rounds. BPDC students won the third place in a Business Quiz completion organized by British University, Dubai on 7 May 2012. An Inter-University Quiz Festival was held in Manipal University on 2 November 2012. Team comprising of Jonathan Justin and Rahul Philip, students of BITS Pilani, Dubai Campus were the first runners up in Puzzle 2012 and team comprising of Raunaq Paul and Rahul Gupta Kambampati, again from BITS were the second runners up
5. **Music Club:** A team from the club won the first and second prize in The Band Competition at Vaudeville organized by IMT Dubai on 15 March 2012.
6. **Astronomy Club** - Star gazing activity was conducted in the month of September and November 2012.
7. **ENGINuity & TECHNOFEST (2011-2012):** The annual inter-university techno-management festivals of BITS Pilani, Dubai Campus were held during 26-29 April 2012. The fest caters to the philosophy 'An Engineer's Ingenuity' by encouraging creativity and innovation amongst its participants from various universities within UAE and from other countries (for online competitions). The event was inaugurated on 26 April 2012 by Prof. Dr. R K Mittal, Director, BITS Pilani, Dubai Campus in a modest opening ceremony conducted in the Institute's Auditorium.

As part of ENGINuity close to 28 events were held spreading across four days. The events included Computer Gaming, Computer Programming, Reverse Engineering, Shutter Speed, Trezoro Casi, Reverse Engineering, Shoot Out, Crime Scene Investigation (CSI: BITS), Google Dance, Online Quiz Competition, Numbers Game, Blitz Idea, Mobile App Development, Hackathon, Cipher, Cheat Code, and many more in addition to Quizzes viz., Automobile Quiz, Crusade Corporate Quiz and What-the-Tech?-Quiz. The code debugging competition called "DEBUGGER CONFUSED" was held on 28 April 2012.

As part of TECHNOFEST of intra-collegiate paper presentation was held on 29 April 2012. A very good response was received from students of all the four years as around 40 papers were presented on the various engineering disciplines. The event of model making was held during 28-29 April 2012 and around 25 models were displayed. The closing ceremony of ENGINuity & TECHNOFEST concluded with a prize distribution held on 29 April 2012. Dr. Nikolas Maviridis of New York University, Abu Dhabi & the founder of the Interactive Robots and Media Laboratory (IRML) at U.A.E. University's College of IT, delivered an interactive talk followed by an informative question answer session on the occasion. Prof. Dr. R K Mittal, Director joined Dr. Nikolas Maviridis in distributing the prizes.

TECHNOFEST (2012-13): TECHNOFEST for the academic year 2012-13 was held during the calendar year 2012. The second edition of TECHNOFEST during 2012, witnessed an enhanced version that included 15 event categories. Inaugurated by the Director and Senior Professor, BITS

Pilani, Dubai Campus Dr. R K Mittal, on 15 December 2012 in the main block, the event had several categories that include: Paper presentation, Models Presentation, the Literary Events: Pass the Buck, The Talking Heads, Coding events: Code Relay and Codecians, Photography event: Frames, Mechanical events: High Flyer and Weaponeer, Gaming Event: Game On, Quiz events: Inquisitive, BizzQuiz and Supernova. Dr. Radha K Maheshwari, Professor of Pathology and Coordinator, Indo-US Activities, Uniformed Services University of the Health Sciences, Bethesda, MD, USA was the chief guest for the closing ceremony held on 16 December 2012. At the closing ceremony he gave an inspiring talk on current technological trends. The faculty advisors joined the Chief Guest, Director Prof. R K Mittal and Mrs. Aabha Mittal during prize distribution.

8. **IFOR Report 2012:** The IFOR team at IARC 2012 consisted of Robin Singh, Aditya Jain, Pratik Sen and Vivek Radhakrishnan. The IFOR vehicle that was presented and demonstrated at IARC, North Dakota in August 2012 had a new array of modules allowing for an improved real time performance. The vehicle uses a software backbone of ROS, for easy standardization of modules as well as making sensor data readily available. Robust image identification and matching module which had a real time performance was also implemented. A creative solution using mirrors was used to determine the height of the vehicle from the ground. A 30 meter LIDAR was used in mapping the environment and planning the path. The project received significant funding from BITSAA through the efforts of Saurabh Ladha who conceived and executed the first presentation at IARC with significant success and who has now graduated from BITS Pilani, Dubai Campus. The travel to North Dakota was funded by Sharaf DG. The demonstration was a tremendous learning experience in dealing with system deployment issues and this experience should stand them in good stead in the next edition of IARC. Pratik Sen and Vivek Radhakrishnan with support from Deepan Kishore recruited five new technical members and two marketing members for the IFOR team. The new members are now being trained while the development of the project is going forward for IARC 2013.
9. **BITS Sports Festival 2012:** The 10th BITS Sports Festival (BSF 2012) was held from 29 November to 5 December 2012. It saw various sporting events like Football, Cricket, Badminton, Volleyball, Table Tennis, Throwball, Basketball, Chess and Athletics, conducted for both boys and girls. Around 1000 students, representing 16 universities from all over UAE participated in the Festival. The participating universities included UOWD, Heriot-Watt, Skyline University, RAKHMSU, CUD, American University of RAK, Emirates Aviation College, GMU Ajman, SZABIST, Amity, AUS and Bolton. BITS Pilani, Dubai Campus won the overall championship. The highlight of the closing ceremony was the presence of Mr. Sushil Kumar, World Wrestling Champion and Silver Medalist in 2012 London Olympics and the Chief Guest, H.E. Mr. Lokesh M.K., Ambassador of India to U.A.E.
10. **Ethnic Day:** This annual event was held on 5 November 2012 at the Campus. Students dress up in Ethnic Wear and several activities are held throughout the day. Food Stalls were put up and the Art Club handled the decoration of the Graduation Hall and the library area of the college. There were dance performances by students and faculty followed by Comical Drama, performed by the members of Paribhasha. Several On-the-Spot competitions were conducted that were open to all students and prizes were given to the winners. Mr. Ethnic and Ms. Ethnic were announced after a few rounds of contest. The Social and Environmental Club held a competition called Treasure Hunt to raise funds for charity. The Art Club organized a fun event called Beg Borrow Steal, in which the participants had to gather the list of items given to them within a set frame of time. A photography competition was organized by photography club where the winning photograph was taken by Neha Patil.
11. **SPARKS 2012:** The annual intra college competition was held during 13-14 October 2012. The dance competition was divided into duet, eastern and western categories. Around 7 groups performed in Duet, 7 groups in western category and 12 groups in eastern category. The competitions were judged by alumni of BPDC. The Music Club of the college held 3 events during the SPARKS 2012. Solo and Duet Singing in both, the Eastern and Western category, Battle of the Bands were held along with Instrumental competition. Paribhasha, the theatre society of BITS, Pilani Dubai Campus, had two main events during SPARKS 2012, namely Impulse & Street Play (Nukkad Naatak). The event consisted of three categories: Wring Zap, Pantomime and Mad Ad. A photography contest was also organized by Photography Club.
12. **JASHN 2012:** An Inter college cultural festival 'Jashn12' was held during 13-15 April 2012. Around 300 students from 7 colleges and universities from across the UAE participated in the festival. It comprised 7 events organized by the Music, Drama and Dance clubs of the college, a fashion show, and a special performance by some of the leading rock bands of Dubai on the final day.
13. **Hostel Day Celebrations:** Hostel Day was celebrated for the first time in BITS Pilani, Dubai Campus with a lot of fanfare. Fun activities like Antakshri, Tambola, Kho Kho, Bathroom singing and many outdoor sports were organized. There was a huge response and participation involved, hostel students, wardens and the staff. A grand Buffet dinner was organized after the closing ceremony

where lot of prizes and gifts were given away to the winners and the hostel staff. The hostel students also organized a small get together for Diwali on 13 November 2012. Diwali Puja was conducted, followed by dances. Ms. Abha Mittal was the Chief Guest of the celebrations.

14. **Farewell Party:** The 'DIROS Tea Party', a farewell party to the passing batch was organized by the Alumni Cell on 24 May 2012. For the first time it was held in the campus. Around 600 students attended the farewell where 500 passing out students gathered. A lot of fun games were arranged and a gold ring went to the lucky winner. A 15 kg cake was cut by the students. The farewell ended on an emotional note.
15. **Welcome Party:** The Fresher's Welcome Party was held on 20 September 2012. It was organized by the senior students of the college to welcome the new batch of students of 2012. Around 800 students along with the faculty attended the function. There were Music and Dance Events held followed by refreshments. Plantation of a Batch Tree for the Fresher's Ice-Breaker was held on 20 September 2012. A tree was planted by freshers and seniors. This batch tree plantation was the first of its kind in the campus.
16. **SPIC MACAY:** The SPIC MACAY chapter was started in BITS Pilani, Dubai Campus in the month of November 2012.

ACHIEVEMENTS AND COMMENDATIONS

Awards and Achievements

1. Following are the three student entries that participated during a Software Development Tradeshow held by the University of Wollongong in Dubai (UoWD) on 28 May 2012:
 - a. Midst "a very tough competition" as per organizer Dr. Catherine Todd's remarks, while announcing the results, Mr. Mohit Athwani (2008A7TS098U) of Dubai Campus of BITS won 3rd prize for his Mobile Application titled "facial detection and recognition on iPhone with blink gestures".
 - b. Mr. Aditya Mehta (2008A7PS022U)'s Mobile Application titled "Let Us Order" was considered for broadcast by BBC (Arabic) TV channel in its show called "4tech" from among three demo videos recorded by an BBC (Arabic) producer who visited the trade show and recommended by him to BBC Headquarters at London.
 - c. A 2-member student team consisting of Mr. Thomas Binu (2008A7PS556U) and Prashant Nair (2008A7PS450U) participated with their Mobile Application titled "Automation of a University Internship Program"
2. For being adjudged as the maximum number (four) of student entries from an institute to have found their place in the top 10 best and innovative of mobile application entries among submitted, the Institute won first prize worth US \$10,000 during the Nokia University Application Challenge held on 27 May 2012 at a function held in Armani Hotel Ballroom, Burj Khalifa, Dubai, UAE. Below are the application names and students who contributed the same:
 - a. Mobile Application titled "Pocket Masjid" by Shamliya Shukkur
 - b. Mobile Application titled "My Metro" by Dhvani Chotalia and Roopal Chouhan
 - c. Mobile Application titled "Jobless" by Deepa Devanand
 - d. Mobile Application titled "Rage Comics" by Aditya Shankar and Siddhart Swamy

Igniting a healthy and fair competition among all, the participating students received intensive training on Nokia Platforms for 2-days after which 7 weeks time was provided to all the participating students to develop Mobile Apps. Out of a total of 19 entries received from within UAE Universities, BPDC students contributed maximum number of entries by submitting 11 Mobile Applications. Dr. S Vadivel, Head, Department of Computer Science & the Director Prof. R K Mittal who mentored the above students deserve a special mention in this context.
3. **Conservation Award:** BITS Pilani, Dubai Campus won the "Conservation Award – For A Better Tomorrow 2011-2012" by standing first in the University Category. The award ceremony was held on 8 May 2012. The competition was hosted by Dubai Electricity & Water Authority (DEWA) in association with Knowledge & Human Development Authority (KHDA). Around 25 educational institutions participated in the competition out of which BITS Pilani, Dubai Campus won the first prize along with the Best Conservation Team award and Best Worker award. BITS Pilani Dubai Campus saved 191,703kWh (4%) of electricity, and 9,539,000 IG (47%) of water over the previous year.

SCHOLARSHIPS

Financial Assistance to Students

513 students received financial assistance of AED 28,01,075/- under different categories for the Academic Year 2011-12, the details of which are given below:

S. No.	Particulars	Students Nos.	Amount (in AED)
1	Institute Merit Scholarship	374	16,66,125
2	Higher Degree and Doctoral Scholarship	20	1,38,560
3	Need-based Scholarship (Physically challenged, Bereaved family discount)	8	2,28,100
4	Others (Staff, Siblings, Sports, Special Concessions)	76	6,68,350
	Total	478	27,01,135

EARN WHILE YOU LEARN

16 students worked as Professional Assistants in the second semester 2011-12 and 15 students in the first semester of 2012-13. They participated in various academic activities like assistance in labs, software and other developmental work. This gave them an opportunity of independent thinking and developing a sense of responsibility. The programme is not linked with any academic credit but the participants were paid honorarium for their services and certificates from the Director, Dubai Campus.

Annexure B4-1

(1 page)

Ref/ AR 2012, Page No. B4-4

SENIOR OFFICERS OF THE INSTITUTE**DIRECTOR**

Dr. R. K. Mittal

DEANS

<u>DIVISION</u>	<u>NAME</u>
1. Academic and Registration	Dr. T G Thomas
2. Research and Consultancy	Dr. G Vijaya
3. Student Welfare	Dr. Priti Bajpayee
4. Instructions	Dr. D J Shariff
5. Practice School and Placement	Dr. Tanmay Panda

REGISTRAR

Dr. K. Kumar

HEAD OF THE DEPARTMENTS

<u>DEPARTMENT</u>	<u>NAME</u>
1. Chemical	Dr. B B Gulyani
2. Electrical and Electronics	Dr. R Mary Lourde
3. Mechanical	Dr. C Perisamy
4. Computer Science	Dr. S Vadivel
5. Electrical and Instrumentation	Dr. D V Prasad
6. Biotechnology	Dr. Neeru Sood
7. Mathematics and Science	Dr. R Roop Kumar
8. Humanities and Management	Dr. Shazi Shah Jabeen

INCHARGES

1. Laboratories	Dr. A R Abdul Rajak
2. Admissions and Academic Registration	Dr. A Somasundaram
3. Grading	Dr. A M. Surendra Kumar

HOSTEL WARDENS

<u>BLOCK</u>	<u>NAME</u>
Chief Warden –Hostel	Dr. Miller Jothi
A	Mr. N A Venkatesh
B	Mr. Harold Franklin
C	Dr. Miller Jothi
D	Mr. Anuj Kumar
G	Dr. S Karthiyayini

Annexure B4-2

(1 page)

Ref/ AR 2012, Page No. B4-4

DETAILS OF THE ADMISSIONS MADE DURING THE YEAR 2012

I. First Semester 2012-2013

1. Integrated First Degree Programmes:

B. E. (Hons.)	
Biotechnology	: 17 (15)
Chemical Engineering	: 30 (15)
Electrical and Electronics Engineering	: 48 (20)
Mechanical Engineering	: 105 (04)
Electronics and Instrumentation Engineering	: 07 (05)
Computer Science	: 100 (39)
Electronics and Communication Engineering	: 76 (33)
TOTAL	383 (131)

2. Higher Degree Programmes: : 00

3. Ph.D : 03 (02)

TOTAL : 386 (133)

II. Second Semester 2011-2012

1. Integrated First Degree Programmes : 00

2. Higher Degree Programmes:

M. E.	
Microelectronics	: 03 (00)
Design Engineering	: 10 (00)
Software Systems	: 08 (02)
Biotechnology	: 05 (04)
M.B.A	: 09 (01)
TOTAL	35 (07)

3. Ph.D : 03 (02)

TOTAL : 38 (09)

SUMMARY

	II Semester 2011-2012	I Semester 2012-2013
Integrated First degree Programmes	-	383 (131)
Higher Degree Programmes	35(07)	-
Ph. D	03(02)	03 (02)
Total	38 (09)	386 (133)

Annexure B4-3

(1 page)

Ref/ AR 2012, Page No. B4-4

STATEMENT SHOWING THE NUMBER OF CANDIDATE WHO HAVE BEEN PERMITTED IN THE ACDEMIC YEAR 2012-2013 TO PURSUE A VARIOUS DUAL DEGREE PROGRAMMES UNDER VARIOUS PRIORITIES

Programmes* From ↓ To →	A7	AA	TOTAL
A3	1	-	1
A7	-	1	1
TOTAL	1	1	2

*Legend :

- A3: B.E. (Hons.) Electrical and Electronics
- A7: B.E. (Hons.) Computer
- AA: B.E. (Hons.) Electronics and Communication

Annexure B4-4

(1 Page)

Ref/ AR 2012, Page No. B4-5

NUMBER OF STUDENTS REGISTERED IN FIRST SEMESTER 2012 - 2013**(As on 3rd October 2012)**

PROGRAMME	Year of Admission					Total
	2008 and earlier	2009	2010	2011	2012	
A. Integrated First Degree Programmes						
B.E. (Hons.)						
CHE	2 (0)	13 (10)	15 (6)	20 (6)	30 (15)	80 (37)
EEE	8 (0)	41 (13)	35 (12)	40 (12)	48 (20)	172 (57)
MECH	5 (0)	82 (2)	89 (6)	113 (4)	105 (4)	394 (16)
CS	14 (1)	57 (36)	70 (28)	81 (25)	100 (39)	322 (129)
EIE	2 (0)	12 (7)	7 (4)	9 (5)	7 (5)	37 (21)
BIO	-	9 (8)	10 (7)	14 (12)	17 (15)	50 (42)
ECE	13 (3)	81 (27)	74 (34)	83 (40)	76 (33)	327 (137)
M.Sc.(Tech.)						
ET	-	14 (0)	-	-	-	14 (0)
Sub Total	44 (4)	309 (103)	300 (97)	360 (104)	383 (131)	1396 (439)
B. Higher Degree Programmes						
M.E.						
Software Systems	-	-	6 (2)	8 (2)	-	14 (4)
Microelectronics	-	1 (0)	5 (3)	3 (0)	-	9 (3)
Biotechnology	-	-	-	5 (4)	-	5 (4)
Design Engineering	-	-	5 (0)	10 (0)	-	15 (0)
Master of Business Administration	-	-	11 (2)	9 (1)	-	20 (3)
Sub Total	-	-	27 (7)	35 (7)	-	63 (14)
C. Ph.D.	5 (5)	-	1 (0)	3 (2)	3 (2)	12 (9)
Total (On Campus)	49 (9)	310 (103)	328 (104)	398 (113)	386 (133)	1471 (462)

Number of female students is given in brackets.

Annexure B4-5

(1 Page)

Ref/ AR 2012, Page No. B4-6

STATEMENT OF DEGREES AWARDED

Degrees	No. of degrees	
	70 th Award (23 rd Feb 2012)	71 st Award (22 nd July 2012)
B.E. (Hons.)		
Chemical	01 (0)	0
Chemical (with PS)	01 (0)	20(8)
Electrical & Electronics	01 (0)	8(1)
Electrical & Electronics (with PS)	01 (0)	55(19)
Computer Science	01 (0)	16(6)
Computer Science (with PS)	02 (0)	125(50)
Electronics & Instrumentation	0	2(2)
Electronics & Instrumentation (with PS)	01 (0)	22(8)
Mechanical	01 (0)	8(1)
Mechanical (with PS)	02 (2)	76(1)
Biotechnology	0	8(5)
Biotechnology (with PS)	0	24(17)
Electronics & Communication	0	14(6)
Electronics & Communication (with PS)	0	116(50)
Sub Total	11 (0)	494 (174)
Higher Degree		
M.E. (Microelectronics)	06 (01)	0
M.E. (Design Engineering)	05 (0)	0
Master of Business Administration	17 (10)	01 (0)
Sub Total	28 (11)	
Total	39 (11)	495 (174)

SUMMARY

	70 th Award (3 rd Feb 2011)	71 st Award (22 nd July 2012)	Total
Integrated First Degrees	11 (0)	494 (174)	505 (174)
Higher Degree	28 (11)	1 (0)	29 (11)
Total	39 (11)	495 (174)	534 (185)

Annexure B4-6

(1 Page)

Ref/ AR 2012, Page No. B4-6

**70th AWARD OF DEGREES APPROVED BY THE 65th MEETING OF THE
BOARD OF GOVERNORS**

Programme	Dist.	I	II	Total
B.E. (Hons.) (Chemical)	0	0	01	01(0)
B.E. (Hons.) (Chemical) (with Practice School)	0	0	01	01(0)
B.E. (Hons.) (Mechanical)	0	0	01	01(0)
B.E. (Hons.) (Mechanical) (with Practice School)	1	1	1	03(0)
B.E. (Hons.) (Computer Science)	0	1	0	01(0)
B.E. (Hons.) (Computer Science) (with Practice School)	0	0	06	06(1)
B.E. (Hons.) (Biotechnology)	0	0	0	0
B.E. (Hons.) (Biotechnology)(with Practice School)	0	0	2	2(2)
B.E. (Hons.) (Electronics and Instrumentation)	0	0	0	0
B.E. (Hons.) (Electronics and Instrumentation) (with Practice School)	0	1	0	01(0)
B.E. (Hons.) (Electrical and Electronics)	0	1	0	01(0)
B.E. (Hons.) (Electrical and Electronics) (with Practice School)	0	1	1	02(1)
Sub Total	01	05	13	19(4)
M.E. (Microelectronics)	-	-	-	6(1)
M.E. (Design Engineering)	-	-	-	5(0)
Master of Business Administration	-	-	-	17(10)
Sub Total	-	-	-	28(11)
Total	01(0)	05(0)	05(0)	47(15)

Number of female students is given in brackets.

**71st AWARD OF DEGREES APPROVED BY
THE BOARD OF GOVERNORS THROUGH CIRCULATORY
RESOLUTION NO. BG/66 DT. 19 JULY 2012**

Programme	Dist.	I	II	Total
B.E. (Hons.) (Chemical)	0	0	0	0
B.E. (Hons.) (Chemical) (with Practice School)	1	12	7	20(8)
B.E. (Hons.) (Mechanical)	1	5	2	8(1)
B.E. (Hons.) (Mechanical) (with Practice School)	10	36	30	76(1)
B.E. (Hons.) (Computer Science)	2	7	7	16(6)
B.E. (Hons.) (Computer Science) (with Practice School)	16	70	39	125(50)
B.E. (Hons.) (Biotechnology)	0	4	4	8(5)
B.E. (Hons.) (Biotechnology) (with Practice School)	5	9	10	24(17)
B.E. (Hons.) (Electronics and Instrumentation)	1	1	0	2(2)
B.E. (Hons.) (Electronics and Instrumentation) (with Practice School)	3	9	10	22(8)
B.E. (Hons.) (Electrical and Electronics)	2	3	3	8(1)
B.E. (Hons.) (Electrical and Electronics) (with Practice School)	6	28	21	55(19)
B.E. (Hons.) (Electronics and Communication)	4	6	4	14(6)
B.E. (Hons.) (Electronics and Communication) (with Practice School)	10	59	47	116(50)
Master of Business Administration				1
Total	61	249	184	495(174)

Number of female students is given in brackets.

Annexure B4-7

(1 Page)

Ref/ AR 2012, Page No. B4-6

**72nd AWARD OF DEGREES TO BE APPROVED BY THE 66th MEETING OF
THE BOARD OF GOVERNORS**

Programme	Dist.	I	II	Total
B.E. (Hons.) (Chemical)	0	0	0	0
B.E. (Hons.) (Chemical) (with Practice School)	0	0	0	0
B.E. (Hons.) (Mechanical)	0	0	0	0
B.E. (Hons.) (Mechanical) (with Practice School)	0	0	2	2(0)
B.E. (Hons.) (Computer Science)	0	3	2	5(0)
B.E. (Hons.) (Computer Science) (with Practice School)	0	0	5	5(0)
B.E. (Hons.) (Biotechnology)	0	0	0	0
B.E. (Hons.) (Biotechnology) (with Practice School)	0	0	0	0
B.E. (Hons.) (Electronics and Instrumentation)	0	0	1	1(0)
B.E. (Hons.) (Electronics and Instrumentation) (with Practice School)	0	0	0	0
B.E. (Hons.) (Electrical and Electronics)	0	0	0	0
B.E. (Hons.) (Electrical and Electronics) (with Practice School)	0	0	5	5(0)
B.E. (Hons.) (Electronics and Communication)	0	1	2	3(1)
B.E. (Hons.) (Electronics and Communication) (with Practice School)	0	0	5	5(2)
Sub Total	0	4	22	26(3)
M.E. (Microelectronics)	-	-	-	6(3)
M.E. (Design Engineering)	-	-	-	5(0)
M.E.(Software Systems)	-	-	-	6(2)
Master of Business Administration	-	-	-	10(2)
Sub Total				27(7)
Total	0	4	22	53(10)

Number of female students is given in brackets.

Annexure B4-8

(2 pages)

Ref/ AR 2012, Page No. B4-7

LIST OF ORGANISATIONS WHICH CONDUCTED CAMPUS INTERVIEWS

Sl. No	NAME OF ORGANISATION	NUMBER OF STUDENTS		DISCIPLINE
		INTERVIEWED	SELECTED	
1	Aban Offshore, Sharjah, UAE	25	-	EEE, EIE, MECH, CHE
2	ABB Industries, Dubai, UAE	08	-	EIE
3	AC Nielsen, Sharjah, UAE	03	01	EEE, CS
4	Adapt Middle East LLC, Dubai, UAE	02	01	EEE, ECE
5	Alpha Data LLC, Dubai, UAE	05	03	EEE, EIE, CS
6	APP (Asia Pulp & Paper) International Marketing PTE Ltd., Dubai, UAE	16	05	ALL
7	Aptec Distribution FZ LLC, Dubai, UAE	24	-	ALL
8	Elcome International, Dubai, UAE	03	03	ECE
9	Elfit Arabia, Ajman, UAE	05	04	MECH, EEE, ECE
10	Emirates Glass LLC, Dubai, UAE	03	01	CHEM
11	Emirates Industrial Gas Co. LLC, Dubai, UAE	16	04	MECH
12	Emirates International Exchange, Sharjah	17	-	ALL
13	ESRI (Environmental Science & Research Institute), Sharjah, UAE	02	01	CS
14	Eversendai Engineering LLC, Sharjah, UAE	04	-	MECH
15	GIS Solutions (GISTEC), Sharjah, UAE	08	04	CS
16	Grundfos Gulf Distribution, Dubai, UAE	14	05	MECH, EEE
17	Intertek Systems	12	02	CS, ECE, MECH
18	JBK Controls International FZE, Dubai, UAE	09	05	EEE, EIE, ECE, CS
19	Jones Lang LaSalle, Abu Dhabi, UAE	01	01	CS
20	Jones Lang LaSalle, Dubai, UAE	04	01	EEE, MECH, CS
21	L&T Electrical & Automation FZE, Dubai, UAE	38	08	EIE, EEE, ECE
22	Lucy Switchgear FZE, Dubai, UAE	17	06	MECH, EEE, CS
23	Metadata Technologies FZ LLC, Dubai, UAE	06	01	EEE
24	Microsoft, Hyderabad, INDIA	21	03	EEE, EIE, MECH
25	MSD (Merck, Sharp & Dhome), Dubai, UAE	03	01	CS

Sl. No	NAME OF ORGANISATION	NUMBER OF STUDENTS		DISCIPLINE
		INTERVIEWED	SELECTED	
26	New Medical Center, Abu Dhabi, UAE	09	-	BIOT
27	NIIT Technologies, Gurgaon, INDIA	03	-	CS
28	Orion Global FZC, Dubai, UAE	06	01	
29	Paramount Computers Systems FZ LLC, Dubai, UAE	18	03	CS, EEE, ECE
30	Quality International Co. Ltd. [LLC], Sharjah, UAE	04	01	MECH, CHEM
31	Radical Rising, Dubai, UAE	08	02	CS
32	Sanbook Quality Consultancy, Dubai, UAE	21	02	BIOT, CHEM
33	Scientecnic, Dubai, UAE	23	10	EEE, EIE, ECE, CS
34	Sibca Electronics, Abu Dhabi, UAE	03	01	EEE, MECH
35	Siemens LLC, Dubai, UAE	03	01	MECH, ECE
36	Solutions Middle East LLC, Dubai, UAE	18	02	CS, ECE
37	Tech Mahindra	03	01	CS
38	Tecknoware Middle East FZCO, Dubai UAE	04	01	EEE, EIE, ECE
39	Think Software Services FZ LLC, Dubai, UAE	15	-	CS, EEE, EIE
40	Thyssen Krupp Elevator (UAE) LLC, Dubai	05	02	EEE, MECH
41	Thyssen Krupp Elevator LLC, Saudi Arabia	01	01	EEE, MECH
42	VENTURIA, Dubai, UAE	26	02	CS
43	Zio Technologies	06	01	CS, EEE, ECE
44	ZOMATO, Dubai, UAE	14	-	ALL

SUMMARY

Total No. of Companies : 44

Total No. of students interviewed : 628

Total No. of appointments offered : 91

*Legend

CHE: Chemical, CS: Computer Science, EEE: Electrical & Electronics, EIE: Electronics & Instrumentation, MECH: Mechanical, BIOT: Biotechnology, ECE: Electronics & Communication

*Annexure B4-9
(17 Pages)
Ref/ AR 2012, Page No. B4-7*

LIST OF FIRST DEGREE PROJECTS

Second Semester 2011-2012 (February 2012 to June 2012)

S.No.	Name	Topic	Instructor	Type
1	Abhimanyu Jhajharia	Webpage Design for Free Advertisements	Dr. R Gomathi Bhavani	CP
2	Abhinav Goel	Design of an Algorithm to Analyze the types of Web Links Embedded in Web Pages	Ms. Jeyalatha	CP
3	Abhishek Jalan	Interfacing of Bar-code Scanning Devices	Dr. V Santhosh Kumar	CP
4	Aditya Julka	Non Functional Property based Service Selection	Ms. S Susila	CP
5	Aditya Mehta	Implementation of Content Management System for BPD Linux Users Group using Joomla under Ubuntu Linux	Dr. B Vijayakumar	CP
6	Agarwal Dhruv Sanjeev	Modeling Location and Retail Sales using Matlab	Dr. S Baskaran	CP
7	Agniparthi Sudeep	Theoretical calculation of Ultrasonic velocity in Binary Liquid Mixtures	Dr. S Karthiyayini	CP
8	Ahammed Shamir Ali O	Character Recognition using Neural Networks	Dr. Kalaihelvi	CP
9	Akshay Chawla	Analysis of Promela Language	Ms. Susanna Henry	CP
10	Akshay Kukreja	Short Circuit Analysis for a 3 Phase Power System Network	Dr. K Nithyananthan	CP
11	Aksheta Mukesh Mehta	Creating Web based Model for Financial Planning and Forecasting	Ms. Pushkala Muralidharan	CP
12	Akshintala Prathyusha	Design and Implementation of Parametric tests of hypothesis	Dr. Maneesha Bhagchandani	CP
13	Anant Mithal	Simplex Method and its Applications	Ms. Kavitha Sathyanarayanan	CP
14	Anita Dinesh Davla	Marketing Strategies Customer Management and E Commerce at ASTECO	Dr. Lajwanti	CP
15	Anjali Muraleedharan Nair	Design and Simulation of Direct Sequence Spread Spectrum System with Barker Code using Cck	Dr. T G Thomas	CP
16	Ankit Sachdeva	Design of Double Pipe Heat Exchanger using Prosim	Dr. Surendra Kumar	CP
17	Ankit Verma	Analysis of Voltage Stability Problem in Power System using Matlab	Dr. Sunil Thomas	CP
18	Ankur Bakshi	Advertising Through Social Networking Sites	Dr. Tanmay Panda	CP
19	Anshul Joshi	Marketing Strategies used by Business Groups used at Social Networking sites	Dr. Lajwanti	CP
20	Anupkumar Pariyarathu Gopakumar	Online Marketing Trends and its Applications	Dr. Lajwanti	CP
21	Arjun Muraleedharan	Design and Implementation of Online Software for PS II Program Faculty Module and Generation of PS Transcripts using PHP and MySQL	Dr. M Madijagan	CP

S.No.	Name	Topic	Instructor	Type
22	Arpit Solanki	Thermal Stress Evaluation in Welding using Ansys	Dr. R Karthikeyan	CP
23	Arshad Abdul Sherief	Studying Investment in Current Assets and Current Liabilities to Assess its Impact on Firm's Profitability	Ms. Pushkala Muralidharan	CP
24	Arya Mohan Das	Blogging as Marketing Tool	Dr. Shazi Shah Jabeen	CP
25	Asma Rizvi	Modeling and Simulation of Load-Frequency Control of Power System	Mr. Sunil Thomas	CP
26	Athwani Mohit Prakash	Development of a mobile based application for online polling and display of result charts	Dr. S Vadivel	CP
27	Barazandeh M Mohammed	Fatigue Stress Analysis on Welded Joints using ANSYS	Dr. R Karthikeyan	CP
28	Chandan Jain	Numerical Study of Convective Heat Transfer of Nanofluids	Dr. K Kumar	CP
29	Deeraj Divakaran	Computer Aided Design of Gear Box used in Propulsion Drive of a Dredge	Dr. M V Sankaram	CP
30	Devashree Kailash Mutha	Building Simulation Tools and their role in improving existing Building Designs	Dr. R Gomathi Bhavani	CP
31	Devdatt Maganty	Mechanism Analysis using Simmechanics/ Matlab	Dr. R Karthikeyan	CP
32	Dhara Rakesh	Investigating Web Page Classification Techniques in Continuous and Discrete Domains	Ms. Alamelu Mangai	CP
33	Dhruv Chugh	Solving Transportation Problem for a Transport Company	Dr. Priti Bajpai	CP
34	Dipthi Sekhar	Using Protocol Specification Language for Describing Mobile IP Protocol	Dr. V Santhosh Kumar	CP
35	Dipti Dhope	Simulation Studies on Linear Quadratic Regulator using Matlab Software	Dr. Kalaichelvi	CP
36	Divakala Sashank	Design and Analysis of an Algorithm for Finding the strongest connected components of a Directed Graph	Dr. Somasundaram Arumugam	CP
37	Divakar Khanna	A Study of Interpolation, Differentiation, and Integration by Cubic Splines	Dr. S Baskaran	CP
38	Divyanshu Kathuria	Solutions and Algorithm for Linear Integer Programming Problems	Dr. Suhel Ahmad Khan	CP
39	Faraz Ahmed	Design & Implementation of Lp Problem in Real Life	Dr. Maneesha Bhagchandani	CP
40	Farha Khatoon	Identification and Structural Analysis of Proteins of Clinical Significance using Bioinformatics Software and Tools	Dr. S Ramachandran	CP
41	Fernandes Michelle Felicia Mic	Developing a Computer Based Model for Arriving at the Optimum Capital Structure	Ms. Pushkala Muralidharan	CP
42	Fouzan Abbas Thakur	Calculation of Elastic Properties of Nanocrystalline Materials	Dr. S Karthiyayini	CP
43	G Pushyami	A Study of Fuzzy Logic Business Applications Using Matlab	Dr. S Baskaran	CP
44	Gaddam Vaishnavi	Solving Inventory Problems using Linear Programming	Dr. Priti Bajpai	CP
45	Gadde Siddartha	Improving Naive Bayesian Web Page Classification	Ms. Alamelu Mangai	CP

S.No.	Name	Topic	Instructor	Type
46	Gaurav Bajargan	Stress Analysis of Pressure Vessel using Ansys	Dr. M N Sankaram	CP
47	Gaurav Singh	Developing Secured Android Mobile Application for Accessing Cloud Enabled Secured Web Service	Dr. S Vadivel	CP
48	Gavva Sai Lakshmi	Computer-based Curve Fitting	Dr. T K Dutta	CP
49	Geethanjali Jeevanatham	Design and Implementation of a Data Mining Model for Car Evaluation	Ms. Alamelu Mangai	CP
50	Guneet Singh	A Study of Various Sales Promotion Schemes and their Effectiveness for FMCG Products in Dubai	Dr. Tanmay Panda	CP
51	Gunturu Mahati	Development of R&C Division File Management System	Dr. Vijaya G	CP
52	Guruguntla Bhargavi	VHDL Simulation of Fir Filter	Dr. A R Abdul Razak	CP
53	Haleema Fathima	Software for Importing Data from Bar-Code Scanning Devices	Dr. V Santhosh Kumar	CP
54	Harshvardhan Mishra	Computer Aided Design and Analysis of Automotive Transmission System	Dr. R Udayakumar	CP
55	Iyer Sudhanshu Sudhir	Implementing different Artificial Intelligence Algorithms in Game Playing	Dr. Sujala D Shetty	CP
56	Jignasa J Dobariya	Modeling and Simulation of DC Dynamic Braking using Three Phase Induction Motor	Mr. Sunil Thomas	CP
57	K Bhavi Bharat	Modeling and Simulation of Dynamics of Single Phase Induction Motor	Mr. Sunil Thomas	CP
58	K Teja Priyanka Yadav	Role and Impact of Visual Communication in Microsoft Powerpoint Presentations	Dr. Shazi Shah Jabeen	CP
59	Kamala Priyadarsini	Analysis of Organisation Structure in Contracting Firms in Dubai	Dr. Tanmay Panda	CP
60	Kanika Mehta	A Study of Attrition in the IT Firms in Dubai in Post Recession Era	Dr. Tanmay Panda	CP
61	Karthik Ramesh	An Improved Data Mining Model for Glass Identification through Discretization	Ms. Alamelu Mangai	CP
62	Katragadda Roshini	Design & Implementation of Non-Parametric tests of Hypothesis	Dr. Maneesha Bhagchandani	CP
63	Ketaki Vinay Deshpande	Implementation of Classification Scheme in Data Warehouse	Ms. Jeyalatha	CP
64	Khurana Vidur Vijay	Development of Software for Helical Spring Design for Fatigue Loading	Dr. N K Miller Jothi	CP
65	L Sashank	Calculation of Ultrasonic Velocity of Binary Liquid Mixtures by Various Theoretical Model	Dr. S Karthiyayini	CP
66	Lavanya Suresh Kumar	Implementation of Dual Simplex algorithm and Sensitivity analysis	Dr. Maneesha Bhagchandani	CP
67	Lehar Chugh	Design & Integration of SIP and IPv6 and Interoperability of SIP Implementation	Dr. M Madijagan	CP
68	M Phani Teja	Analysis of Impact of Dividends on Stock Prices	Ms. Pushkala Muralidharan	CP
69	M R Praveen Kumar	Thermal Analysis of Carbon Composite Material Propulsion Nozzle	Dr. C Periasamy	CP
70	M Siva	Developing Web Service Client for Android	Dr. S Vadivel	CP

S.No.	Name	Topic	Instructor	Type
	Manaswini	Mobile for Interacting with Cloud Enabled Hospital Management System		
71	Manjyot Singh Anand	Modelling and Programming of Robotic Arm using a Microcontroller	Dr. R Gomathi Bhavani	CP
72	Maria Joy	Numerical solution of one dimensional integration by using C	Dr Suhel Ahmad Khan	CP
73	Mohamed Razal Dawood	Design and fabrication of simple Watt Governor	Dr. M N Sankaram	CP
74	Mustafa Mohd Obaid	Modeling and Simulation of DC-DC Boost Converter using State Variable Approach	Dr. Adhir Baran Chattopadhyay	CP
75	Namita Annie Joseph	Design and Simulation of a Solar Tracking Sytem using Matlab and Pspice	Dr. R Mary Lourde	CP
76	Nandakumar Ganesh	Study of Theoretical Models on Quarks	Dr. S Karthiyayini	CP
77	Neha Sondhi	Deploying a database application on the cloud	Dr. Sujala D Shetty	CP
78	Nehala Channanath Anwar	Development of a Web Service for a Hospital Administration System	Dr. Sujala Deepak Shetty	CP
79	Nimit Pradhan	Modeling and Analyzing the Performance of OFSM with CDMA and MIMO	Dr. Anand Kumar	CP
80	Nitya Namratha Kotharu	Comparing Software's for Solving Engineering Problems	Dr. Priti Bajpai	CP
81	Oishik Dey	Sequence Data Analysis for Application Specific Log File	Ms. Jeyalatha	CP
82	Ongole Abhineeth	EXAFS study on analysis of Cu – Zr glasses	Dr. Kavita S Jerath	CP
83	P Anirudh Raju	Modeling of Steam Power Plant using Thermoflow Software	Dr. Surendra Kumar	CP
84	Pachisia Aditya Ashok	Design and Analysis of Wind Energy Variable-Ratio Gear Box	Dr. C Periasamy	CP
85	Prabhash Padinjaroot Prakashan	Functioning of E-Commerce in International Business	Dr. Lajwanti A	CP
86	Pradhan Nikhil Nitin	Web Portal to Increase Student College Interaction	Dr. R K Mittal	CP
87	Prasad Sarvapriya Abjesh	Security Management of Web Services	Ms. S Susila	CP
88	Pratham Daga	Web Services Integration based on SOA	Ms. S Susila	CP
89	Pratik Akhairamka	Design of Computerised Vapour Compression Refrigeration System	Dr. Mallika Parveen	CP
90	Priyanka Arora	Design & Implementation of Project Planning & Control Techniques	Dr. Maneesha Bhagchandani	CP
91	Pulak Kusumwal	Develoiping Android based Mobile Applications for Location Service,Text to Speech Synthesis and Push Notifications	Dr. S Vadivel	CP
92	Raghav Krishna	Efficient Soap Binding for Web Services	Ms. S Susila	CP
93	Raghunadam Kaza	Analytical Solutions of Partial Differential Equations by Line Integration Method using Matlab	Dr. S Baskaran	CP
94	Ramabhotla Swetha Rao	Corporate Social Responsibility: the Current Practices by Local Banks in UAE	Dr. Tanmay Panda	CP

S.No.	Name	Topic	Instructor	Type
95	Ravi Teja	Design of a Multimedia Learning System for Application Architecture	Dr. B Vijayakumar	CP
96	Richa Garg	Using Networks to Solve a Business Problem	Dr. Priti Bajpai	CP
97	Sabarish Nair Prasanth	Design and Implementation of Online Software for Ps II Program Students Module using PHP and MySQL	Dr. M Madijagan	CP
98	Sahil Sharma	Real-Time Application of Transportation Model	Dr. T K Dutta	CP
99	Sai Chaitanya Prasad Avva	Creation of computer based Model for Evaluation of Capital Budgeting Investment Projects	Ms. Pushkala Muralidharan	CP
100	Sanket B Mehta	Design of Hydraulic Circuits in Renewable Energy Industry	Dr. Surendra Kumar	CP
101	Sapna Panjwani	Modeling and Simulation of Dynamics of Three Phase Induction Motor	Dr. Adhir Baran Chattopadhyay	CP
102	Sarah Subramanian	Technological Innovations in Web Designing using various Marketing Trends	Dr. Lajwanti A	CP
103	Sasank Syamala	Modeling and Analyzing Performance of OFDM based MIMO Detection	Dr. Anand Kumar	CP
104	Saumya Nimesh Lokhandwala	Design an Algorithm for Solving LPP using Tora Software	Ms. Kavitha Sathyanarayanan	CP
105	Shad Mohammed Hussain	Modeling and Simulation of Harmonic Impedance of a Salient-Pole Synchronous Generator	Dr. Adhir Baran Chattopadhyay	CP
106	Sharanya Jayasankar	Comparative and transcription analysis of membrane and regulatory proteins in cancer cells	Dr. S Ramachandran	CP
107	Shishir Subramanyam	Design and Implementation of Web Content Mining algorithm to extract graphical data	Ms. Jeyalatha	CP
108	Shitij Vasist	Solving Business Problems with Multiple Goals	Dr. Priti Bajpai	CP
109	Shiuli Bawa	Simulation Studies on Pitch Control in Flight using Matlab Software	Dr. Kalaichelvi	CP
110	Shivangi Sharma	Design Considerations for Wifi Setup and Configuration in an University Environment	Dr. B Vijayakumar	CP
111	Shreeya Verma	Modeling and Analysis of Mobile Communication Growth	Dr. Anand Kumar	CP
112	Shukla Parth Mukesh	State Variable Modeling of Three Phase Salient-Pole Synchronous Machine	Dr. Adhir Baran Chattopadhyay	CP
113	Srinivas Sathish Babu Suresh	Assignment Problems in Real Time Applications	Ms. Kavitha Sathyanarayanan	CP
114	Thomas Binu	Design and Implementation of Online Software for PS - I Program Students Module using PHP and SQL	Dr. M Madijagan	CP
115	Tushar Patel	Digital Object Repository using Fedora	Dr. V Santhosh Kumar Vasudevan	CP
116	Urvi Kohli	Application of assignment problem by using C language	Dr. Suhel Ahmad Khan	CP
117	Varun Chakri	Analyzing and Implementing Viterbi Decoding Algorithm in Matlab	Dr. Anand Kumar	CP
118	Varun Shanker Shukla	Applications of Monte Carlo Method using C	Dr. Suhel Ahmad Khan	CP
119	Vatsa Bhargava	Analysis of Capital Budgeting for Industries	Dr. Mallika Parveen	CP
120	Vedurwada Vijay	Algorithm and Solutions for Quadratic	Dr. Suhel Ahmad	CP

S.No.	Name	Topic	Instructor	Type
	Mohan	Programming Problems	Khan	
121	Vikram Badrinarayanan	Analysis of Luxury Segment 4Wds and their Usage in the UAE	Dr. Mallika Parveen	CP
122	Vivek Ravindran	Design and Analysis of the Strategies and Algorithms to Solve Travelling Salesman Problem	Dr. A Somasundaram	CP
123	Yash Asthana	Simulation of Stamping Process in ANSYS	Dr. R Karthikeyan	CP
124	Aadersh Sathyan Kizhakkidath	Computer Aided Water Level Control System	Dr. R Swarnalatha	LOP
125	Anuj Agarwal	A Report on Study of Electrochemical Deposition of Copper	Dr. B Muralidharan	LOP
126	Anunay Agarwal	Corrosion Prevention using Inhibitors	Dr. B Muralidharan	LOP
127	Apeksha Asthana	Bioluminescence Studies using Vibrio Sps	Dr. Gokhale Trupti Swarup	LOP
128	Arshi Agarwal	Study on the Effect of Time and Temperature on Vitamin A in Multivitamin Tablets	Dr. Neeru Sood	LOP
129	Bhansali Dhruva Nilesh	Design of Moisture Meter	Dr. D V Prasad	LOP
130	Divya Narain	Determination of Aspartame Content in Health Drinks	Dr. Rusal Raj Francis	LOP
131	Fahad Mohammad Khan	Performance and Combustion Analysis of a Diesel Engine with Manifold Fumigation	Dr. R Udayakumar	LOP
132	Gautam Taluja	Design of Cogeneration Power Plant for the Process Industry	Dr. N K Miller Jothi	LOP
133	Harshal Rajeev Kale	Cell – Phone Controlled Audio Mute Button	Dr. Jagadish Nayak	LOP
134	K Praneel Kumar	Global System Mobile Communication Networks for Home Security	Dr. R Swarnalatha	LOP
135	Karan Ambwani	Mechanism analysis for cable winding of a Winch Machine	Dr. C Periasamy	LOP
136	Khurana Vidur Vijay	Static and Dynamic Analysis of crank shaft of a multicylinder 4-stroke engine	Dr. M V Sankaram	LOP
137	Krishna Manjunatha Dixit	Design and Development of an Efficient Fiber Optic Communication Channel Between two existing networks	Dr. S Swaminathan	LOP
138	Laxmana Gargeyee Deepika	RF ID based Security System	Dr. A R Abdul Razak	LOP
139	M R Praveen Kumar	Energy Conservation Audit in Motors at Various Industries	Dr. N K Miller Jothi	LOP
140	M Venkatesh Subramanian	Effect of Microwave Radiation on the Proteins and DNA of Bacteria	Dr. Gokhale Trupti Swarup	LOP
141	Mrinalini Govindankutty Menon	Development of a Low Cost Pulse Rate Monitor Using Labview	Dr. S Swaminathan	LOP
142	Muhammad Thabith F	Comparison of Water Quality Parameters for Domestic and Industrial Purposes	Dr. Rajan Ramaswamy	LOP
143	Nadeem Mohammed	Fuzzy Pid Control for Flow	Dr. R Swarnalatha	LOP
144	Nimkar Prathamesh Pramod	Airflow Control using Fuzzy Logic	Dr. R Swarnalatha	LOP

S.No.	Name	Topic	Instructor	Type
145	Payal Yadav	Model Predictive Control for a Pressure Process	Dr. Kalaichelvi	LOP
146	Prafulla R	Study of Hardness in Nanocrystalline Metals	Dr. S Karthiyayini	LOP
147	Pranav Bhardwaj	Design and Analysis of Gas and Steam Turbine combined Cycle Power Plant	Dr. N K Miller Jothi	LOP
148	Rajesh Chowdary Anne	Microcontroller based Automatic Azan System	Dr. A R Abdul Razak	LOP
149	Renjini Venugopalan Palakkal	IR based Counting System to Count Number of People Entry or Exit from the room	Dr. Jagadish Nayak	LOP
150	Saikishan Suresh	X-Ray Spectroscopic Study of High Temperature Superconductors	Dr. Kavita Sunil Jerath	LOP
151	Saxena Kriti Rajeev	Galvanic Skin Response Meter	Dr. D V Prasad	LOP
152	Shahin Salam	Preparation of Cuprammonium Rayon- a Semi Synthetic Fibre	Dr. B Muralidharan	LOP
153	Supriya Ananthkrishnan	Mobile Phone based Control System for Home Automation	Dr. A R Abdul Razak	LOP
154	Tipnis Rucheeet Sanjiv	Design and Fabrication of Vertical Axis Wind Turbine System	Dr. C Periasamy	LOP
155	Trusha Nilesh Sheth	Optical Analysis of Semiconducting Lasers	Dr.G Amaranath	LOP
156	Tushar Patel	Design & Fabrication of Wind Turbine	Dr. Surendra Kumar	LOP
157	Abhinav Sharma	A Study on Metaheuristic Algorithm	Dr. T K Dutta	SOP
158	Anant Mithal	A Study on Electric Power Distribution using SCADA System	Mr. Sunil Thomas	SOP
159	Anisha Khushlani	Study of Pricing Strategies used by Corporates	Dr. Maneesha Bhagchandani	SOP
160	Ankita Das	Emerging Trends in Antimicrobial Resistance in Microbial Biofilm Communities and its Medical Significance	Dr. S Ramachandran	SOP
161	Anshul Singhal	Synthesis of Ca Sn O ₃ an Anode Material for Li-Ion Batteries by Sol- Gel Route	Dr. R Roop Kumar	SOP
162	Avika Gupta	Carbon Nanotubes for Hydrogen Storage	Dr. Vijaya Ilango	SOP
163	Bhargav Mallampati	A Study on the Computational Complexity of Different Algorithms for Determining a Planar Graph	Dr. A Somasundaram	SOP
164	Deepan Kishore Kumar	Studies in BioMEMS based Biological Cell Separator	Dr. R K Mittal	SOP
165	Dharsana Vijaya Kumar	XML Data Mining	Dr. S Vadivel	SOP
166	Divyanshu Kathuria	PC based Heart Rate Monitor	Dr. R Swarnalatha	SOP
167	Farhana Ahsan	Studies on the Effect of Desalination on the Marine Life	Dr. D J Shariff	SOP
168	Gandhi Nirmitt Rajesh	Study of Integration of Lean and Green Supply Chains in Manufacturing Firms	Dr. Mallika Parveen	SOP
169	Gourav Sehgal	Mechanical Properties of Nanocrystalline Metals and Alloys	Dr. S Karthiyayini	SOP
170	Gunika Mathur	Future of Global Energy Supplies	Dr. Kavita Sunil Jerath	SOP
171	Gupta Shreya	A Study of Corporate Governance Best Practices	Ms. Pushkala	SOP

S.No.	Name	Topic	Instructor	Type
	Sanjay	in Emerging Economies	Muralidharan	
172	H Abhinay Reddy	Routing Analysis of Wireless ADHOC Network by GLOMOSIM	Dr. AR Abdul Razak	SOP
173	Hari Thejas	Design and Analysis Active Solar System for Multistory Building	Dr. C Periasamy	SOP
174	Harshal Rajeev Kale	Study of Digital Filters for Biometric Security Systems	Dr. R Mary Lourde	SOP
175	Jeeva Yaldo	Query Optimisation for Non Traditional Database Applications	Dr. Sujala D Shetty	SOP
176	Justin Jacob	Speech Processing for Cochlear Implants	Dr. T G Thomas	SOP
177	Juveen George	Energy Efficient Lighting and Barriers in Adoption	Dr. R Gomathi Bhavani	SOP
178	Jyotsna Lakshmi Kumar	Studies on Factors Affecting Patient Safety using Medical Equipments	Dr. Neeru Sood	SOP
179	K Nikhita	Case Studies using LPP Model	Dr. Suhel Ahmad Khan	SOP
180	Keshav Bajaj	A Study of Oscillation Criteria for a Second Order Differential Equation	Ms. Kavitha Sathyanarayanan	SOP
181	Kshitij Goyal	Financial Econometrics: Model Selection, Estimation, and Testing	Dr. S Baskaran	SOP
182	Malvika Kaushal	Study and Analysis of an Econometric Application using Gretl Under Ubuntu Linux	Dr. B Vijayakumar	SOP
183	Mario Steve Paul	Performance study of a Gasifier for Thermal and Electrical Applications	Dr. N K Miller Jothi	SOP
184	Mujtaba Ali Jozy	A Study and Applications of Lagrange Multiplier Method	Dr. Suhel Ahmad Khan	SOP
185	Mukhopadhyay Reshmi Soumitra	Study on Vibration Monitoring Methodologies for Steam Turbines used in Power Generation	Dr. M Venkatanaga Sankaram	SOP
186	Munib Ur Rahman Shakeel Ur Rah	Differential Caches for Web Services in Mobile Environments	Dr. S Susila	SOP
187	Nargisdurna Manzoor Ilahi	Study and Analysis of Solar Vapor Absorption Refrigeration Systems	Dr.R Udayakumar	SOP
188	Nishant Mohan Mathur	Study on Some Aspects of Direct Torque Control and Vector Control of Three Phase Induction Motor	Dr. Adhir Baran Chattopadhyay	SOP
189	Nithin Rajan	Analysis and Design of Future Technologies of Power over Ethernet	Dr. M Madijagan	SOP
190	Nooli Kaushik Rao	Modeling and Analyzing Growth of Mobile Communication, Internet, and Computer Technologies in India	Dr. Anand Kumar	SOP
191	Omer Fayyaz	Environmental Fate of Pesticides in Soils and Sands	Dr. Bharat Bhushan Gulyani	SOP
192	Parnika Agarwal	Using Ancient Indian Mathematics to Solve Engineering Problems	Dr. Priti Bajpai	SOP
193	Raghav Khullar	Customers to Employees: a Paradigm Shift in the Current Management Approach	Dr. Tanmay Panda	SOP
194	Reshma Ahmed Thakur	Health Hazards Caused by Environmental Pollution and its Control	Dr. Rajan Ramaswamy	SOP
195	Rifna M	Effect of Nanoparticles in Water Treatment Process	Dr. Rusal Raj Francis	SOP

S.No.	Name	Topic	Instructor	Type
196	Rohit Jain	A Study of Methods used for Estimating Missing Values in Data Sets	Ms. Alamelu Mangai	SOP
197	Rohit Ratnaparkhi	English Language and its use in Emails , Internet and Mobile Phones	Dr. Lajwanti A	SOP
198	Rohitash Gupta	Design of Telemedicine System	Dr. D V Prasad	SOP
199	Rushda Anwar Shahid	A Study on the Damages and ill Effects of Cloud Burst	Dr. Rusal Raj Francis	SOP
200	S Rajeev Kumar	Study of Thermal Behaviour of Materials	Dr. Kavita Sunil Jerath	SOP
201	Sayyam Aneja	Electromagnetic Generators	Dr. K K Singh	SOP
202	Serin Mary Philip	Heart Disease Database using Learning Vector Quantization Neural Network	Dr. Kalaichelvi	SOP
203	Shabiha Khathun	Phytochemical Analysis and Characteristics of Medicinal Desert Plants	Dr. Gokhale Trupti Swarup	SOP
204	Shahin Salam	Detection of Tumours in CT Images using Image Processing Techniques	Dr. Jagadish Nayak	SOP
205	Shivam Goel	UV- Spectroscopic study of crystalline materials	Dr. Kavita Sunil Jerath	SOP
206	Shone Shaji John	Study of Latent Semantic Indexing for Web Page Classification	Dr. V Santhosh Kumar	SOP
207	Shraddha James	Analysis of Carbon Nanotube FETs	Dr. S Swaminathan	SOP
208	Solipuram Sujay Reddy	Study of CNTs in Solar Cells	Dr. G Amaranath	SOP
209	Srinivas Sathish Babu Suresh	Analysis of Hydraulic Circuits in a CNC Lathe	Dr. R Karthikeyan	SOP
210	Sruthi Sathyan Puthalath	Design an Algorithm for Pattern Analysis in Web Usage Mining	Ms. Jeyalatha	SOP
211	Udit Kumar	Treatment Processes for Drinking Water	Dr. B Muralidharan	SOP
212	Vishnu Nambiar	Study on Electromagnetic Analysis on Electrical Machines using Ansys	Dr. K Nithyananthan	SOP
213	Zubin Leons Puthur	Study & Design of MHD Power Generator	Dr. Surendra Kumar	SOP
214	Archit Kannan	Intelligent Detection of Cardiac Diseases	Dr. D V Prasad	SP
215	Arjun Roy	Harmonic Analysis of AC Chopper fed Three Phase Induction Motor	Dr. Adhir Baran Chattopadhyay	SP
216	Arpita Neogi	Assessment of Genetic Counseling understanding at the Preconception Stage in UAE and India	Dr. D J Shariff	SP
217	Chennamaneni Abhinay Rao	Mixer RF Circuit Design	Dr. A R Abdul Razak	SP
218	Divya Narain	Mechanism of Action of Biocides on Microbial Biofilm Communities, Antimicrobial Resistance and its Medical Importance	Dr. S Ramachandran	SP
219	George Blaison Johns	Data Compression using Back Propagation Neural Network	Dr. Kalaichelvi	SP
220	Govindan Gopikrishnan	Study & Design of Adiabatic Cooling Systems	Dr. Surendra Kumar	SP
221	Kapur Parth Nawal	Dynamic and Static Analysis of tower cranes used in Building Construction	Dr. M N Sankaram	SP
222	Mohammed	Design of Energy Efficient Power Distribution	Dr. R Gomathi	SP

S.No.	Name	Topic	Instructor	Type
	Yousuf	Network	Bhavani	
223	Murali Shyam	Weight Reduction of WINCH Machine Chassis using CATIA/ANSYS	Dr. R Karthikeyan	SP
224	Natasha Giridhar	Design of EMG Controlled Prosthetic Arm	Dr. R Swarnalatha	SP
225	Raghunadam Kaza	Soap Processing Performance and Enhancement	Ms. S Susila	SP
226	Rajiv Mukherjee	Designing a Data Mining Model for Identifying Banned Web Sites	Ms. Alamelu Mangai	SP
227	Rattani Yugansh Ashok	Design of Biogas Plant for Cooking Application	Dr. N K Miller Jothi	SP
228	Ritika Bipin Singh	COST EFFECTIVE FOOT SENSOR MEASUREMENT SYSTEM TO ANALYZE AND CORRECT HUMAN GAIT	Dr. S Swaminathan	SP
229	Roshan Praveen Rao	Plasmid Isolation from Rhizobial Strains Isolated from Sesbania	Dr. Gokhale Trupti Swarup	SP
230	Sandeep A	Design and Development of Wind Energy Conversion System for Power Generation	Dr. R Udayakumar	SP
231	Saniyah Hassan	Design and Implementation of Web Content Mining algorithm to extract audio & video from web	Ms. Jeyalatha	SP
232	Sherlyn Jemimah	Forage Quality Analysis of Acacia Plants grown under Saline Conditions	Dr. Neeru Sood	SP
233	Sidrathul Muntaha Shabuddin	Design and Analysis of Trusted Computing Technology to Enable the Cloud Computign Systems	Dr. M Madijagan	SP
234	Sindhuja Mahadevan	Development of a Cloud Enabled Web Service Utilised by Cloud Applications	Dr Sujala D Shetty	SP
235	T Santosh	Modeling and Analyzing the performance of OFDM based Multi-User Detection	Dr. Anand Kumar	SP
236	Tulika Ashok Saraf	Acoustic Echo Cancellation	Dr. T G Thomas	SP

First Semester 2012-2013 (September 2012 to January 2013)

S.No.	Name	Topic	Instructor	Type
1	Aalisha Gupta	Solving Business Problems using Linear Programming	Dr. Priti Bajpai	CP
2	Aanchal Uppal	Use of Computer Applications in Business and Finance	Ms. Pushkala Muralidharan	CP
3	Abhishek Duhan	The Gram-Schmidt Algorithm and its Application	Dr. Suhel Ahmad Khan	CP
4	Abhishek Krishnan	Design and Simulation of Si Engine in Catia	Dr. Udayakumar	CP
5	Akash Gahlot	Design and Implementation of Inventory Management	Dr. Santhosh Kumar Vasudevan	CP
6	Akshay Chaturvedi	Implementation and Applications of Least Squares Fitting of a Curve using Matlab	Dr S Baskaran	CP
7	Aliakbar Eski	Transient Analysis and Simulation on Dynamic Braking of a separately Excited DC Motor	Dr Sunil Thomas	CP
8	Anirudh Ramnath Ramakrishna	Development of a Mobile Application on the Windows Phone 7 Platform	Dr. Sujala D Shetty	CP

S.No.	Name	Topic	Instructor	Type
9	Anish Agarwal	Developing a Computerized Registration System for BPDC	Dr R K Mittal	CP
10	Ankita Gupta	Solving Business Problems using Goal Programming	Dr. Priti Bajpai	CP
11	Anuj Purushottam	Solving Business Problems using Sensitivity Analysis	Dr. Priti Bajpai	CP
12	Anupam Basu	Design and Implementation of DHT for Cloud Environment	Dr. V Santhosh Kumar	CP
13	Anurag Shah	Stress Analysis & Failure Prediction for Adhesively Bonded Joints	Dr. Surendra Kumar	CP
14	Arshia Fathima	Theoretical Investigation of Mechanical Properties of Nanocrystalline CDO	Dr. S Karthiyayini	CP
15	Bharath Kumar Menon	Design and Analysis of Spur Gears using FEM	Dr. M N Sankaram	CP
16	Bharath Vasudevan	CFD Modeling of Pipe Flows	Dr. Mallika Parveen	CP
17	Chayanika Khatua	Data Compression Techniques for Image Processing using Wavelet Transforms- a Case Study	Dr. R Mary Lourde	CP
18	Chenna Reddy Vishwak	Numerical Solutions and Algorithm of Fredholm Integral Equation	Dr. Suhel Ahmad Khan	CP
19	Chirag Mehta	Analysis and Prediction of Movements and Trends in Financial Markets	Ms. Pushkala Muralidharan	CP
20	Dasari Niveditha	Application of Transportation Problems by using C	Dr. Suhel Ahmad Khan	CP
21	Deepti S Prakash	Security aspects of web applications	Dr. S Vadivel	CP
22	Dhariwal Prateek Ashok	Implementation of Six Sigma Methodology in Academics	Dr. Maneesha Bhagchandani	CP
23	Dikasha Israni	Implementation of Indexing Schemes for Multimedia Collection	Dr. B Vijayakumar	CP
24	Dilip Jayachandra Menon	Business Modeling and Decision Support System in Excel	Dr. S Baskaran	CP
25	Dipak Thakkar	Hydraulic Circuit Simulation using Automation Studio	Dr. R Udayakumar	CP
26	Dsouza Cynieka	Computation of Electromagnetic Fields in Linear Induction Motor	Dr. Adhir Baran Chattopadhyay	CP
27	Faisal M Aslam	Simulation Studies of Cooling Control System of Air-Conditioner using fuzzy Logic	Dr. Kalaichelvi	CP
28	Ganapa Sreya	Role of IT in Supply Chain Management	Ms. Aqila Rafiuddin	CP
29	Gautham Badhrinathan	Design of a Distributed Chess Engine	Dr. Anand Kumar	CP
30	Gautham S	Design and Analysis of RF Amplifier using Matlab	Dr. A R Abdul Razak	CP
31	Hedel Frank	Analysis of Green Supply Chains	Dr. Mallika Parveen	CP
32	Hira Quraishi	Design and Simulate a Robotic Wireless Communication System that works off the Cloud	Dr. Anand Kumar	CP
33	Ishan Kaul	Design and Simulation of Automobile Chassis in CATIA and Ansys	Dr. R Udayakumar	CP
34	Jackson Jose	Aerodynamics Analysis of Horizontal Axis Wind Turbines Blades using CATIA and ANSYS	Dr. C Periasamy	CP
35	Jakka Aditya	Solving Transportation Problem for a company	Dr. Priti Bajpai	CP

S.No.	Name	Topic	Instructor	Type
		using Excel Solver		
36	Jiya Chadha	Analytical Solutions to Sales Forecasting Problems through Matlab	Dr. S Baskaran	CP
37	Kevin George Babu	Computer Aided Design of Pressure Vessel used in Oil Industry	Dr. M N Sankaram	CP
38	Kush Suneja	Lighting Design of a typical Commercial Building Space	Dr. R Gomathi Bhavani	CP
39	Kushal Nagar	Developing Computer-Based Model to Evaluate Fluctuations in Indian Rupee Against a Basket of Currencies	Ms. Pushkala Muralidharan	CP
40	Laveena	Modeling and Simulation of Synchronous Machine using Generalized Theory of Electrical Machines	Dr. Adhir Baran Chattopadhyay	CP
41	M Bharathi	Designing the QoS Parameter Measurement Tool for Web Service	Ms. S Susila	CP
42	Madhumita Krishna Mohan	Pedagogical Potentials of Social Media	Dr. Shazi Shah Jabeen	CP
43	Malik Reetika	Design Analysis of an Electric Induction Furnace	Dr. Adhir Baran Chattopadhyay	CP
44	Mallapragada Varun Srivathsa	Developing a Computer based Model to Analyze and Compare Economic Growth Among N11 Nations	Ms. Pushkala Muralidharan	CP
45	Manas Jog	Design and Analysis of enabling trusted Cloud Computing	Dr. M Madijagan	CP
46	Mohammad Zeeshan Qamar	Numerical Solution of Explicit and Implicit Runge Kutta Method by using C	Dr. Suhel Ahmad Khan	CP
47	Mohanasundaram Adarsh	Verilog HDL Implementation of Circular FIFO for interfacing between Two Logic Functions	Dr. AR Abdul Razak	CP
48	Neha Goel	Analysis of Teller Service Times in Banks	Dr. Maneesha Bhagchandani	CP
49	Pranshu Jain	INTECH based SCADA Simulations for a Dry Ice Process Plant	Dr. K Nithiyanthan	CP
50	Priya Bajju Parappat	Design and Implement a Robust Image Recognition Algorithm for Mobile Phone Images	Dr. Anand Kumar	CP
51	Ramnik Kaur Oberoi	To Solve Business Problems using Networks	Dr. Priti Bajpai	CP
52	Raviteja Sripada	Matlab Implementation of Numerical Integration of ordinary Differential Equations	Dr. S Baskaran	CP
53	Renu Purecha	A Study on the Applications of Spline functions using Matlab	Dr. A Somasundaram	CP
54	Rohan Joshua Aarons	Evaluation of Springback in Sheet Metal Forming using Ansys	Dr. R Karthikeyan	CP
55	Roopal Chouhan	Analysis of Fault & Intrusion Detection and Tolerance for Cloud Computing	Dr. M Madijagan	CP
56	Ruchira Chatterjee	Analysis of Transients in Resonant Converters	Dr. Adhir Baran Chattopadhyay	CP
57	S R Chaitanya Varma	Developing Computer based Model for Analysis and Projection of Cashflow for Companies	Ms. Pushkala Muralidharan	CP
58	Sai Abhilash	Internet based Home Automation using Microcontroller	Dr. A R Abdul Razak	CP
59	Sai Kiran Ellenki	A Study on Solving Neutral Differential Equation	Ms. Kavitha	CP

S.No.	Name	Topic	Instructor	Type
		using Matlab	Sathyanarayanan	
60	Sarthak Sethi	Calculation of Energy Losses of a DC Motor during Transient Operation	Dr. Sunil Thomas	CP
61	Satej Milind Wagle	An Improved K Nearest Neighbor based Web Page Classification	Ms. Alamelu Mangai	CP
62	Siddharth Lunawat	Use of ANN for Financial Exchange Rate Prediction	Dr. Bharat Bhushan Gulyani	CP
63	Sriram Krishnakumar	Formulation and Solving Transportation Problem for a Business Setup using Solver	Dr. Priti Bajpai	CP
64	Sruti Sridharan	Developing a Trip planner Mobile app deployed using windows Azure	Dr. S Vadivel	CP
65	Sudhanshu Agarwal	Design and Implementation of Algorithm for LPP using TORA	Ms. Kavitha Sathyanarayanan	CP
66	Swati Raisinghani	Design & Implementation of Linear Programming	Dr. Maneesha Bhagchandani	CP
67	Sweekriti Satpathy	Design and Implementation of Cloud-Based Database System, with Additional Computing Modules	Dr. S Vadivel	CP
68	Varun a G Reddy	Development of Software for Helical Compression Spring Design for Static Service	Dr. N K Miller Jothi	CP
69	Varun Atul Gupta	Project Planning and Control in Oil Industry	Dr. Maneesha Bhagchandani	CP
70	Yash B Tamakuwala	Design and Implementation of Algorithm for Nonlinear Equation using C Language	Ms Kavitha Sathyanarayanan	CP
71	Zawar Aditya Sanjay	Study and analysis of NPSH in Hydraulics Turbines and Pumps	Dr. Surendra Kumar	CP
72	Adarsh Venkataraman G	Analysis and development of MEMS based piezo resistive fingerprint sensor	Dr. S Swaminathan	LOP
73	Ajitesh Singh Parihar	Design and Modeling of a Micro mirror Display System using COMSOL	Dr. S Swaminathan	LOP
74	Aliakbar Eski	Gait Analysis using Arduino based Micro Controller	Dr. S Swaminathan	LOP
75	Anish Agarwal	Developing a Chess Game using Artificial Intelligence and Cloud Computing with an alternate Algorithm	Dr. Anand Kumar	LOP
76	Arshia Fathima	Investigation of alternative technologies for Desalnation	Dr. Bharat Bhushan Gulyani	LOP
77	Atif Wasiuddin Khan	Optimization of Process Parameters for Lab Scale Fermentation for Biotechnological Applications	Dr. S Ramachandran	LOP
78	Badlani Girish Prakash	Design of Frequency Meter using Lab View	Dr. R Swarnalatha	LOP
79	Bhargav Mallampati	Hardware Implementation of a Four Bit Binary Signed Number Multiplier Circuit	Dr. R Mary Lourde	LOP
80	Dey Shramana Subrata Kumar	Chemical and Microbiological Analysis of Water Samples	Dr. Vijaya Ilango	LOP
81	Dhakshita Dodeja	Design and Performance Study of a Mixing Educator	Dr. C Periasamy	LOP
82	Ganapa Sreya	Design and Development of Android based Travel Alert	Dr. S Vadivel	LOP
83	Gautham Badhrinathan	Developing a Computerized Registration System for BPDC	Dr. R K Mittal	LOP

S.No.	Name	Topic	Instructor	Type
84	Gautham S	Design and Analysis of MEMS based Capacitive Finger Print Sensor using QUCS	Dr. S Swaminathan	LOP
85	Hibah Mashhood	Design of Emotional Stress Indicator	Dr. D V Prasad	LOP
86	Jakka Aditya	Design of a Phonocardiographic System	Dr. R Swarnalatha	LOP
87	Javeed Aaqib Ahmed	Testing of Materials for Automobiles using Universal Testing Machines	Dr. C Periasamy	LOP
88	Kevin George Babu	Combustion Analysis for Diesel Engines using Alternate Fuels	Dr. R Udayakumar	LOP
89	Kevin Philip Mathews	Friction Stir Welding and Tensile Testing of the welded Specimens	Dr. R Karthikeyan	LOP
90	Mani Priyanka Ramesh	Development of Prototype Model for Hybrid Solar Lighting System	Dr. K Nithiyananthan	LOP
91	Nilay Ketan Doshi	Design and Simulation of Comb Drive using COMSOL	Dr. Krishna Kumar Singh	LOP
92	Palminder Dhillon	Design on a Multi-Purpose Clap Switch	Dr. R Swarnalatha	LOP
93	Patel Vama Chetan	Implementation of Data Compression Circuit	Dr. R Mary Lourde	LOP
94	Rohan Joshua Aarons	Ultra Violet / Visible Spectrometric study of Crystalline Materials	Dr. Kavita Sunil Jerath	LOP
95	Roshni Hamsakutty	Design of Optical Fiber Sensor for Vibration Amplitude Measurement	Dr. R Swarnalatha	LOP
96	Saima Sirajuddin	Immobilization of Vibrio Species for potential use in Biosensor Development	Dr. Gokhale Trupti Swarup	LOP
97	Shaatir Pervez Khanzada	Design and Performance Study of Aircraft Wing Materials Using UTM	Dr. C Periasamy	LOP
98	Shabbir Ahmed	Detailed Energy Conservation Audit in Process Industries	Dr. N K Miller Jothi	LOP
99	Soha Shaukat Shaikh	Analysis of Suitability of Surface Water for Sugar Industry	Dr. Rajan Ramaswamy	LOP
100	Sriram Krishnakumar	Routing Analysis of Wireless ADHOC Network using Glomosim	Dr. A R Abdul Razak	LOP
101	Syed Mohamed Rizvi	Measurement Techniques for Micro-Scale Flow	Dr. Surendra Kumar	LOP
102	T Krishna Chaitanya	Analytical Methods for Analysis of Pottable Water	Dr. B Muralidharan	LOP
103	Taha Talib Ur Rehman	Pretreatment Methods of Raw Materials as Substrates for Industrial Fermentation	Dr. S Ramachandran	LOP
104	Varun Atul Gupta	Design and Fabrication of Double Crank Mechanism	Dr. M N Sankaram	LOP
105	Zeeshan Ashrafi	Optimization of Process Parameters for Mass Cultivation of Microalgae for Biotechnological Applications	Dr. S Ramachandran	LOP
106	Ahmed Asif Padela	A Study on Removal of Hydrogen Sulphide Gas Odour by Various Methods	Dr. B G Prakash Kumar	SOP
107	Akshay Dalmia	Evaluation of Indian Budget 2012 in the Light of Present Global Economic Scenario	Ms. Pushkala Muralidharan	SOP
108	Al Ameen P Abdul Azeez	Advancement and Transition in Media	Dr. Shazi Shah Jabeen	SOP

S.No.	Name	Topic	Instructor	Type
109	Ariz Ahmad	Study of Combustion Chambers for IC Engines	Dr. R Udayakumar	SOP
110	Arpit Agarwal	Recent developments in Microprocessors	Dr. Sujala D Shetty	SOP
111	Asmita Maiti	Applications of Laser Technology in Medicine	Dr. G Amaranath	SOP
112	Aswin Kumar Balaji	Factors Affecting Boiler Corrosion and its Control Techniques	Dr. Rajan Ramaswamy	SOP
113	Bhuvaneshwari M	Study on Soliton Pulse and its Characteristics for Fiber Optic Communication	Dr. A R Abdul Razak	SOP
114	Fathima Mubarak	Review of Elastic Properties of Nanocrystalline Materials	Dr. S Karthiyayini	SOP
115	Fumida Ashraf	An Investigation on the Synthesis, Characterization & Application of Bio-Degradable Polymers	Dr. B Muralidharan	SOP
116	Gautam Viswanathan Nagarajan	Study of Cryogenic Engine for Satellite Launch Vehicle	Dr. Surendra Kumar	SOP
117	Girirajan Bhuanesh	A Study on the Oscillation Criteria of Neutral Differential Equations	Ms. Kavitha Sathyanarayanan	SOP
118	Gurkaran Singh Aujla	Discovery of Oil and its Impact on the Middle East	Dr. Shazi Shah Jabeen	SOP
119	Isha Jain	An Exploratory Study on Risk Management and Hedging Techniques	Ms. Aqila Rafiuddin	SOP
120	Joel Thomas	PC based Wireless Phonocardiograph	Dr. R Swarnalatha	SOP
121	Justus M George	Calculation of Ultrasonic Velocity of Binary Liquid Mixture by Various Theoretical Model	Dr. S Karthiyayini	SOP
122	Kiran S	Analysis of F1 Cars	Dr. Mallika Parveen	SOP
123	Lakshmi Nandakumar	Application of Carbon Nano Tubes for Energy Storage Device	Dr. K K Singh	SOP
124	Larina Melissa D'Souza	Impacts of Silver Nanoparticles on Wastewater Treatment	Dr. Vijaya Ilango	SOP
125	Manas Jog	Simulating an Application on Robotic Operating System (ROS)	Dr. Anand Kumar	SOP
126	Manasa Priyadarshini Srikanth	Comparative Studies on the Human Phenotypic characters	Dr. D J Shariff	SOP
127	Minu Manoharan Ponthen	Solar Concentrators and its effect on Solar Cells	Dr. Kavita Sunil Jerath	SOP
128	Monisha Tyagi	Study of Adaptive Filter Algorithms for Channel Equalization	Dr. T G Thomas	SOP
129	Nath Sushen Badrinathan	A Study on Numerical Optimization: Search Methods	Dr. Somasundaram Arumugam	SOP
130	Nelakonda Pavan Kumar	Analyzing & Harvesting Unused It Resources	Dr. M Madijagan	SOP
131	Noor Nishal	Study on Superconducting Energy Storage Systems	Dr. Adhir Baran Chattopadhyay	SOP
132	Patel Vama Chetan	Study and Applications of KKT Condition	Dr. Suhel Ahmad Khan	SOP
133	Rahul Mathur	A Study of suitable Option Hedging Strategies for Minimizing Foreign Exchange Risk	Dr. S Baskaran	SOP
134	Raviteja Sripada	Wavelet Transforms and its Application in Biomedical Engineering	Dr. R Mary Lourde	SOP

S.No.	Name	Topic	Instructor	Type
135	Roshni Hamsakutty	Web 2.0: Ideas, Technologies and Implication for Education	Ms. S Susila	SOP
136	Ruchira Chatterjee	Study of Interaction of Pacemakers with High frequency RF Fields	Dr. D V Prasad	SOP
137	Sameer Bhardwaj	Use of Ann in Financial Market Predictions	Dr. Bharat Bhushan Gulyani	SOP
138	Satej Milind Wagle	Euro Zone Debt Crisis- Analysis and Suggestions	Dr. Maneesha Bhagchandani	SOP
139	Shamli Shukkur	Windows Mobile Enabled Cloud based Faculty Feedback System	Dr. S Vadivel	SOP
140	Shasank Patro	Essentials of Obtaining LEED Certification for Buildings	Dr. R Gomathi Bhavani	SOP
141	Shashank Anil Kumar	Study and Analysis of Improvement of Efficiency in Modern Power Plant	Dr. N K Miller Jothi	SOP
142	Sheethal Rosemary Thankachan	A Study on HVDC System Configurations	Dr. Sunil Thomas	SOP
143	Shivam Goel	Study of Effect of Maternal Cadmium Exposure During Pregnancy	Dr. Geetha	SOP
144	Shivani M Palekar	Application of Image Processing Technique on MRI Images for the Detection of Lesions Corresponding to Tumor in the Human Brain	Dr. Jagadish Nayak	SOP
145	Syed Mohamed Rizvi	Study on Condition Monitoring Methodology of Gear Drives in Cement Plant	Dr. M N Sankaram	SOP
146	Zohra	Climate Change and Current Practices in Agroforestry Management Systems in UAE and the Way Forward	Dr. S Ramachandran	SOP
147	A A Thahzeem	Implementation of a 4-Bit Signed Binary Multiplier Using Verilog	Dr. R Mary Lourde	SP
148	Ashwani Thawani	Design and Implementation of Data Warehouse for Academic Institution	Dr. V Santhosh Kumar	SP
149	Chirag Mehta	Analysis of Control Strategy for Fault Detection and error correction in Electrical Power Distribution System	Dr. Sunil Thomas	SP
150	Jackson Jose	Study & Design of Thermo Acoustic Refrigerator	Dr. Surendra Kumar	SP
151	Jobin John	Model and Simulate an End to End Communication System	Dr. Anand Kumar	SP
152	Kritika Sachdeva	Integration of Web Services using BPEL	Dr. S Susila	SP
153	Mananpreet Singh		Dr. M N Sankaram	SP
154	Manasi Jayakumar	Studies on the Blood Grouping with Respect to Intelligence Quotient	Dr. D J Shariff	SP
155	Megha Dua	Design of Pid Controlled Oven	Dr. R Swarnalatha	SP
156	Mohit Ravi Ghatikar	Analysis of photoplethysmography signal	Dr. S Swaminathan	SP
157	Neha Goel	Cloud Interoperability	Dr. M Madijagan	SP
158	Siddhant Maheshwari	Study and Design of Solar Dish for Energy Generation	Dr. C Periasamy	SP
159	Sreeram Navya Sri	Modeling and simulation of a series resonant inverter with bidirectional switches	Dr. Adhir Baran Chattopadhyay	SP

S.No.	Name	Topic	Instructor	Type
160	Teny John Joseph	Study of Hybrid Vehicles	Dr. Mallika Parveen	SP
161	Vivek Kumar	Performance Study of Biomass Gasifier for Industrial Applications	Dr. N K Miller Jothi	SP

LIST OF HIGHER DEGREE PROJECTS

First Semester 2012-2013 (September 2012 to January 2013)

S.No.	Name	Topic	Instructor	Type
1	Cijal Rahim Valiyakath	Aircraft Hydraulic Systems Circuit Design and Simulation	Dr. Jagadish Nayak	CP
2	Himanth Prathap	Design of load sensing hydraulic circuits using Automation Studio	Dr. Ram Karthikeyan	CP
3	Prabhjot Singh	ECG Data Base Systems: A study	Dr. G Vijaya	CP
4	Senthilkumar M	Application of automation studio in simulation of robotics for welding automation	Dr. Ram Karthikeyan	CP
5	Umasankar P	Modeling and Simulation of 11KV Automated Substation using MATLAB	Dr. Mary Lourde	CP
6	Chaparala Ramanuja Prasad	Development of fault tree diagram for the production line of a soft drink bottling company	Dr. Ram Karthikeyan	SP
7	Chindu K Mohasin	Software based Academic Time Table	Dr. Jagadish Nayak	SP
8	Cijal Rahim Valiyakath	Fault analysis method-Non destructive testing - Ultrasonic	Dr. Ram Karthikeyan	SP
9	Himanth Prathap	Retrofit of process gas compressors at various GASCO sites	Dr. Ram Karthikeyan	SP
10	Md Rahebul Hasan	Combustion Analysis using alternate fuel in diesel engine	Dr. R Udaya Kumar	SP
11	Mohamadh Jameel M G B	Development of Office Automation (for R&C Division): A Design & Implementation	Dr. G Vijaya	SP
12	Patel Niravkumar	Energy target setting (ETS) in factory	Dr. Ram Karthikeyan	SP
13	Prabhjot Singh	Design of RF Low Noise Voltage Amplifier and study its Performance using EDA tools	Dr. Abdul Rajak	SP
14	Senthilkumar M	Microcontroller and Finger Print Reader Interface for the Pinger Print Recognition	Dr. Jagadish Nayak	SP
15	Syed Aslam Ahamed S	Design and Performance study of Tower Cranes at High-Rise Buildings	Dr. C Perisamy	SP
16	Umasankar P	Study and Design of Magnetohydrodynamic Power Plant	Dr. C Perisamy	SP

*Annexure B4-10
(2 pages)
Ref/ AR 2012, Page No. B4-10*

SPECIAL LECTURES BY INVITED SCHOLARS - 2012

S.No.	Name	Topic	Date
1	Mr. Dil Sukh Jain, (Alumnus of BITS Pilani), Dy. Director (SDAPSA) National Remote Sensing Centre ISRO, Hyderabad, INDIA	ISRO's Remote Sensing Satellites Programme	March 20, 2012
2	Prof. Dr.-Ing. Ralph Kennel, Professor in Electrical Drive Systems and Power Electronics, Technische Universtat, Munchen (Germany).	Predictive Control	March 26, 2012
3	Video conference with Dr. S P Kothari, (Alumnus of BITS Pilani), Dean MIT Boston.	Financial Crisis: Europe and U. S. A.	April 04, 2012
4	Mr. Mukut Sharma (Alumnus BITS Pilani, India), Senior Vice-President, M/s Primary Infrastructure, Gurgaon, Haryana, India.	Sustainable Development	April 08, 2012
5	Mr. Akram, GM, RAS Infotech, Dubai	IT Security and the ever evolving IT Security Threats	April 12, 2012
6	Dr. Nikolas Maviridis, Professor New York University, Abu Dhabi.	A Technical talk on Humanoids	April 29, 2012
7	Prof. Hussain Al – Ahmad, Head of the Electronic Engineering Department at Khalifa University of Science, Technology and Research, UAE.	Creative Applications of Signal Processing	May 16, 2012
8	Mr. Phil Bedford, CEO, The Referral Institute	Entrepreneurial Success: Role of Referrals	May 22, 2012
9	Mr. Raju Reddy, Alumnus of BITS Pilani, Class of 1981	Sharing his experience as an Entrepreneur	May 27, 2012
10	Col.(Dr.) S.P. Wahi, Chairman and Founder of S.P. Wahi Management and Technology Consultants Pvt. Ltd.	Transformational Leadership	October 03, 2012
11	Mr. Sajith Ansar, CEO, Idea Spice, Dubai	Entrepreneurial Growth: Success Story	October 09, 2012
12	Dr. Osman Ahmed, SBU Head, Siemens Innovation Centre, Abu Dhabi	Innovation & Entrepreneurship	October 10, 2012
13	Mr. Sivagurunathan Sankaranarayan, BITS Pilani, Dubai Campus Alumnus	Entrepreneurial Journey	November 01, 2012
14	Ms. Karan Bartleson, Sr. Director, Community Marketing, M/s Synopsys Inc., U.S.A and President-Elect, IEEE Standards Association	1. Global Standards; 2. Synopsys University Program	November 20, 2012
15	Dr. Eesa Mohammed Bastaki, CEO, ICT Fund, Dubai, UAE	Cloud Computing and Applications (A Keynote during ICCCTAM-12)	December 08, 2012
16	Dr. Osman Ahmed, VP and Head, Siemens Center of Excellence on Smart Buildings, Masdar, Abu Dhabi.	Cloud Collaboration Service-Earning from Cloud (A Keynote during ICCCTAM-12)	December 09, 2012

S.No.	Name	Topic	Date
17	Dr. Ahmed Dabbagh, Technology & Services, Dev Manager, Ankabut, UAE.	UAE Educational Cloud over ANKABUT (A Keynote during ICCCTAM-12)	December 09, 2012
18	Dr. Peter J. Varman, Dept. of ECE, MS-380, Rice University, Houston, Texas.	Noisy Neighbors, Isolation and QoS in Cloud Infrastructures (A Keynote during ICCCTAM-12)	December 10, 2012
19	Dr. Anand Dabak, Ph.D., TI-Fellow, Systems Applications R&D Center, Texas Instruments Inc., Dallas.	Smart Grid Applications	December 13, 2012
20	Mr. Prashant Gulati, Serial Entrepreneur, and Trustee, Global Board of TiE.	Entrepreneurial Experiences & Success Stories	December 16, 2012
21	Professor Radha Maheshwari, Professor, Pathology USUHS, Maryland.	Overview of the INDO-US Collaborative Teaching and Research Opportunities	December 17, 2012
22	Prof. Kuldip Singh Sangwan, HOD, Mechanical Engineering, BITS Pilani, India	Unconventional manufacturing	December 20, 2012
23	Prof. L K Maheshwari, Advisor to Chancellor, BITS Pilani, Rajasthan.	An Overview of Electronics	December 20, 2012
24	Prof. Radha Maheshwari, Professor, Pathology USUHS, Maryland.	Development of second generation viral vaccines	December 20, 2012
25	Prof. Radha Maheshwari, Professor, Pathology USUHS, Maryland.	Antimalarials, Co-Infections and Environmental Agents Increase of Disease severity: Implication in Public Health	December 20, 2012
26	Prof. Kuldip Singh Sangwan, HOD, Mechanical Engineering, BITS Pilani, India	Lean and sustainable manufacturing	December 23, 2012
27	Prof. L K Maheshwari, Advisor to Chancellor, BITS Pilani, Rajasthan.	BJT Amplifier configurations	December 23, 2012
28	Prof. Radha Maheshwari, Professor, Pathology USUHS, Maryland.	Micro RNA as Diagnostic Biomarkers in Traumatic brain injury	December 23, 2012
29	Prof. Radha Maheshwari, Professor, Pathology USUHS, Maryland.	Grant and Paper writing	December 24, 2012
30	Prof. Radha Maheshwari, Professor, Pathology USUHS, Maryland.	Role of angiogenesis in wound healing and cancer	December 24, 2012
31	Prof. Radha Maheshwari, Professor, Pathology USUHS, Maryland.	Antiviral interferon mechanisms against enveloped viruses including HIV	December 25, 2012

Annexure B4-11

(6 pages)

Ref/ AR 2012, Page No. B4-9

LIST OF FACULTY MEMBERS WHO ATTENDED VARIOUS CONFERENCES AND PRESENTED PAPERS - 2012

Conference Proceedings

S.No.	Author(s)	Title of the Paper	Proceedings of Conference	Pages/ Paper ID.	Date & Place
(* Bold faced author names are the faculty/staff of BITS Pilani, Dubai Campus)					
1	Shashank Vasandani and S.Karthiyayini	Theoretical Investigation of Ultrasonic Velocity and Mechanical Properties of Nano-materials.	International Conference on Nanoscience and Technology.	–	20-23th Jan 2012, Hyderabad, India
2	Shashi Bhushan, Maneesha Bhagchandani and R.Karan Singh	On Unbiased Jack-Knifed Regression Type Estimator of Finite Population Mean.	National Conference on Statistical Inference, Sampling Techniques & Related Areas, Aligarh Muslim University.	–	11-12 th Feb 2012, Aligarh, India
3	Dr Shashi Bhushan, Dr. Maneesha Bhagchandani and Dr. R Karan Singh	An Efficient Jack-Knifed Regression Type Estimator for Finite Population Mean,	National Seminar on New Dimensions in Statistics: Concepts & Issues (NDSCI-2012), Banaras Hindu University.	–	2-4 th Mar 2012, Varanasi, India
4	Rusal R Francis	Spectral and DNA binding studies of Cu(II)-OVTRY and Cu(II)-OVTRY-1,10-PHEN complexes.	DRDO sponsored, National Level Workshop on Recent Trends in Inorganic Matreials, National Engineering College.	–	9 -10 th Mar 2012, Kovilpatti, Tamilnadu, India
5	Arpita Neogi and D J Shariff	“Assessment of genetic counseling understanding at the preconception stage in UAE and India”.	Human Genome Meeting.	–	11-14 th March 2012, Sydney, Australia
6	Vyas. P and R K Mittal	“Eliciting additional safety requirements from use cases using SFTA”.	1st International Conference on Recent Advances in Information Technology (RAIT).	–	15-17 th March 2012, Dhanbad Jharkhand, India
7	J. Alamelu Mangai , Dipti S. Kothari and Santhosh Kumar V	“A Supervised Discretization Algorithm for Web Page Classification”	8th International Conference on Innovations in Information Technology (IEEE).	226 – 231	18-20 th March 2012, Al Ain, UAE
8	Karan Ambwani and A M Surendra Kumar	Study and Design of Wind Tunnel for Aerodynamics and Fluid Flow and its application in Weapon Design.	ICFMTE 2012: International Conference on Fluid Mechanics and Thermal	–	28-29 th Mar, 2012, Madrid, Spain

S.No.	Author(s)	Title of the Paper	Proceedings of Conference	Pages/ Paper ID.	Date & Place
(* Bold faced author names are the faculty/staff of BITS Pilani, Dubai Campus)					
			Engineering.		
9	Rusal R Francis	"Synthesis, Spectral, Electrochemical and Biological Studies of VO(II) Schiff Base Complexes"	World Academy of Science, Engineering and Technology.	–	25-26 th April 2012, Paris, France
10	B Muralidharan, S Laya and G Gopu	An Investigation on the impact of azeotropic solvent mixture pretreatment on the fibre composite of a natural and synthetic origin.	S-POLYMAT 2012 (International Conference) Organized by European Polymer Federation.	–	20-23 rd May 2012, Rolduc, Netherlands
11	B. Muralidharan, S Laya and R Venkatachalam	A study on the physico-chemical modification of polyethylene terephthalate fabric.	S-POLYMAT 2012 (International Conference) Organized by European Polymer Federation.	–	20-23 rd May 2012, Rolduc, Netherlands
12	Mohit Athani and Vadivel S	"Facial Detection and Recognition on iPhones using Intel OpenCV Library"	MobiCONA 2012 - 2nd Annual International Conference on Mobile Communications, Networking and Applications.	–	18-19 th June 2012, Singapore
13	Sandeep Ganapa and Vadivel S	"Integrating Facebook Platform Features into an Android Application"	MobiCONA 2012 - 2nd Annual International Conference on Mobile Communications, Networking and Applications.	–	18-19 th June 2012, Singapore
14	A M Surendrakumar and Shylaen keshwani.	"Analysis of Biogas Using Leucaena and Manure as Biomass Source"	International Conference on Desalination and Renewable Energy	–	27-28 th June 2012, Paris, France
15	Laya S and Muralidharan B	"A study on the Impact of Non-aqueous Solvent Mixtures on the Crystallinity of Polyester/Cotton Composite Fibre"	International Conference on Chemistry and Chemical Engineering (ICEEE)	–	29-30 th June 2012, Jeju Island, South Korea
16	Deepan Kishore Kumar, Anand Kumar & R K Mittal	"An Adaptive Curriculum For Higher Education"	4 th International Conference on Education and New Learning Technologies EDULEARN-12	–	2-4 th July 2012, Barcelona, Spain
17	Karthiyayini S and K K Singh	Longitudinal Structure Function of nucleon Using Thermodynamical Bag Model.	International Conference on High Energy Physics-2012 at University of	–	4-11 th July 2012, Melbourne, Australia

S.No.	Author(s)	Title of the Paper	Proceedings of Conference	Pages/ Paper ID.	Date & Place
(* Bold faced author names are the faculty/staff of BITS Pilani, Dubai Campus)					
			Melbourne.		
18	Robin Singh, Aditya Jain, Pratik Sen, Vivek Radhakrishnan and Anand Kumar	Autonomous Unmanned Aerial Vehicle for Reconnaissance based on Robotic Operating System.	International Aerial Robotics Competition (IARC) Symposium	–	4-6 th August 2012, North Dakota, USA
19	Ajith Kumar, Anand Kumar , R K Mittal	Parameters to Diffusion of Cloud Computing in India	Public Policy and Governance, IISc.	–	4-6 th Sep 2012, Bangalore India
20	R. Roop Kumar , and Chockalingam Surya R	Development of bioactive coatings of HA-G-Ti composites for in vivo studies	Innovations of Biomedical Materials 2012 Conference.	–	10-13 th Sep 2012, North Carolina, USA
21	Adithya Mehta and B. Vijayakumar	Implementation of Content Management System for Institution LINUX USERS GROUP using JOOMLA under UBUNTU LINUX	International conference on innovative technologies	167-170; ISBN: 978-953-6326-77-8	26-28 th Sep 2012, Rijeka, Croatia
22	V Varunkumar and B Vijayakumar	Design and Implementation of Search Algorithm for DNA Sequence Database	International conference on innovative technologies	221-224; ISBN: 978-953-6326-77-8	26-28 th Sep 2012, Rijeka, Croatia
23	Saru Saseedharan and Pushkala Muralidharan	Information and Communication Technology in 3PL Organizations	International conference on innovative technologies, IN-TECH 2012.	251-255; ISBN: 978-953-6326-77-8	26-28 th Sep 2012, Rijeka, Croatia
24	D V Prasad , R Swarnalatha and Natasha Giridhar.	"Prediction of Onset of Epileptic Seizure by Analysis Of Pre-Ictal State of EEG"	International conference on innovative technologies, IN-TECH 2012.	–	26-28 th September 2012, Rijeka, Croatia
25	Aditya Mehta and D V Prasad	Developing an iOS application for Restaurant Menu Cards, ,	International conference on innovative technologies, IN-TECH 2012.	–	26-28 th September 2012, Rijeka, Croatia
26	Arpita Neogi, Aiswarya and D J Shariff	"Attitudes and Practices of an undergraduate population from India".	62nd American Society of Human Genetics Annual Meeting.	–	6-10 th Nov 2012, San Francisco, USA
27	Phani Teja Marpaka and Pushkala Muralidharan	A Study of Successful CSR practices of Industry leaders	International Conference on Business Management & Information Systems 2012.	528-534, ISBN: 978-93-82563-39-6	22-24 th Nov 2012, Singapore

S.No.	Author(s)	Title of the Paper	Proceedings of Conference	Pages/ Paper ID.	Date & Place
(* Bold faced author names are the faculty/staff of BITS Pilani, Dubai Campus)					
28	Anand Kumar	Automatic critical health care service system using wireless communication, positioning and/or RF ID	Third International Conference on Computer and Communication Technology, MNNIT.	–	23-25 th Nov 2012, Allahabad, U.P., India
29	B G Prakash Kumar, Roseline and Lima Rose Miranda	Photocatalytic Degradation of Remazol Brilliant Red by TiO ₂ -UV Process.	International Conference on Chemical and Environmental Engineering (ICCEE 2012)	–	28-29 th Nov 2012, Paris, France
30	M Madijagan	"Virtual e-Medi: A cloud based Medical Aid".	World Academy of Science, Engineering and Technology.	2141-2145, Issue 71, pISSN 2010-376X, eISSN 2010-3778	28-29 th November 2012, Paris, France
31	Gautham Badhrinathan, Anish Agarwal and Anand Kumar	Implementation of Distributed Chess Engine using PaaS	International Conference on Cloud Computing Technologies, Applications and Management, BITS Pilani, Dubai Campus.	–	8-10 th Dec 2012, Dubai, UAE
32	Anand Kumar and R K Mittal	An User-Centric Billing Model for Cloud Computing	International Conference on Cloud Computing Technologies, Applications and Management, BITS Pilani, Dubai Campus.	–	8-10 th Dec 2012, Dubai, UAE
33	Rusal R Francis	"Reliability of Cloud Computing In Quantum Chemistry Calculations"	International Conference on Cloud Computing Technologies, Applications and Management, BITS-Pilani, Dubai Campus.	–	8-10 th Dec 2012, Dubai, UAE
34	Mohammed Al Hasan Khan, Shreyas Jaikhan and B G Prakash Kumar	Applications of Cloud Computing In Remote Oil and Gas Operations.	International Conference on Cloud Computing Technologies, Applications and Management, BITS Pilani, Dubai Campus.	–	8-10 th , December 2012, Dubai, UAE
35	M Madijagan	"ERP on cloud-	International	–	8-10,

S.No.	Author(s)	Title of the Paper	Proceedings of Conference	Pages/ Paper ID.	Date & Place
(* Bold faced author names are the faculty/staff of BITS Pilani, Dubai Campus)					
		Implementation strategies and challenges".	Conference on Cloud Computing Technologies, Applications and Management, BITS Pilani, Dubai Campus.		December 2012, Dubai, UAE
36	M Madijagan	"Security & Privacy Architecture as a Service for Small and Medium Enterprises".	International Conference on Cloud Computing Technologies, Applications and Management, BITS Pilani, Dubai Campus.	–	8-10, December 2012, Dubai, UAE
37	M Madijagan	"Cloud Computing: Exploring security design approaches in Infrastructure as a Service"	International Conference on Cloud Computing Technologies, Applications and Management, BITS Pilani, Dubai Campus.	–	8-10, December 2012, Dubai, UAE
38	Siva Manaswini Malladi and Vadivel S	"Designing and Deploying a Hospital Management Application in Google Cloud and Performance Study of the application"	International Conference on Cloud Computing Technologies, Applications and Management, BITS Pilani, Dubai Campus.	–	8-10, December 2012, Dubai, UAE
39	Sujala Shetty, Shikhar Sethi and Vadivel S	"Development of REST Web Service to help organizations promote customer involvement in online corporate social responsibility"	International Conference on Cloud Computing Technologies, Applications and Management, BITS Pilani, Dubai Campus.	–	8-10, December 2012, Dubai, UAE
40	Sujala Shetty, Vadivel S and Nirav Gandhi	"A Cloud enabled online quiz application deployed on Google Cloud"	International Conference on Cloud Computing Technologies, Applications and Management, BITS Pilani, Dubai Campus.	–	8-10, December 2012, Dubai, UAE
41	Susila S and Vadivel S	"Broker Architecture for web service selection using SOAPUI".	International Conference on Cloud Computing Technologies, Applications and Management, BITS Pilani, Dubai Campus.	–	8-10, December 2012, Dubai, UAE
42	Nand Kumar and	"Cloud Computing Setup for	International	–	8-10,

S.No.	Author(s)	Title of the Paper	Proceedings of Conference	Pages/ Paper ID.	Date & Place
(* Bold faced author names are the faculty/staff of BITS Pilani, Dubai Campus)					
	R K Mittal	a Campus Environment"	Conference on Cloud Computing Technologies, Applications and Management, BITS Pilani, Dubai Campus.		December 2012, Dubai, UAE
43	Maneesha Bhagchandani and Priti Bajpai	"A Study of Traffic Management at Toll Plaza on Delhi Gurgaon Expressway"	2nd International Conference on Mathematical Sciences Applications	–	15-16th Dec 2012, New Delhi, India
44	Sujala D Shetty	"A study on security in Cloud computing"	6th Annual International Conference on Business and society in a Global Economy.	–	17-20 th Dec 2012, Athens, Greece
45	Fouzan Abbas Thakur, Gourav Sehgal and S Karthiyayini	"Theoretical Investigation of Ultrasonic Velocity of Nanomaterials from Mechanical Properties"	4th International Conference of Solid State Science and Technology, Holiday Inn.	–	18–20th Dec 2012, Malacca, Malaysia
46	Maneesha Bhagchandani and Priti Bajpai	A Study of Clinic for Public Sector Bank's staff and Family.	International Conference: Mathematical Science and Applications.	–	26 –31st Dec 2012 Abudhabi, UAE

Annexure B4-12

(2 pages)

Ref/ AR 2012, Page No. B4-9

LIST OF RESEARCH PUBLICATIONS – 2012**Journal Publications**

Sl. No.	Author(s)*	Title of the Publication	Journal	Vol.	Pages
(* Bold faced author names are the faculty/staff of BITS Pilani, Dubai Campus)					
1	V Kalaichelvi, R Karthikeyan, D Sivakumar & V Srinivasan	Tool Wear Classification Using Fuzzy Logic for Machining of Al/SiC Composite Material.	International Journal of Modeling and Numerical Simulation of Material Science.	2	28-36; doi:10.4236/mnsm.s.2012.22003
2	Trupti Gokhale, Almas Wali, Shailee Parikh and Neeru Sood	Lux genes as biosensors for environmental pollutants.	Journal of Engineering reviews.	32(1)	17-22
3	Prashant Vaidyanathan, Nitish Malhotra, Jagadish Nayak	"A new encryption technique for the secured transmission and storage of text information with medical images".	Journal of Engineering reviews.	32(1)	57-63
4	Mohamed Anvar Haither	"Performance Optimization – Necessary Steps for PC Fast Performance".	International Journal of Computer Science Issues (IJCSI).	9(2;3)	545-550; ISSN: 1694-0814;
5	Tanmay Panda and K Teja Priyanka Yadav	"Study of shopper's attitude towards private labels in Dubai".	International Journal of Research in Computer Application and Management.	2(6)	8-14; ISSN 2231-1009.
6	V Kalaichelvi and Ahammed Shamir Ali	"Application of Neural Networks in Character Recognition".	International Journal of Computer Applications.	52(12)	0975–8887.
7	Nilaykumar, Kiran Sangani, Vijayakumar B	Cyber Security Scenarios and Control for Small and Medium Enterprises	Informatica Economica	16(2)	58-71; ISSN: 1453-1305
8	Aksheta Mehta, Vijayakumar B	Implementation of a Prototype Client-Server Model for a Generic Database Application over a Network	UACEE Int. Journal of Computer Science and its Applications	2(3)	366-369; ISSN: 2250-3765
9	Laya S, and Muralidharan B	"A study on the Impact of Non-aqueous Solvent Mixtures on the Crystallinity of Polyester/Cotton Composite Fibre".	International proceedings of Chemical, Biological & Environmental Engineering.	38	51-57; ISBN: 978-981-07-2124-4; ISSN: 2010-4618
10	Suhel Ahmad Khan, Q H Khan and Farhat S.	Generalized Vector Mixed Variational-Like Inequality Problem Without Monotonicity.	Thai Journal of Mathematics.	10(2)	245–258

Sl. No.	Author(s)*	Title of the Publication	Journal	Vol.	Pages
(* Bold faced author names are the faculty/staff of BITS Pilani, Dubai Campus)					
11	Suhel Ahmad Khan	Oscillation criteria for second-order nonlinear neutral difference equations of mixed type.	Advances in Difference Equations.	2012 (4)	1-15
12	Suhel Ahmad Khan	Comparison and oscillation criteria for second order nonlinear neutral difference equation of mixed type.	Dynamic Systems and Application	21	83-92
13	Veena Valsamma Daniel, B B Gulyani, B G Prakash Kumar	Usage of date stones as adsorbents: A review.	Journal of Dispersion Science and Technology	33	1321-1331
14	V Srinivasan, R Karthikeyan , G Ganesan, and B Asaithambi	"Comparative study on the wear behavior of long and short glass fiber reinforced plastics".	Metals and Materials International.	16(2)	205-212
15	C Senthilkumar, G Ganesan, and R Karthikeyan	"Optimization of ECM Process Parameters Using NSGA-II".	Journal of Minerals and Materials Characterization and Engineering.	11	931-937
16	D Kanagarajan, K Palanikumar, and R Karthikeyan	"Effect of Electrical Discharge Machining on strength and reliability of WC-30% Co composites".	Materials & Design.	39	469-474
17	V Kalaichelvi , R Karthikeyan , Sivakumar D and Srinivasan V	"Tool Wear Classification Using Fuzzy Logic for Machining of Al/SiC Composite Material".	Modeling and Numerical Simulation of Material Science.	2(2)	28- 36
18	R Udayakumar and Chandra Bhushan Kasera	"Combustion Analysis of a Diesel Engine Operating With Performance Improvement Additives"	International Refereed Journal of Engineering and Science.	1(2)	11-16
19	Aksheta Mehta and Pushkala Muralidharan	Creating a web-based model for financial planning and forecasting	UACEE International Journal of Computer Science and its applications	2(3)	370-374; ISSN: 2250-3765
20	J Alamelu Mangai , V Santhosh Kumar and S Appavu alias Balamurugan	"A Novel Feature Selection Framework for Automatic Web Page Classification"	International Journal of Automation and Computing, Springer-Verlag.	9(4)	442-448
21	J Alamelu Mangai , Dipti D Kothari and V Santhosh Kumar	"A Novel Approach for Automatic Web Page Classification Using Feature Intervals"	International Journal of Computer Science Issues.	9(5;2)	282-287
22	Maheshwar Dwivedy and Prof. R K Mittal	"An investigation into e-waste flows in India"	Journal of Cleaner Production. Elsevier publication.	37 (Dec 2012)	229-242; ISSN: 0959-6526

Annexure B4-13

(3 pages)

Ref/ AR 2012, Page No. B4-31

LIST OF HIGHER DEGREE DISSERTATIONS**Summer Term 2012 (June 2012 to August 2012)**

S.No.	Name	Topic	Supervisor
1	Abraham Jose	Optimization of Pump Performance by Conducting a Pump Audit	Dr. R Karthikeyan
2	Aisha C	Design & Analysis of Social Network for Tourism in a Cloud Environment	Dr. M Madhijagan
3	Anuj Kumar	Simulation and Experimental Analysis of Multipass Heat Exchanger	Dr. Surendra Kumar
4	Appandairajan	Design & Build an enterprise application using WCF & Web components	Ms. Jeyalatha
5	Fahimudeen K	Analysis of Bird Strike on Composite Aircraft Structures	Dr. R Karthikeyan
6	Gagan Singh Sethi	Impact of Organization Structure on Organization Performance: A study in a Mid-sized Engineering Company located in UAE	Dr. Srinivasa Rao
7	Harish Sanjeev	Analysis of Innovation Capability of Enterprises in UAE and Singapore	Dr. Anand Kumar
8	Jarkko T Lasanen	Study of Market Entry Strategy & its Success in International Business - Finnish Companies entering into Norwegian Markets	Dr. Srinivasa Rao
9	Kunal Nagar	Creating a Model View Controller Application using Google App Engine	Dr. B Vijaya Kumar
10	Meeru Hameed	Hydraulic Circuit Optimization of Cable Pulling Machine at ELFIT ARABIA	Dr. Udaya Kumar
11	Mohd Ashraf KP	Design & Implementation of Ad-hoc Cloud Computing for Hotel Industry	Ms. Jeyalatha
12	Nadirsha S	Comparison of ASME Criteria and Fracture Mechanics Criteria in Pressure Vessel Design	Dr. Udaya Kumar
13	Nithya S	Ultra Low Power CMOS Design Technology of Power and Reliability of Schmitt Trigger Based SRAM Cell	Dr. R K Mittal
14	Nuhi Shabnam	Design & Analysis of Green Cloud	Dr. M Madhijagan
15	Pawan Kumar Singh	Strategies Adopted by a Furniture Manufacturing Company for Sustainability during Economic Uncertainty: A Case Study	Ms. Aquila Rafiuddin
16	Udaya Kumar D	Implementation of Project Management as a Tool for Organization Innovation	Dr. TG Thomas
17	Zafar Ali Khan	Design & Implementation of Classification Algorithm for Multi-relational Data Mining	Dr. B Vijaya Kumar

First Semester 2012-2013 (September 2012 to January 2013)

S.No.	Name	Topic	Supervisor
1	Abraham Jose	Design of a Sewage Pumping Station using Automation Studio	Dr. R Karthikeyan
2	Aisha C	Formal Analysis and Verification of Design for Service Oriented Architecture Cloud Application	Dr. Madhijagan
3	Anuj Kumar	Comparison of ASME and Fracture Mechanics criteria in Pressure Vessel Design	Dr. B B Gulyani
4	Appandairajan	Design & Build an Enterprise Application using WCF Component	Dr. S Vadivel
5	Fahimudeen K	Optimization of Aircraft Structures	Dr. C Periasamy
6	G Vijay	Design Issues & Implementation of Low Noise Amplifier in Digital Television	Dr. G Vijaya
7	Gagan Singh Sethi	Analysis of the BRICS and UAE Economics in the Height of Recession and its Impacts	Ms. Pushkala
8	Harish Sanjeev	Neural Network and Modeling, Simulation and Prediction of Innovation Growth in UAE	Dr. Anand Kumar
9	Kunal Nagar	Design and Implementation of Library Management System	Dr. B Vijaya Kumar
10	Meeru Hameed	Hydraulic System Optimization of Cable Laying Equipment	Dr. Udaya Kumar
11	Mohd Ashraf KP	Analysis of Server Application Transition to Virtualized Platform	Dr. Santosh Kumar
12	Nadirsha S	Optimization of Pressure Vessel Design with Fracture Mechanics Criteria	Dr. Jyothi Miller
13	Nithya S	Analysis of Energy Consumption for Digital Serial Interfaces in Embedded Systems	Dr. K Nithyananthan
14	Nuhi Shabnam	Designing a Prototype Architectural Model for Data Migration and Management in Cloud	Dr. M Madhijagan
15	Pawan Kumar Singh	Factors Influencing Investor behavior in Indian Expats in UAE	Dr. Aquila Rafiuddin
16	Saad Mustafa Hashmi	Consumer expectations from Industrial Flow Solutions' Providers: Study of a Pump Manufacturer(Viking) in the Middle East	Dr. Tanmay Panda
17	Udaya Kumar D	Evaluation of Organization Structure Theory and Case Study of EPC Company in Oil & Gas Sector	Dr. Anand Kumar
18	Zafar Ali Khan	Design & Implementation of an Algorithm for Constraint Based Association Mining in a Relational Database	Dr. B Vijaya Kumar

**Both During Summer Term 2012 (June 2012 to August 2012) &
First Semester 2012-2013 (September 2012 to January 2013)**

S.No.	Name	Topic	Supervisor
1	Binny Sabu	Entrepreneurs Growth: Issues and Challenges of micro level entrepreneurs in Dubai	Dr. G Vijaya
2	Jisma Simon	Issues and Challenges faced by Women Entrepreneurs in SMEs in Dubai	Dr. Srinivasa Rao
3	Jithu Lissi Raju	Ultra Low Power CMOS design : Analyzing Power and Reliability of 3-input Majority Gate	Dr. Anand Kumar
4	Madhusoodanan Nambiar K	Optimization of Transportation Cost in Confectionary Industry	Dr. S Bhaskaran
5	Manjunath T	Situational Leadership at Managerial levels - A Study in an UAE Organization	Dr. Tanmay Panda
6	Nilay Vinod Acharya	Ultra Low Power CMOS design: Analyzing Power and Reliability of 2-input-XOR Gate	Dr. Anand Kumar
7	Pillai Shirin Madhavan	Study of Employee Effectiveness in a Higher Degree Institution	Dr. A Srinivasa Rao
8	Rama R	Modeling and Analysis of Human Ear using COMSOL	Dr. Swaminathan
9	Rishirajsingh Parmar	Design of Microstrip Patch Antenna for Wireless Access Point	Dr. Abdul Rajak

Annexure B4-14

(3 pages)

Ref/ AR 2012, Page No. B4-32

LIST OF FIRST DEGREE THESES**Second Semester 2011-2012 (February 2012 to June 2012)**

S.No.	Name	Topic	Supervisor
1	Abhay Ranganathan	Design a Nanonotic Propulsion System	Dr. R K Mittal
2	Achin Gupta	Automation System for Screening Children with Handwriting Difficulties in Early Stages.	Dr D V Prasad
3	Aditya Agarwal	Process Modulation and Control of Hydraulic Circuits	Dr. R Karthikeyan
4	Agrima Bhatnagar	Design and Implementation of Discretization Algorithm using Data Mining Techniques.	Dr. V Santosh Kumar
5	Aishwarya Mahesh	Clinical Implication of Some Common Disorders and the Significance of Genetic Counseling at the Pre-Conception Stage	Dr. D J Shariff
6	Ankit Roongta	Design, Development and Analysis of Hydraulic Circuits for a Winch Machine	Dr. Udaya Kumar
7	Archana Rajan	SCADA Implementation of Expansion of Jet Fuel Storage Facility	Dr. Jagadish Nayak
8	Ashok S Vydyanathan	Optimization of the Pressure Transmitter Manufacturing Line at Rosemount DMMC Emerson Process Management	Dr. Anand Kumar
9	Chilukuri V N Sadrush	Properties and Performance Evaluation of IEEE Standard 802.11b CCK Modulation	Dr.T G Thomas
10	Christie Shaji Varghese	Design and Implementation of Web Mining Algorithm in Federated Databases	S. Jayalatha
11	Gatha Das	Study and Design of Thermal Power Plant for Reducing Pollution	Dr. C Periasamy
12	Gaurav Bansal	Role of Technology in Banks : Biometric Automated Teller Machines	Ms Pushkala
13	Gaurav Malik	Fiber Lasers and their Applications	Mr. G Amarnath
14	Guneet Makkar	Artificial Neural Network Based Classification of Diabetic Retinopathy Fundus Images using Image Processing Based Feature Extraction System.	Dr. Jagadish Nayak
15	K.Sravanthi Reddy	Fault & Intrusion Tolerance for Cloud Computing	Dr.Madia Jagan
16	Kanishk Sharan	Mobile Based Database Querying Application using Oracle ADF.	Dr. Sujala D Shetty
17	Keerthi Adithya Duraikkannan	Reverse Engineering a Roll Around Series Robot through Analysis of its Structure, Function and Operation	Dr. Anand Kumar
18	Keshwani Shylaen Salim	Design and Fabrication of Community Biogas Plant	Dr. A M Surendra Kumar
19	Khushali K Ringwala	Case Study on Bus Routing	Dr. Priti Bajpai
20	Manan Gupta	Design and Implementation of a Classification Model in Data Mining	J. Alamelu Mangai
21	Manisha Ramaseshan	Anti-Microbial Properties of Desert Plants	Dr. Tripti Gokhale

S.No.	Name	Topic	Supervisor
22	Nawaz M Latif	Corporate Social Responsibility and its Impact on Customer Loyalty within the IT and Consumer Electronics Industry	Dr. Lajwanthi
23	Niyas Khan	A Study on Performance of TCP/IP using NS-2	Dr. Abdul Rajak
24	Pavitra Bhalla	Mobile Based Cloud Computing	Dr. S Vadivel
25	Pranav Sharma	Protocol Verification using Promella Language	Ms. Susanna Henry
26	Praveen Bansal	Matlab Based Simulation for DC Motor Driven FIS for all Terrain Vehicles	Dr. K Nithiyananthan
27	Pruthvish. R	Quantum Chemical Treatment of a Novel Schiff Base	Dr. F Rusal Raj
28	Sagar Garg	Energy Efficient Machine to Machine (M2M) Communication	Dr.A B Chattopadhyay
29	Saiganu Vedula	Analysis of Information Security Requirements for Business Organizations	Dr. Santosh Kumar
30	Sana Zaman	Assessment of Information Technology Infrastructure in Business Organizations	Dr. V Kalaichelvi
31	Shikhar Sethi	Design and Study of an Academic Collaboration Tool: Deployment on the Cloud and Access Through Mobile Devices	Ms. S Susila
32	Shinde Nakul Shivaji	Design of a Pressurized Air Roller Feeding System	Dr. Mallika Parveen
33	Surya R Chockalingam	Characteristics of Microbial Bio Film Communities for Identifying Drug Resistant Microbes and Medical Implications for Human Health	Dr. S Ramchandran
34	Syeda Neha Kausar	Analysis of Communication and Networking Protocols of Wireless Sensors Networks	Prof. Swaminathan
35	Vaibhav Thakur	Design and Implementation of Learning Management System under Ubuntu Linux	Dr. B Vijayakumar

First Semester 2012-2013 (September 2012 to January 2013)

S.No.	Name	Topic	Supervisor
1	Agniparthi Sudeep	Non-Linear Analysis of EEG in Different Mental States	Dr. D V Prasad
2	Ankit Arora	Design and Implementation of Alumni Portal in Cloud Environment	Dr. V Santosh Kumar
3	Ben Anthony Joseph	Azeotropic Distillation Design for a Continuous Process of Binary and Tertiary Components	Dr. B B Gulyani
4	Devesh Kumar	Quantitative Analysis of Commodity Markets	Ms. R Aqila
5	Harsh Joshi	Some Aspects of Uncertainty in Information Theory	Dr.A B Chattopadiyay
6	K Bhavi Bharat	Condition Monitoring & Diagnostic Analysis of Propeller Shafts used in Air Crafts	Dr. M N Sankaram
7	Khushbu Kothari	Growth and Establishment of Potential Tree Species Tolerant to Arid Environments for Applications in UAE	Dr. S.Ramachandran

S.No.	Name	Topic	Supervisor
8	Niyati Parameswaran	Cloud Based Artificial Intelligence	Dr. S Vadivel
9	P Sandeep Kumar	Addressing Major Issues in Cloud Computing	Dr. Sujala D Shetty
10	Pranav R K	Coherent Optical Orthogonal Frequency Division Multiplexing DSP Channel Estimation	Dr. Anand Kumar
11	Raghunadam Kaza	Develop a Web Server to Find the Latency of Other Web Services	Ms. S. Susila
12	Ramanujam Shravani Aishwarya	Performance Analysis of FEC In CDMA System using MATLAB	Dr. Abdul Razak
13	Sri Krishna Tapariya	Design and Implementation of New Technique and Metrics for Measuring Cloud Computing Performance	Dr. Madhiajagan
14	Syed Aaquib Hazari	Generation of Hydrogen Fuel using Solar Power	Dr. A M Surendra Kumar
15	Venkateswaran Santhanam	Design and Analysis of Automobile Engine Transition Systems	Dr. Mallika Parveen
16	Yashovinay Pipada	Design and Development of Turbo Charger for Diesel Engine	Dr. R Udayakumar

Annexure B4-15
(3 pages)
Ref/ AR 2012, Page No. B4-35

DETAILS OF DISTRIBUTION OF PS-I STUDENTS AND FACULTY OVER PRACTICE SCHOOL- I STATIONS DURING THE SUMMER 2012
(14.06.2012– 08.08.2012)

S.No.	STATION	NO. OF STUDENTS	NO. OF FACULTY
I. Stations in United Arab Emirates (UAE)			
la. Stations at Abu Dhabi			
1	Automech Engineering Co. WLL*	4	1
2	Constellation Marine Services LLC	1	1
3	Jones Lang LaSalle*	1	1
4	Solutions Middle East	2	1
5	Star Cement Co. LLC.	1	1
6	Universal Voltas LLC*	4	1
lb. Stations at Ajman			
7	Elfit Arabia*	7	1
lc. Stations at Dubai			
8	Al Faizan Electrical Installations LLC	3	1
9	Al Khaleej Sugar Co. LLC	4	1
10	Al Naboodah Automobiles LLC	3	1
11	Al Tayer Motors*	2	1
12	Better Life	5	1
13	BMTC (Bahri Mazroi Trading Company)	6	1
14	Constellation Marine Services LLC	1	1
15	Cosmos Star Consultants*	2	1
16	Cluttons LLC*	1	1
17	Delta Electric	4	1
18	Digitech ERP	7	1
19	Eastern Biotech*	1	1
20	Emerson Process Management FZE*	2	1
21	Emirates Glass LLC*	3	1
22	Emirates Industrial Gas Co. LLC.	4	1
23	E-Pos International LLC	2	1
24	ETA CARS*	5	1
25	ETA Mechanical & Electrical (M&E)*	6	1
26	ETA Melco Elevator Co. LLC	2	1
27	ETA Star Portal LLC*	8	1
28	Fedex Express ME*	3	1

S.No.	STATION	NO. OF STUDENTS	NO. OF FACULTY
29	Galadhari Engineering Works Co. LLC	3	1
30	Granteq LLC*	2	1
31	Gulf & Safa Diaries Co. LLC	4	1
32	Gulf Wireless & Television Co. LLC*	3	1
33	HCL Technologies Limited*	2	1
34	Infratech Controls LLC*	4	1
35	International Diesel Services	2	1
36	International Centre for Biosaline Agriculture (ICBA)*	1	1
37	Jones Lang LaSalle*	4	1
38	Kingsmen Middle East LLC*	4	1
39	L & T, Electrical & Automation FZE*	9	1
40	Logwin Air & Ocean ME LLC	2	1
41	Miltec Rugged Computing Solutions LLC	4	1
42	MSD/ Schering Plough*	7	1
43	Paramount Computer Systems FZ LLC*	5	1
44	Prime Medical Center	3	1
45	Procal Measuring & Control Equipments	2	1
46	Ras Infotech Limited*	2	1
47	Rotapacking	5	1
48	Safedata Middle East LLC*	4	1
49	Safeenat AI Boom Engineering LLC	5	1
50	Sanbook Quality Consultancy*	4	1
51	Sasol Gulf	5	1
52	Scientechnic*	4	1
53	Screencheck	3	1
54	Solutions Middle East LLC*	2	1
55	SRF Overseas Ltd*	2	1
56	Star Cement Co. LLC.*	2	1
57	Steinweg-Sharaf	4	1
58	Technofab Steel Manufacturing LLC.	3	1
59	Tecknoware Middle East FZCO*	4	1
60	Topnet Distribution FZCO*	5	1
61	Transgulf Electro-Mechanical LLC*	9	1
62	UASC Engineering & Ship Repair Service	2	1
63	United Diesel LLC	3	1
64	V3 Media Solutions FZ LLC	2	1
65	Zio Technologies LLC*	4	1

S.No.	STATION	NO. OF STUDENTS	NO. OF FACULTY
Id. Stations at Fujairah			
66	Constellation Marine Services	1	1
Ie. Stations at Ras Al Khaimah			
67	NAEL General Contracting Group	6	1
If. Stations at Sharjah			
68	Cluttons LLC*	2	1
69	GEO Group of Companies	4	1
70	L & T Limited, ECC Division	3	1
71	Murano Lighting Co. LLC*	4	1
72	Petrofac International Ltd.*	3	1
73	Reitz Middle East (FZE)	2	1
74	Verger et Delporte UAE Ltd.*	5	1
75	WS ATKINS Middle East	2	1
II. Stations in India			
Ila. Stations at Delhi NCR			
76	Bharti Airtel Ltd, Gurgaon	4	1
77	Fortis Escort Heart Institute, Delhi	5	1
78	Microtek International Pvt. Ltd., Delhi	10	1
79	Okaya Power Limited, Delhi	5	1
Ilb. Stations at Hyderabad			
80	Agrigold Projects Ltd	4	1
81	eLogic Solutions India, Pvt. Ltd.	2	1
82	SRR Projects Pvt. Limited	3	1

Summary

Total number of students	294
Total number of Stations	76
Total number of Faculty	28**

Note:

* - also PS II station

** - Each PS I Faculty was allotted more than one station to monitor.

Annexure B4-16
(4 pages)
Ref/ AR 2012, Page No. B4-35

SOME PRACTICE SCHOOL- II STATISTICS

Statistical Details of the Distribution of Students & Faculty over Practice School-II during the year 2012:

S.No.	Name of the PS Station	Second Semester 01.02.2012-15.07.2012		First Semester 01.08.2012-10.01.2013		Total No. of Students
		No. of Students	No. of Faculty	No. of Students	No. of Faculty	
PS Stations in USA						
1	N Computing, Silicon Valley, USA	1	-	-	-	1
2	USUHS, Maryland, USA	1	-	-	-	1
A. Stations at Abu Dhabi						
3	Automech Engineering Company WLL*	-	-	2	1	2
4	DBA Infotech (Darwish Bin Ahmed & Sons – Information Technology Division)	2	1	-	-	2
5	ETA Power Projects Division (PPD)	2	1	-	-	2
6	Honeywell Middle East Co. Ltd.	3	1	-	-	3
7	Jones Lang LaSalle	1	1	-	-	1
8	Neo Pharma	2	1	-	-	2
9	Sibca Electronics	3	1	-	-	3
10	Star Cement LLC*	-	-	3	1	3
11	Universal Voltas LLC*	-	-	2	1	2
B. Stations at Ajman						
12	Elfit Arabia*	3	1	4	1	7
13	ETA PCS Switchgear Manufacturing L.L.C.	2	1	-	-	2
C. Stations at Dubai						
14	3i Infotech Ltd.	3	1	-	-	3
15	Al Tayer Motors LLC*	2	1	2	1	4
16	Azbil Corporation	-	-	2	1	2
17	Central Motors & Equipment (BOSCH)	-	-	2	1	2
18	Citibank	4	1	3	1	7
19	Clarion Shipping Services LLC	3	1	-	-	3
20	Cluttons LLC*	1	1	-	-	1
21	Constellation Marine Services LLC*	3	1	-	-	3
22	Cosmos Star Consultants*	4	1	-	-	4

S.No.	Name of the PS Station	Second Semester 01.02.2012-15.07.2012		First Semester 01.08.2012-10.01.2013		Total No. of Students
		No. of Students	No. of Faculty	No. of Students	No. of Faculty	
23	Det Norske Veritas Middle East, (DNV)*	2	1	1	1	3
24	Doosan Project JBL "M"	-	-	21	3	21
25	DULSCO HR Solutions	3	1	1	1	4
26	Eastern Biotech and Life Sciences FZ-LLC*	2	1	-	-	2
27	Elcome International	3	1	-	-	3
28	Emerson Process Management FZE*	7	1	7	1	14
29	Emirates Glass LLC*	2	1	-	-	2
30	Emqube LLC	2	1	-	-	2
31	ETA CARS (Computerised Repairs & Services) *	5	1	4	1	2
32	ETA Mechanical & Electrical (M&E) LLC*	6	1	2	1	8
33	ETA Star Portal LLC*	8	1	3	1	11
34	Fedex Express Inc*	5	1	4	1	9
35	Frequency – Integrated Marketing Communications	2	1	2	1	4
36	Granteq LLC*	2	1	2	1	4
37	Gulf Wireless and Television Co. LLC*	2	1	3	1	5
38	Has Engineering	3	1	-	-	3
39	HCL Technologies Limited	2	1	2	1	4
40	IBM (Gulf Business Machines /UCMC)*	3	1	-	-	3
41	Infratech Controls LLC*	5	1	5	1	10
42	International Centre for Bio- saline Agriculture (ICBA)*	1	1	-	-	1
43	Inspectorate	2	1	-	-	2
44	Intertec Systems LLC	8	1	-	-	8
45	JBK Controls International FZE*	5	1	-	-	5
46	Jones Lang LaSalle*	2	1	-	-	2
47	Kingsmen Middle East LLC*	2	1	-	-	2
48	L & T Electrical & Automation FZE*	8	1	8	1	16
49	Lucy Switch Gear FZE	8	1	4	1	12
50	Maxtouch Computer LLC	3	1	-	-	3
51	Merck Sharp & Dohme*	2	1	3	1	3
52	Metadata Technologies FZ LLC	2	1	-	-	2

S.No.	Name of the PS Station	Second Semester 01.02.2012-15.07.2012		First Semester 01.08.2012-10.01.2013		Total No. of Students
		No. of Students	No. of Faculty	No. of Students	No. of Faculty	
53	Microhard Infotech FZ LLC	5	1	-	-	5
54	Microsoft	2	1	-	-	2
55	Murano Lighting LLC*	2	1	-	-	2
56	Nucleus Exhibitions LLC	2	1	-	-	2
57	Oriental Dynamic Solutions	4	1	4	1	8
58	Paramount Computers Systems FZ LLC*	3	1	3	1	6
59	RAS Infotech Limited *	2	1	2	1	4
60	Redcube Systems LLC	2	1	2	1	4
61	Reliance Facilities Management LLC (RFM Global)	2	1	-	-	2
62	San Book Quality Consultancy*	3	1	2	1	5
63	Scientechnic*	-	-	3	1	2
64	Siemens LLC	3	1	3	1	6
65	Solutions Middle East LLC*	10	1	6	1	16
66	SRF Overseas Ltd. *	2	1	-	-	2
67	Star Cements LLC*	2	1	2	1	4
68	TE connectivity	2	1	-	-	2
69	Teknoware LLC*	2	1	4	1	6
70	Think Software Services FZ LLC	1	1	-	-	1
71	Thyssen Krupp Elevator (UAE) LLC	3	1	3	1	6
72	Topnet Distribution FZ LLC*	-	-	2	1	2
73	Trans Gulf Electro Mechanical LLC*	3	1	3	1	6
74	Yokogawa Engineering Middle East FZE	2	1	-	-	2
75	Zio Technologies LLC*	3	1	2	1	5
D. Fujairah						
76	Microsol International LLC FZE*	7	1	-	-	7
E. Sharjah						
77	AC Neilson & Company	3	1	-	-	3
78	Ashkhar Metals FZE	-	-	3	1	3
79	Central Motors & Equipment (BOSCH)*	2	1	2	1	4
80	Cluttons LLC*	2	1	-	-	2
81	Consilium ME FZC*	2	1	-	-	2

S.No.	Name of the PS Station	Second Semester 01.02.2012-15.07.2012		First Semester 01.08.2012-10.01.2013		Total No. of Students
		No. of Students	No. of Faculty	No. of Students	No. of Faculty	
82	Corrosion Technology Services LLC	2	1	-	-	2
83	ESRI Global Inc.	2	1	1	1	3
84	Petrofac International Ltd.*	7	1	5	1	12
85	Quality International Co. Ltd. FZC	2	1	-	-	2
86	Safeenat Al Boom Engineering (Al Maronah Marine Engineering Services)*	3	1	-	-	3
87	Verger et Delporte UAE Ltd.*	3	1	-	-	3

Summary

Total No. of PS II stations in Semester II	: 76
Total No. of stations in Semester I	: 40
Common Stations in Both Semesters	: 33
Total No. of students in Semester II	: 242
Total No. of students in Semester I	: 144

* - also PS I stations

Annexure B4-17

(2 pages)

Ref/ AR 2012, Page No. B4-35

PRACTICE SCHOOL GROWTH STATISTICS**PRACTICE SCHOOL- I**

Session	No. of students who attended PS- I	No. of faculty who supervised PS- I	No. of PS- I Stations
Summer 2002	53	04	07
Summer 2003	102	10	24
Summer 2004	94	14	26
Summer 2005	155	21	49
Summer 2006	260	28	81
Summer 2007	256	32	91
Summer 2008	357	40	117
Summer 2009	357	40	126
Summer 2010	457	49	139
Summer 2011	343	32	89
Summer 2012	294	28	76

PRACTICE SCHOOL II

Year	Semester	Period (Duration)	No. of Stations	No. of Students	No. of Faculty
2003-04	I	July 2003 to January 2004 (09.07.2003 to 18.01.2004)	17	27	16
	II	February 2004 to July 2004 (09.02.2004 to 22.07.2004)	16	26	13
2004-05	I	August 2004 to January 2005 (02.08.2004 to 10.01.2005)	27	43	17
	II	February 2005 to July 2005 (01.02.2005 to 14.07.2005)	28	39	26
2005-06	I	July 2005 to January 2006 (24.07.2005 to 05.01.2006)	30	47	30
	II	February 2006 to July 2006 (02.02.2006 to 16.07.2006)	31	43	27
2006-07	I	July 2006 to January 2007 (31.07.2006 to 12.01.2007)	40	76	40
	II	February 2007 to July 2007 (01.02.2007 to 15.07.2007)	45	75	38
2007-08	I	August 2007 to January 2008 (1.08.2007 to 15.01.2008)	59	116	50
	II	February 2008 to July 2008 (3.02.2008 to 17.07.2008)	57	115	50
2008-09	I	August 2008 to January 2009 (3.08.2008 to 15.01.2009)	67	140	52
	II	February 2009 to July 2009 (01.02.2009 to 15.07.2009)	61	133	51

Year	Semester	Period (Duration)	No. of Stations	No. of Students	No. of Faculty
2009-10	I	August 2009 – January 2010 (02.08.2009 to 14.01.2010)	73	155	60
	II	January 2010 to July 2010 (31.01.2010 to 14.07.2010)	59	163	52
2010-11	I	August 2010 to January 2011 (1.08.2010 to 13.01.2011)	71	170	65
	II	February 2011 – July 2011 (30.01.2011 to 14.07.2011)	66	199	59
2011-12	I	August 2011 – January 2012 (1.08.2011 to 12.01.2012)	71	204	62
	II	February 2012 – July 2012 (1.02.2012 to 12.07.2012)	76	242	60
2012-13	I	August 2012 – January 2013 (1.08.2012 to 10.01.2013)	40	144	38

Annexure B4-18

(3 pages)

Ref/ AR 2012, Page No. B4-35

FACILITIES AVAILABLE AT PS-II STATIONS DURING THE YEAR 2011-12

S.No.	PS-II Stations	Out of pocket allowance in Dhs & Others Facilities.
A. Stations at Abu Dhabi		
1	Automech Engineering Company	1000
B. Stations at Dubai		
1.	Clarion Shipping Services LLC	1000
2.	Cluttons LLC	1000
3.	Cosmos Star Consultants	500
4.	Det Norske Veritas Middle East (DNV)	1400
5.	DULSCO HR Solutions	1500
6.	Emerson Process Management FZE	550
7.	Emqube LLC	1500
8.	E-Pos International LLC	1000
9.	ETA Melco Elevator Co. LLC	500
10.	Frequency – Integrated Marketing Communications	1000
11.	Infratech Controls LLC	1000
12.	Intertec Systems LLC	1500
13.	JBK Controls International FZE	1000
14.	Jones Lang LaSalle	4000
15.	Kingsmen Middle East LLC	800
16.	L & T Electrical & Automation FZE	1500+Lunch
17.	Lucy Switch Gear FZE	2000+Factory uniform, safety shoes
18.	Metadata Technologies FZ LLC	1200
19.	Merck Sharp & Dohme	2000
20.	Nucleus Exhibitions LLC	1000
21.	Paramount Computers Systems FZ LLC	1500
22.	RAS Infotech Limited	1500
23.	Redcube Systems LLC	1200
24.	Siemens LLC	1500
25.	Solutions Middle East LLC	500
26.	Star Cement Co. LLC	1500
27.	Think Software Services FZ LLC	1000
28.	Thyssen Krupp Elevator (UAE) LLC	1500
29.	Yokogawa Engineering Middle East FZE	2000
30.	Zio Technologies LLC	1000
C. Stations at Fujairah		
1.	Microsol International LLC FZE	1000+Accommodation+subsidized lunch
D. Stations at Sharjah		
1.	AC Neilson & Co.	2000

S.No.	PS-II Stations	Out of pocket allowance in Dhs & Others Facilities.
2.	Central Motors & Equipment (Bosch)	2000
3.	Cluttons LLC	1000
4.	Corrosion Technology Services LLC	2000
5.	ESRI Global Inc.	2200
6.	Petrofac International	4000
7.	Quality International Co. Ltd.	2000

FACILITIES AVAILABLE AT PS-II STATIONS DURING THE YEAR 2011-12

S.No.	PS-II Stations	Out of pocket allowance in Dhs & Others Facilities.
A. Stations at Abu Dhabi		
1	Honeywell ME	1000
2	Jones Lang LaSalle (JLL)	4000
3	Sibca Electronics	1500
B. Stations at Ajman		
4	ETA PCS	1000
C. Stations at Dubai		
5	Adapt Middle East LLC	1000
6	Aptec Distribution FZ LLC	1000
7	Asteco LLC	2000
8	Citibank	1500
9	Clarion Shipping Services LLC	1000
10	Cluttons LLC	1000
11	Cosmos Star Consultants	750
12	Culligan International (Emirates) LLC	1250
13	Det Norske Veritas Middle East (DNV)	1400
14	DULSCO HR Solutions	1500
15	Elcome International	2000
16	Emerson Process Management FZE	550
17	Emqube LLC	1500
18	E-Pos International LLC	1000
19	ETA Melco Elevator Co. LLC	500
20	Frequency – Integrated Marketing Communications	1000
21	Granteq LLC	1000
22	Gulf Wireless Television	500
23	Infratech Controls LLC	1000
24	Inspectorate	1500
25	Intertec Systems LLC	1500
26	JBK Controls International FZE	1000
27	Jones Lang LaSalle (JLL)	4000

S.No.	PS-II Stations	Out of pocket allowance in Dhs & Others Facilities.
28	Kingsmen Middle East LLC	800
29	L & T Electrical & Automation FZE	1500+Lunch
30	Lucy Switch Gear FZE	2000+Factory uniform, safety shoes
31	Metadata Technologies FZ LLC	1200
32	Microhard Infotech LLC	1000
33	Microsoft	1500
34	MSD/ Schering - Plough Ltd.	2000
35	Nucleus Exhibitions LLC	1000
36	Oriental Dynamic Solutions	750
37	Paramount Computers Systems FZ LLC	1500
38	PROCAL Measuring & Control Equipment	500
39	RAS Infotech Limited	1500
40	Redcube Systems LLC	1200
41	Siemens LLC (Rashidiya)	1500
42	Solutions Middle East LLC	500
43	Star Cement Co. LLC	1500
44	Tech Mahindra Ltd.	1000
45	Teknoware Middle East	750
46	Think Software Services FZ LLC	1000
47	Thyssen Krupp Elevator (UAE) LLC	1500
48	Yokogawa Engineering Middle East FZE	2000
49	Zio Technologies LLC	1000
C. Stations at Fujairah		
50	Microsol International LLC FZE	1000+Accommodation+subsidized lunch
D. Stations at Sharjah		
51	A/C Spares Neilson & Co.	2000
52	Central Motors & Equipment (Bosch)	2000
53	Cluttons LLC	1000
54	Corrosion Technology Services LLC	2000
55	ESRI Global Inc.	2200
56	ETA PCS (Ajman)	1000
57	PETROFAC	4000
58	Quality International Co. Ltd.	2000
59	Serck Services International	1500

Annexure B4-19
(20 pages)
Ref/ AR 2012, Page No. B4-36

LIST OF PROJECT ASSIGNMENTS FOR PS II SECOND SEMESTER 2011-12

1. DBA Infotech, Abu Dhabi, UAE

1. Enterprise Resource Planning Solutions At DBA Infotech
2. Enterprise Resource Planning & Applications

2. ETA PPD, Abu Dhabi, UAE

3. Introduction To Tender/Contracting And Switchgear Protection In Electrical Substation
4. Power Transformers And Tenders

3. Honeywell, Abu Dhabi, UAE

5. Emergency Shutdown Systems At Honeywell
6. Implementation Of Distributed Control Systems In Borouge-3 Project
7. C300 System And Experion Software

4. JII, Abu Dhabi, UAE

8. Overview Of Abu Dhabi Real Estate Market

5. Neo Pharma, Abu Dhabi, UAE

9. An Overview – Pharma Quality Management System
10. Design And Development Of A Pharmaceutical Product

6. Sibca Electronics, Abu Dhabi, UAE

11. Simulation Of Hvac Concepts Through Automation/ Controls
12. Building Management System For Hvac In Burjeel Lifeline Hospital
13. Lighting Control In Etihad Towers

7. Elfit Arabia, Ajman, UAE

14. Design Modifications On Winch And Design Optimization Of Hydraulic Cable Jack
15. Structured It Infrastructure Upgrade For A Small To Medium Sized Company And Development Of An Interdepartmental Planning Tool
16. Optimization Of Winch Machine And Analyzation Of Products In 2d

8. ETA PCS ,Ajman, UAE

17. An Introduction To Sales, Production And Scms In ETA-PCS
18. An Introduction To Lv, Cnr And Other Engineering Activities In ETA-PCS

9. 3i Infotech, Dubai, UAE

19. Implementation Process Of Orion Business Unit
20. Sales Process For Orion Business Unit
21. Business Functions Of Orion Business Unit

10. Al Tayer Motors LLC, Dubai, UAE

22. The Study Of Air Conditioning, Braking System And Other Technical Aspects Of An Automobile
23. Suspension And Steering System Of An Automobile

11. Citibank, Dubai, UAE

24. Key Segments Of The Operations And Technology Division In Banking
25. An Introduction To Retail Banking And Its Constituents With A Rendition On The Various Types Of Investments
26. Banking Solutions By Citibank, Maintenance On Mis And Process Flows Of Standard Retail Banking Transaction
27. Cheque Clearing, Commercial Banks And Other Banking Principles

12. Clarion Shipping Services, Dubai, UAE

- 28. Ocean Freight Analysis – Environmental Effects Of Shipping
- 29. Ocean Freight Analysis : Inco Terms And Imco Classification
- 30. Ocean Freight Analysis : Factors Affecting Pricing

13. Cluttons, Dubai, UAE

- 31. Property Valuation Techniques In UAE

14. Constellation Marine Services, Dubai, UAE

- 32. Draft Surveys, Ship Condition Surveys And Surveys Attended At Constellation Marine Services
- 33. Pre Purchase Yacht Survey / Inspection
- 34. Asbestos Awareness And Safety Measures In Shipping Industry

15. Cosmos Star Consultants, Dubai, UAE

- 35. Services Offered By Cosmos Star Consultants
- 36. Deal Launching And Management At Group Buying Websites
- 37. Facilities Provided By Cosmos Star Consultants
- 38. Group Buying And Its Advertising Methods

16. DNV (Det Norkse Veritas), Dubai, UAE

- 39. Intranet Website Developing Using Tridion And Vba Solutions
- 40. Development Of Business Tools Using Visual Basic

17. DulSCO LLC, Dubai, UAE

- 41. The Role Of It In Human Resource Management And Human Resource Information Systems
- 42. A Study On Computer Networks
- 43. Study On Environmental Impacts [Ozone Layer Depletion And Bioremediation

18. Eastern Biotech, Dubai, UAE

- 44. Medical Database Systems
- 45. Designing A Web Layout & Marketing A Service

19. Elcome, Dubai, UAE

- 46. Business Process Of An Organization
- 47. Integrating Alarm Monitoring System Using Praxis Hardware
- 48. Integrating An Alarm Monitoring System Using Praxis Hardware

20. Emerson Process Management, Dubai, UAE

- 49. Quality Management And Calibration
- 50. Developing The Inspection Tool And Equipment Management Software
- 51. Design & Development Of Label Printing Tools, Notification Tool, Excel Automation And A Report On Best Coding Practices And Standards
- 52. Implementation On The Production Lines
- 53. Level Measurement And Its Technologies
- 54. Project Management And Technologies Of Pressure Technologies
- 55. Temperature Transmitters And Its Significance

21. Emirates Glass, Dubai, UAE

- 56. Coating Of Glass
- 57. Supply Chain Management

22. Emqube, Dubai, UAE

- 58. Search Engine Optimization, Web Design And Software Testing
- 59. Marketing Techniques And Strategies

23. ETA Cars LLC, Dubai, UAE

- 60. Spare Part Procurement System
- 61. Customer Relationship Management (Crm)
- 62. Automotive Sector In UAE
- 63. Automotive Sector In UAE And Customer Care
- 64. Customer Care

24. ETA M & E, Dubai, UAE

- 65. Role Of Sprinklers In Fire Alarm Systems
- 66. Application And Role Of Chillers Plant
- 67. Role Of Air Conditioning In Hvac System
- 68. Role Of Cooling Towers In Hvac
- 69. Busbars And Bms In Electrical Power Distribution
- 70. Role Of Heat Detector In Fire Alarm System

25. ETA Star Portal, Dubai, UAE

- 71. Spend Management Systems
- 72. Cement Industry In The UAE
- 73. Gcc Food Industry
- 74. Industrialization In UAE
- 75. Oil And Gas Industry In India
- 76. Economic Development In The UAE
- 77. Construction Companies In UAE
- 78. Oil And Gas Industry In UAE

26. Fedex Express, Dubai, UAE

- 79. Software Development & Information Technology
- 80. Implementation Of Fedex Webservices In E-Commerce
- 81. Study Of Operations At Fedex Customer Service
- 82. Roll Of Interactive Voice Response In Customer Service
- 83. Hub Operations At Fedex

27. Frequency - Integrated Marketing Communications, Dubai, UAE

- 84. Erp, Bi And Other Business Solutions Offered By Microsoft
- 85. Erp And Other Business Software

28. Granteq LLC, Dubai, UAE

- 86. Comparison Of Various Videoconferencing Solutions
- 87. ICT Penetration In UAE

29. Gulf Wireless & Television Co. LLC, Dubai, UAE

- 88. Low Voltage Systems
- 89. Closed Circuit Television (CCTV)

30. HAS Engineering, Dubai, UAE

- 90. Operations At A Facilities Management Firm
- 91. Pool Maintenance And Cost Analysis
- 92. Design And Implementation Of Security Items

31. HCLTechnologies Limited, Dubai, UAE

- 93. Design And Implementation Of Airline Information And Health Care Systems
- 94. Design And Implementation Of Web Data Management And Health Care Application

32. IBM / UCMC / GBM, Dubai, UAE

- 95. An Insight Into The Integrated Technology Services And Systems Group Of Gbm
- 96. Computer Networks And It Services
- 97. Gbm's Systems And Platform Services Product Portfolio

33. ICBA, Dubai, UAE

- 98. Evaluation Of Native Rhizobial Strains For Tolerance To Abiotic Stresses

34. Infratech Controls BM LLC, Dubai, UAE

- 99. Building Automation System
- 100. Heat Ventilation And Air Conditioning Systems
- 101. CCTV Systems
- 102. Global Positioning System
- 103. Building Management Systems

35. Inspectorate, Dubai, UAE

- 104. A Study On Petrochemicals And Water Analysis
- 105. Enumeration, Isolation And Detection Of Bacteria From Food Samples

36. Interteck, Dubai, UAE

- 106. Marketing Strategies And Product Sales In It Industry
- 107. An Overview Of The Landesk Management Suite And The Nextthink Monitoring Tool
- 108. Productivity Measures Of Sng And Asg Department
- 109. Telemarketing And Research On Infor Asset Management Systems
- 110. An Overview Of It Infrastructure Library
- 111. Operations In Microsoft Product Division
- 112. An Overview Of Syros Erp And Its Integration With Business Intelligence (Bi)
- 113. Customer Perspective In Quality Management System

37. JBK Controls, Dubai, UAE

- 114. Design And Estimation Of Security Systems And Application
- 115. Design And Estimation Of Security Systems
- 116. Design And Estimation Of Cctv And Access Control System
- 117. Study Of Optical Fibres & Communication Systems
- 118. Design And Estimation Of Building Management Systems

38. JII, Dubai, UAE

- 119. Dubai Economic And Real Estate Overviews
- 120. Property Information Platform (Pip) & Dubai Real Estate Market Overview Q2 2012

39. Kingsmen, Dubai, UAE

- 121. Logistics And Management At Events And Theme Parks
- 122. Design And Buildup Of Exhibition Stands

40. L&T Electrical & Automation Fze, Dubai, UAE

- 123. Gps Chemoil – Electrical And Instrumentation Aspects
- 124. Instrumentation And Electrical Specifications For Gulf Petrochem And Other Projects
- 125. Lteafze Production Management & Value Stream Mapping
- 126. District Cooling Plant Plc System In Education City Qatar

- 127. Development And Communication Of Plc
- 128. Zakum Central Super Complex Demothballing Project
- 129. Cctv System Installation
- 130. Cctv System – Design And Installation

41. Lucy Switchgear Fze, Dubai, UAE

- 131. To Understand And Improve The Contractual Requirement And Process And Improve Customer Focus
- 132. Occupational Noise Assessment And Health & Safety Trainings
- 133. Alternative To Shot Blast Operation & Implementation Of Lean Manufacturing At Shop Floor
- 134. Development Of Functional User Manuals For Dynamics Ax 2012 Implementation
- 135. Resourcing New Suppliers From The Global Market
- 136. Validation Of Weld Fixtures For External Audit
- 137. Estimation Of Air Freight Costs & Means Of Reduction
- 138. Upgradation Of Windows Legacy To Windows 7 Operating System

42. Maxtouch Computer, Dubai, UAE

- 139. Virtualization And Storage
- 140. It Security Solutions For The Corporate Sector
- 141. Corporate It Infrastructure Solutions

43. Metadata Technology, Dubai, UAE

- 142. Customer Relationship Management Using Microsoft Dynamics Crm
- 143. Customer Relationship Management Using Soffront Crm

44. Microhard Infotech LLC

- 144. Asset Tracking And Inventory Management System
- 145. It Solutions In Security
- 146. Security Solutions In Microhard Infotech
- 147. It Operations And Solutions
- 148. Access And Identity Management

45. Microsoft, Dubai, UAE

- 149. Junior Software Developer (Mobile) DPE – Microsoft Gulf
- 150. Junior Software Developer (Cloud) DPE – Microsoft Gulf

46. Msd (Merck, Sharp & Dhome), Dubai, UAE

- 151. Continuous Medical Education Website
- 152. Oracle: On Demand, A Tool For Modern Day Business Environment

47. Nucleus Exhibitions, Dubai, UAE

- 153. Advance Database Management System
- 154. Data Management Solutions

48. Oriental Dynamic Solutions, Dubai, UAE

- 155. Elv Systems: Design To Implementation Of Central Battery System
- 156. Overview Of Access Control System & Public Address System
- 157. Fire Alarm And Voice Evacuation System: Design And Installation
- 158. Remotely Accessible Cctv Systems – Design And Installation

49. Paramount Computers Systems FZ LLC, Dubai, UAE

- 159. Microsoft Sharepoint Web Application And Disk Based Backup Solution
- 160. Developing An Intranet Site Using Microsoft Sharepoint And

Cloud Backup And A212 Recovery Solution

161. Cloud Backup Technology

50. Quality International

162. Low Pressure Piping – Das Island Project

163. Process Control Systems In Pressure Vessels

51. RAS Infotech Limited, Dubai, UAE

164. Information Security Products

165. Internet Protocol Version 6 (Ipv6)

52. Redcube Systems LLC , Dubai, UAE

166. Security Systems

167. Extra Low Voltage Systems

53. Reliance Facilitices Management, Dubai, UAE

168. Facilities Management At Business Central Towers

169. Facility Management In Dubai, Qatar

54. Safeenat AI Boom, Dubai, UAE

170. Joomla Web Designing

171. Securing E-Commerce Transaction

172. Using Web Analytics To Improve Web Traffic And Sales Online

55. Sanbook Quality Consultancy, Dubai, UAE

173. Food Safety Management System

174. Quality Auditing

175. Integrated Management System And Its Application

56. Siemens LLC, Dubai, UAE

176. Design And Implementation Of Building Management System

177. Px Upgradation – Building Management System

178. Control System Fundamentals And Applications

57. Solutions Middle East LLC, Dubai, UAE

179. Document Management System (Dms) Through Viewwise

180. Google Enterprise Solutions

181. Crm: Maximizer- Features And Application

182. Recruitment And Marketing Through Linkedin And Twitter

183. Virtualization Through Citrix – The Ultimate Innovation

184. Brand Building And Marketing Initiatives For Solutions Middle East

185. Marketing Via Social Media For Sme

186. Citrix Products Overview

187. Right Fax: A Perfect Document Delivery System

188. Recruitment And Marketing Via Facebook

58. SRF Overseas, Dubai, UAE

189. Study Of Humidity And Temperature In Nylon Fabric And Cords

190. A Study Of Sadc Machines

59. Star Cement Co. LLC, Dubai, UAE

- 191. Gearbox Maintenance System, Optimizing Fan Efficiently And Preparation Of Qcs For Grinding Unit
- 192. Failure Analysis Of Electrical Equipment In A Cement Plant And Tender Preparation Of A Cement Grinding Unit

60. TE Connectivity, Dubai, UAE

- 193. Low Voltage Switchboard Design, Assembly And Supply At Dorman Smith Switchgear
- 194. Low Voltage Electrical Distribution And Estimation

61. Teknoware Middle East FZCOo, Dubai, UAE

- 195. Introduction To Central Battery Lighting System At Teknoware Me
- 196. Introduction To Various Emergency Lighting Concepts At Teknoware Me

62. Think Software Services, Dubai, UAE

- 197. Business Development In It Sales Management And Outsourcing In Hr Department

63. Thyssen Krupp Elevator (UAE) LLC, Dubai, UAE

- 198. Mechanism Of An Elevator And Its Aspects
- 199. A Detailed Study Of The Projects Department
- 200. Safety Features In An Elevator

64. Transgulf Electro-Mechanical LLC, Dubai, UAE

- 201. Cable Jack
- 202. Detailed Study Of Planning Department
- 203. Quantity Surveying Analysis

65. Verger Et Delporte, Dubai, UAE

- 204. Quality, Health, Safety And Environmental Aspects Of Verger Et Delporte
- 205. Overview On Technical Aspects Of Low Voltage Switchgear At Verger Et Delporte
- 206. Working Process Of Low Voltage Switchgear Division At Verger Et Delporte

66. Yokogawa, Dubai, UAE

- 207. Dcs/Esd Hardware Design Specifications And Testing
- 208. Integrated Control And Safety System

67. Zio Technologies LLC, Dubai, UAE

- 209. Digital Signage
- 210. Control And Presentation Devices
- 211. Telepresence

68. Microsol Int., Fujairah, UAE

- 212. Engineering And Technical Enhancement In Solar Cell Manufacturing
- 213. Reduction Of Z Grade And Sc0006 Cell % In Solar Cell Manufacturing And Solar Cell Efficiency Improvement To Upto 18.15%
- 214. Design And Fabrication Of Water Loading Machine And Rfid Security System
- 215. Sustainable Inventory Management System
- 216. To Effectively Streamline The In-Process Product Performance Parameter Measurement And To Increase The Solar Cell Efficiency
- 217. Organisational Reform Through Operator Performance Management

System And Structure Design At Management Level

218. Improving Sheet Rho Uniformity In The Diffusion Process And Improvement In Solar Cell Efficiency

69. Central Motors (Bosch), Sharjah, UAE

219. Vehicle Log Data Analysis, Identifying Stock Applications And Market Research For Spare Parts

220. Sales And Marketing Strategies Implemented To Boost The Sales In Various Business Segments

70. Cluttons, Sharjah, UAE

221. Implementation Of Property Management Software System

222. Integrated Real Estate Solution For Property Management Operations

71. Consilium, Sharjah, UAE

223. An Overview Of Consilium Middle East With Particular Focus On Fire Safety Alarm

72. Corrosion Technology Services LLC, Sharjah, UAE

224. Impressed Current Cathodic Protection (Iccp) And System For Tanks And Pipelines

225. Cathodic Protection For Tanks And Pipelines

73. ESRI, Sharjah, UAE

226. Mosaic Method Widget For Image Service Using Arcgis Api For Javascript

227. Error Analysis And Exception Handling On Arcgis Desktop 10

74. Murano Lighting, Sharjah, UAE

228. Lighting Quotations And Marketing Support

229. Dipline Creative Lights And Marketing Support

75. Neilson, Sharjah, UAE

230. Market Research – A Solution To A Million Problems

231. Exploring Marketing Research – Brand Building Strategies

232. Market Research – Customer Data Analysis

76. Petrofac International, Sharjah, UAE

233. Sizing Methods Employed In Petrofac Projects

234. Basic Process Design Of Piping Systems & Equipment

235. Methods And Instruments Employed For Various Petrofac Projects

236. Substation Grounding And Electrical Cable Sizing

237. Design Of Static Equipments

238. Design Of Static Equipment Packages Used In The Oil And Gas Industry

239. Pressure, Temperature Level & Flow Measurement

77. Ncomputing, USA

240. Product Development And Generation Of Business Models In The Virtualization Industry

78. USUHS, USA

241. Effect Of Mild Traumatic Brain Injury On Cognitive Functions In Mice

LIST OF PROJECT ASSIGNMENTS FOR PS II - FIRST SEMESTER 2012-13**1. Automech Engineering Co. LLC, Abu Dhabi, UAE**

1. Study On Industrial Machining, Data Management & Design Development
2. Cantilever Rack And Its Design

2. Star Cement Co. LLC, Abu Dhabi, UAE

3. Power Generation From Waste Heat
4. Quality Control Of Cement In A Grinding Plant
5. Study Of Air Compressor Systems And Optimizing Overall Compressor Efficiency

3. Universal Voltas LLC, Abu Dhabi, UAE

6. Multi-Level Modelling In Biometric Systems.
7. Networking Through Cloud Computing

4. Elfit Arabia, Ajman, UAE

8. Plastic Injection Mould For Cable Laying
9. Copper And Fiber Telecom
10. Designing A Multi-Purpose Cable Drum Trailer
11. Cable Pulling Winch Machine And Accessories

5. Al Tayer Motors LLC, Dubai, UAE

12. Engines And Air Conditioners
13. Engines, Integrated Diagnostic System And Air Conditioning Systems

6. Azbil Corporation, Dubai, UAE

14. Bacnet Communication Protocol And Low Current Systems Integration
15. Extra-Low Voltage Systems Integration And Bacnet Protocol

7. Central Motors & Equipment, Dubai, UAE

16. Various Bosch Test Equipments & Its Application In The Automotive Industry
17. An Analysis On Bosch Batteries For The Automotive Industry

8. Citibank, UAE

18. Analysis Of Scope Of Emerging High Frequency Trading In U.A.E
19. Study Of Commodity Trading With Focus On Gold In U.A.E
20. Analysis Of Short Term Credit Risk In Business Lending By Commercial Banks In U.A.E

9. DNV (Det Norske Veritas), Dubai, UAE

21. Visual Basic And It's Applications

10. Doosan Heavy Industries & Construction Co. Ltd., Dubai, UAE

22. Nox Water Skid Studies In Gas Turbine
23. Studying Of Working Of Different Skids In The Gas Turbine
24. An Analysis Of Bitzer Screw Type Compressors Used In The Hvac Process.
25. Study Of Performance Of Steam Turbine In Doosan
26. The Applications Of Boilers And Hrsg Design
27. Study Of Condenser Coils In The Hvac System
28. Environmental Impact Assessment For Jebel Ali Power And Desalination Station M
29. Working Of Scada And Plc
30. The Design And Working Of Heat Recovery Steam Generator
31. Application Of Lube Oil Skid In Power Plant
32. Working And Application Of Black Start Power Supplies

33. Principle And Working Of The Gas Turbine Engine.
34. Specialty Valves Operating In A Power Plant
35. Working And Applications Of Transformers In A Power Plant
36. Power Plant Protection And Mechanism Of Circuit Breakers
37. Study Of Electrical Relays And Circuit Breakers At Jebel Ali 'M' Station
38. Study And Analysis Of Steam Turbines At Jebel Ali 'M' Station
39. Auxiliaries Of Gas Turbine At Jebel Ali 'M' Station
40. The Overview Of The Gas Turbine, Doosan's Jebel Ali 'M' Station Power Plant
41. A Summary On The Working Of Modern Steam And Gas Turbines, Doosan's Jebel Ali 'M' Station Power Plant
42. The Gas Turbine System At Jebel Ali 'M' Station

11. Dulsco LLC, Dubai, UAE

43. Biodiesel - A Fuel For The Future

12. Emerson Process Management, Dubai, UAE

44. Improvement In Quality Control Inspection Process And Emetrology For Calibration
45. Application Development
46. Debugging, Software Development And Version Control System
47. Projects Executed By Project Management Office Of Rosemount, Dubai For Abu Dhabi And Saudi Arabia Regions
48. Execution Process At Project Management Office (Pmo)
49. Planning And Execution In Emerson's Project Management Office For Central Region In Middle East And Africa
50. Kaizen Project For Operational Efficiency And Enhanced Productivity Of Transmitter And Sensor Assembly Lines

13. ETA Cars LLC, Dubai, UAE

51. Hybrid Vehicles
52. Engine Misfiring
53. Smarter Service Centers
54. Risk Assessment And H.S.E

14. ETA M & E, Dubai, UAE

55. Motor Starting Analysis And Calculation Of Voltage Drop
56. Water Supply And Distribution In Burj Al Salam Site

15. ETA Star Portal, Dubai, UAE

57. Spend Management Through Ariba
58. A Detailed Assessment Of Ariba Solution

16. Fedex Express, Dubai, UAE

59. Analysis On The Softwares Utilized In Fedex
60. Analysis On The Professional Procedures At Fedex
61. Vendor Management And It Development Projects Of Fedex
62. Automation Solutions Supported By Customer Technology At Fedex

17. Frequency - Integrated Marketing Communications, Dubai, UAE

63. An Introduction To Marketing At Frequency Communications And Levtech Consulting
64. Telemarketing: A Boon In The Marketing World

18. Granteq LLC, Dubai, UAE

65. The Reach Of Smart Classroom In The Modern World

66. The Modern Era Of Video Conferencing

19. Gulf Wireless & Television Co. LLC, Dubai, UAE

67. Closed-Circuit Television Systems

68. Communication Systems At Gulf Wireless Television

69. Vehicle Tracking Systems

20. HCL Technologies Limited, Dubai, UAE

70. Application Development For Android

71. Native And Hybrid Application Development For Android

21. Infratech Controls BM LLC, Dubai, UAE

72. Building Management Systems In Light Commercial Tower.

73. Building Control Automation.

74. Building Automation Systems

75. Building Management System: Case Study At Aviation Club Site.

76. Building Management Systems And Its Onsite Application.

22. L&T Electrical & Automation FZe, Dubai, UAE

77. Extensive Analysis Of The Principal Competencies Of L&T Electrical And Automation Fze.

78. Automation Systems Of Gulf Petrochem, Daleel And Tecton Projects.

79. Scada Implementation For Oil And Gas Project.

80. Improvisation Of Automation Systems & Associated Document Preparation.

81. Plc System For District Cooling Plant At Qatar

82. Design And Engineering Of Automation Systems

83. Integration Systems Activities & Productivity Analysis At L And T

84. Industrial Automation Systems Of Some Projects At L And T

23. Lucy Switchgear FZe, Dubai, UAE

85. Internal Handling Damage Reduction

86. Pallet Implementation And Container Space Optimization

87. Industrial Barcode Tracking

88. The Implementation Of Jafza's Lifting Protocol On Lifting Equipment.

24. MSD (Merck, Sharp & Dhome), Dubai, UAE

89. Improving Efficiency Through Automation

90. Continuous Medical Education Website

91. Tools For Modern Day Business Environment

25. Oriental Dynamic Solutions, Dubai, UAE

92. Building Security And Access Control System

93. The Functions And Components Of Fire Alarm System

94. Designing Of Cctv System In High Rise Building

95. Advanced Control Battery System

26. Paramount Computers Systems FZ LLC, Dubai, UAE

96. Backup & Recovery Services In Cloud

97. Architecture Of A Cloud-Based Data Centre

98. Advancements In Burr Solutions

27. Ras Infotech Limited, Dubai, UAE

- 99. Network And Information Security
- 100. Application And Information Security
- 28. Redcube Systems LLC , Dubai, UAE**
 - 101. Closed Circuit Television Systems (Cctv)
 - 102. Access Control Systems
- 29. Sanbook Quality Consultancy, Dubai, UAE**
 - 103. Haccp Certificate, Iso 22000:2005 And Iso 9001:2008 Standardization
 - 104. Iso 17025 Accreditation And Iso 14001 & Ohsas 18001 Certification
- 30. Scientechnic, Dubai, UAE**
 - 105. Switchgears-Introduction, Manufacturing And Their Practical Applications
 - 106. Switchgear Elements And Devices: Their Characteristics, Functions And Testing
 - 107. Short Circuit Testing On Low Voltage Switchgears
- 31. Siemens LLC, Dubai, UAE**
 - 108. Study Of Data Point Schedules For Execution Of Bms
 - 109. Execution Of Building Management Systems
 - 110. Development Of Building Management Systems
- 32. Solutions Middle East LLC, Dubai, UAE**
 - 111. Faxing Solutions
 - 112. Wan Optimization & Its Uses To The Present World.
 - 113. Xen App & Xen Desktop
 - 114. An Overview On Virtualization And Its Benefits
 - 115. Realization Of Desktop Virtualization And Its Benefits
 - 116. Mobile Messaging & Its Applications In The Enterprise World
 - 117. A Brief Study On F5 Products And Solutions Provided
- 33. Star Cement Co. LLC, Dubai, UAE**
 - 118. Study On Clinker Manufacturing Process In A Cement Plant
 - 119. Internal Assessment And Analysis For The Business Enhancement
- 34. Tecknoware Middle East Fzco, Dubai, UAE**
 - 120. Design Of Emergency Lighting Systems
 - 121. Design Of Escape And Aalto
 - 122. Design Of Led Light Systems
 - 123. Design Of Self Contained Lights
- 35. Thyssen Krupp Elevator (UAE) LLC, Dubai, UAE**
 - 124. Safety Of Elevators, Escalators And Moving Walks
 - 125. Control Of Electric Drives In Elevators
 - 126. Electrical Drive Systems Employed In Elevators
- 36. Topnet Distribution FZCo, Dubai, UAE**
 - 127. The Applications Of Fiber Optics In Industrial Field
 - 128. Environment Monitoring For Data Centers And Audio/Video Solutions
- 37. Transgulf Electro-Mechanical LLC, Dubai, UAE**
 - 129. Quality Management System
 - 130. Hvac-Heating, Ventilating And Air Conditioning At Nilona Towers-Jadaf, Dubai
 - 131. Hvac -Heating, Ventilating And Air Conditioning
- 38. Zio Technologies LLC, Dubai, UAE**

132. Digital Signage Applications In Emaar Boulevard

133. Application Of Security Systems In Yas Mall

39. Ashkhar Metals FZe, Sharjah, UAE

134. Furnace Oil Preheating

135. Lounder Preheating And Dross Press Efficiency

136. Maintenance Report Of Ashkhar Metals And Recuperator Efficiency

40. Central Motors & Equipment, Sharjah, UAE

137. Bosch Automotive Lighting And Osram Lighting

138. Innovative Marketing Techniques For The Commercialization Of New Power Tools Technologies

41. ESRI, Sharjah, UAE

139. Elevation Profile Widgets Using Java Script Api

42. Petrofac International, Sharjah, UAE

140. Vessel Sizing And Line Hydraulics

141. Static Equipment In Oil & Gas

142. Communication Networks

143. Level Sketches

144. High Integrity Pressure Protection System

LIST OF PROJECT ASSIGNMENTS FOR PS I 2012

1. Automech Engineering Co. LLC, Abu Dhabi, UAE

1. Journey Through Automech Engineering

2. Overview Of Automech Engineering Co., Abu Dhabi

3. Profile Of Automech Engineering Co., Abu Dhabi

4. Service And Facility At Automech Engineering

2. Constellation Marine Services, Abu Dhabi, UAE

5. Survey Report On Motor Vessel (Abc)

3. Jones Lang Lasalle, Abu Dhabi, UAE

6. Upcoming Developments In Abu Dhabi

4. Solutions Middle East LLC, Abu Dhabi, UAE

7. Citrix – Virtualization & Networking

8. Faxing In The Corporate World

5. Star Cement Co. LLC, Abu Dhabi, UAE

9. Cement Grinding Optimization And Introduction To Plc

6. Universal Voltas LLC, Abu Dhabi, UAE

10. An Overview Of Electromechanical Operations At Universal Voltas

11. An Overview Of Operations At Universal Voltas (Auh)

7. Elfit Arabia, Ajman, UAE

12. Development Of An Inter - Department Planning Tool & Production Planning System

13. Optimization In Costs Of Raw Material

14. Optimization Of Hydraulic Jack And Analysis Of Products In 2d

15. Plastic Injection Molder

8. Al Faizan Electrical Installation LLC, Dubai, UAE

16. Electrical Work On Construction Site

17. Plumbing Systems
- 9. Al Khaleej Sugar Co. LLC, Dubai, UAE**
 18. Conveyor Systems
 19. Enterprises Resource Planning And Its Implementation – Sap
 20. Power Generation And Mechanical Vapour Recompressor
 21. Raw Sugar Refining, Power Generation And Conveyor Belt Systems
- 10. Al Naboodah Automobiles LLC, Dubai, UAE**
 22. Engine Design
 23. Operational Systems In Automobiles
 24. Unconventional Automobile Systems
- 11. Al Tayer Motors LLC, Dubai, UAE**
 25. Automobile Parts
 26. Systems In Automobiles
- 12. Better Life, Dubai, UAE**
 27. Advertising Needs
 28. Best Industry Practices
 29. Better Life: Market Analysis And Consumer Awareness
 30. Customer Satisfaction Index
 31. E-Tailing
- 13. Bahri & Mazroei Trading Co., Dubai, UAE**
 32. Building Management System
 33. Credit Control
 34. Led Highbay Fixture By Dialight Durosite
 35. Lighting Control Management
 36. Street Lighting Fixtures
- 14. Constellation Marine Services, Dubai, UAE**
 37. Damage Survey On Motor Vessel (Abc)
- 15. Cosmos Star Consultants, Dubai, UAE**
 38. Basic Criteria Of Group Buying & Online Marketing
 39. Deal Management And Launch At Group Buying Websites
- 16. Cluttons LLC, Dubai, UAE**
 40. Implementation Of The Property Management Software - Amlaki
- 17. Delta Electric FZe, Sharjah, UAE**
 41. Busbar And Busduct
 42. Circuit Breakers
 43. Motor Control Centers
 44. Stages Involved In Production Of Busducts
- 18. Dignitech ERP, Dubai., UAE**
 45. An Analysis On The Hr And Salary Reports
 46. Department Of Hr & Roles Of Employee Master
 47. Ess, Employee Request, Organizational Chart, Employee Mess
 48. Implementation Of Hr & Payroll Masters
 49. Implementation Of Leave And Transfers Module
 50. Operating Employee Ticket Revision, Salary Revision And Recruitment Module
 51. Payroll Process

19. Eastern Biotech & Life Sciences Fz LLC, Dubai, UAE

52. Statistical Analysis Of Dna Haplogroups In The Middle East

20. Emerson Process Mgt. , Dubai, UAE

53. Python Program For Handling Ps/Pcl Prints, Report Generation For Rosemount Information Tool (Rita)

54. Temperature Transmitter Final Assembly Line At Dmmc

21. Emirates Glass LLC, Dubai, UAE

55. Cost Analysis Of Coating And Tempering

56. Temperable Glass Products And Its Analysis

57. Vacuum Technology In Glass Coating

22. Emirates Industrial Gases Company LLC, Dubai, UAE

58. Acetylene Gas Production

59. Air Separation Unit

60. Dry Ice Plant

61. Gas Production In Eipc – Nitrous Oxide

23. E-Pos International LLC, Dubai, UAE

62. E - Pos - Banking

63. Tech Trends In Retail

24. ETA Cars LLC, Dubai, UAE

64. A Time And Motion Study

65. Performance Appraisal System Management

66. Petroleum: Characteristics And Uses

67. Study On Marketing

68. Working Principles And Characteristics Of A Diesel Engine

25. ETA M & E, Dubai, UAE

69. Building Management System

70. Busbar Systems

71. Heat Ventilation Air Conditioning (HVAC)

72. HVAC

73. Refrigeration Cycle And Practical Application As A Cooling Plant

74. Water Cooling System In Burj Al Salam

26. ETA Melco Elevator, Dubai, UAE

75. Departmental Functions Of Eta Melco

76. Study Of Elevators

27. ETA Star Portal Fz LLC, Dubai, UAE

77. Business Development

28. Fedex Express, Dubai, UAE

78. Automation Service At Customer Service – Fedex

79. Automaton Tools At Fedex Express

80. Hub Operations At Fedex Express

29. Galadhari Engineering Works Co. LLC., Dubai, UAE

81. Crane Maintenance

82. Machining Processes

83. Tetrahedron Space Frame Truss Construction (The Sharjah Expo Centre Project)

30. Granteq LLC, Dubai, UAE

- 84. Cloud Computing – An Emerging Paradigm
- 85. Video Conferencing Solutions

31. Gulf & Safa Diaries LLC, Dubai, UAE

- 86. An Overview Of Potential Pathogens Present In Dairy Products
- 87. Cleaning In Process (Cip) System
- 88. Food Ethics – An Overview Of The Dairy Industry
- 89. Milk Processing And Quality Management In Dairies

32. Gulf Wireless & Television Co. LLC, Dubai, UAE

- 90. Closed Circuit Television (Cctv)
- 91. Global Positioning Systems And Future Uses
- 92. Smart Lighting Systems: Modular Intelligent Control System

33. Hcl Technologies Limited, Dubai, UAE

- 93. Data Mining And Bank Analysis
- 94. Data Mining On It Profile Of Major Gcc Companies

34. Infratech Controls Bm LLC, Dubai, UAE

- 95. Building Automation And Controls
- 96. Building Automation Systems
- 97. Building Management System And Air Handling Units
- 98. CCTV Systems

35. International Diesel Services, Dubai, UAE

- 99. Fuel Injection And Common Rail System

36. International Center For Biosaline Agriculture, Dubai, UAE

- 100. Evaluation Of Native Rhizobial Strains For Tolerance To Abiotic Stresses

37. Jones Lang Lasalle, Dubai, UAE

- 101. Company Overview, Supply Sheets & Site Feasibility Study
- 102. Company Overview, Surveys, Investor Sentiment Survey (Iss) & Survey Softwares
- 103. Market Trends: Studying Them And A Comparison Study
- 104. Snagging – Defects Analysis

38. Kingsmen Middle East LLC, Dubai, UAE

- 105. Architecture And Interior Design
- 106. Design Proposal For Sound Proofing Of Ristorante Cavallino At Ferrari World
- 107. Research Strategies Adopted For Exhibition Shows
- 108. Telemarketing In Kingsmen Company

39. L&T Electrical & Automation Fze, Dubai, UAE

- 109. A Few On Going Projects And My Contribution
- 110. Cctv And Automation Systems
- 111. Cctv Security Systems And Allied Projects
- 112. Development Of Wo-16 & Sb-14 Well Platforms And Epic Of Wellhead Platform & Living Quarters For Zhdanov B
- 113. Instrumentation Specifications For On-Going Projects
- 114. Lteafze – Integration Systems Production And Management
- 115. Lteafze – Scada Systems
- 116. Procurement Process

117. Procurement Process & Procedures
- 40. Logwin Air & Ocean Me LLC (Globelink West), Dubai, UAE**
118. Import Sales And Document Preparations Of Full Container Load Of Cargo
119. Less Than Container Load And Air Freight
- 41. Miltec Rugged Computing Solutions LLC, Dubai, UAE**
120. Industrial Scope Of Rugged Computing In UAE
121. Market Analysis And Scope Of Rugged Computers In The UAE
122. Rugged Computing And Market Analysis
123. Rugged Computing Technology
- 42. MSD (Merck, Sharp & Dhome), Dubai, UAE**
124. Analysis Of Financial Statements Of Merck Sharp & Dohme
125. Customer Relationship Management
126. Database Management System
127. Hr Employee Databases
128. Marketing Events – Documentation And Record Keeping
129. Trade Channel In Msd
130. Working Of A Crm Database
- 43. Paramount Computers Systems FZ LLC, Dubai, UAE**
131. Backup, Recovery & Network Security
- 44. Prime Medical Center, Dubai, UAE**
132. A Study Of Morphology, Cultural & Biochemical Characteristics Of Different Isolates
133. Antibiotic Susceptibility Of Staphylococcus Aureus
134. Blood Cell Morphology Analysis And Mdros
- 45. Procal Measuring & Control Equipment, Dubai, UAE**
135. Basics Of Calibration
- 46. Ras Infotech Limited, Dubai, UAE**
136. Basic Internet Security Terminologies
137. Data Leak Prevention And Device Lock
- 47. Roto Packing Materials Industry Co LLC, Dubai, UAE**
138. Insider On Packaging Industry Life Of A Roto Gravure Cylinder
139. Insider On Packaging Industry Preventive Maintenance
- 48. Safedata Middle East LLC, Dubai, UAE**
140. Brand Building: Strategies Used By Multinational Corporations
141. Brand Management
142. Cloud Computing
143. Concepts Of Cloud Computing
- 49. Safeenat AI Boom Engineering LLC, Dubai, UAE**
144. Generating Business Awareness Using Facebook For Comshop18
145. Using Facebook For Business To Increase Traffic And Sales
- 50. Sanbook Quality Consultancy, Dubai, UAE**
146. Integrated Management System
147. Introduction To Iso 22000 Standards
148. Methods In Business Consulting

149. Orientation Of Sanbook Quality Consultancy And International Standards For Organizations And Food Safety Management Systems (Fsms)

51. Sasol Gulf, Dubai, UAE

150. A Detailed Analysis Of The Electrostatic Precipitator
151. Design, Installation And Fabrication Of Reciprocating Pumps And V Pumps
152. Sulfonation Processes
153. Sulfonation Processing Technology For Anionic Surfactant Manufacture
154. Thermodynamics Of The Sulphonation Process

52. Scientechnic, Dubai, UAE

155. Business And Organization Structure Of Scientechnic

53. Screencheck Middle East Fz LLC, Dubai, UAE

156. Marketing And Its Various Aspects
157. Software Application Development On Windows Presentation Foundation
158. Software Application Development Using Windows Presentation Form

54. Solutions Middle East LLC, Dubai, UAE

159. Use Of Social Media In Marketing
160. Virtualization Through Citrix

55. Srf Overseas Limited, Dubai, UAE

161. It Operation, Functionalities And Activities At Srf
162. Tyre Cords And Operations At Srf

56 Star Cement Co. LLC, Dubai, UAE

163. Implementation Of The Aditya Birla Information Security Management System In Compliance With The Iso 27001 Standards

57. Steinweg-Sharaf FZe, Dubai, UAE

164. Processes At Steinweg-Sharaf Fzco

58. Technofab Steel Manufacturing LLC, Dubai, UAE

165. Study Of Multipurpose Press Tool
166. Study Of Press Tool And Injection Mould
167. Study Of Vacuum Forming

59. Teknoware Middle East FZco, Dubai, UAE

168. Nfpa Life Safety Code – Illumination Of Means Of Egress And Emergency Lighting
169. Nfpa Life Safety Code – Inspection And Maintenance Of Emergency Lightings And Exits
170. Nfpa Life Safety Code – Marking Of Means Of Egress
171. Nfpa Life Safety Code – Performance Of Emergency Illumination System And Its Periodic Testing

60. Topnet Distribution FZCo, Dubai, UAE

172. Data Center
173. Kvm Switches & Its Solutions
174. Market Research Analysis Of Information Transport Systems
175. Media Converters
176. Surveillance Cctv Systems

61. Transgulf Electro-Mechanical LLC, Dubai, UAE

177. An Overview Of Store Department At Trans Gulf
178. Drafting And Quantity Surveying

179. Heating, Ventilating And Air Conditioning Systems (Hvac)

180. Project Planning At Burj Dubai District Cooling Plant

181. Qa/Qc And Hvac Operations At The Oberoi Centre

182. Quality Assurance/Quality Control (Qa/Qc)

183. Quantity Surveying (Qs)

62. UASC Engineering & Ship Repair Services LLC, Dubai, UAE

184. Services At Uasc Engineering And Ship Repair Services (LLC)

63. United Diesel LLC, Dubai, UAE

185. An Insight Into Braking And Engine Systems Of Vehicles

186. An Insight Into Braking Systems And General Service In Vehicles

187. An Insight Into Braking Systems Of Vehicles And Quality Systems Of Management

64. V3 Media Solutions FZ LLC, Dubai, UAE

188. Radio Automation, Traffic And Logging Software

189. Radio Station Software: Features And Functionality

65. Zio Technologies LLC, Dubai, UAE

190. Audio Integration For A High End Meeting Room

191. Audio/Visual Automation For A High End Meeting Room

192. User Interface Concepts And Gui Design For A High End Meeting Room

193. Video Integration For A High End Meeting Room

66. Constellation Marine Services, Fujairah, UAE

194. Superficial Condition Survey Pre-Purchase

67. Nael General Contracting Group, Al Ain, UAE

195. The Products Of Nael General Contracting Company

68. Cluttons LLC, Sharjah, UAE

196. Operations Of Property Management Software - Amlaki

197. Rental Solutions Using Property Management

69. Geo Group, Sharjah, UAE

198. Air Conditioning And Marketing

199. Air Conditioning And The Types Of Ac Systems

200. Air Conditioning And The Working Of Ac Systems

201. Air Conditioning Systems And The Sales Cycle

70. L&T, ECC, Sharjah, UAE

202. Activities At Dewa Project Site Of Pt & D, L & T Construction

203. Power Transmission And Distribution Works At L & T

204. Supply Chain Management And Prequalification Documents

71. Murano Lighting Company LLC, Sharjah, UAE

205. Database Creation, E-Marketing And Dimming Lights

206. Database Development

207. E-Marketing Strategies And Search Engine Optimization: Coding And Implementation

72. Petrofac International, Sharjah, UAE

208. Equipment Used In The Mechanical Department And The Workflow

209. Fire And Gas Devices Selection

210. Petrofac International Limited Internship – Gsf Project And Line Sizing

73. Reitz Middle East FZe, Sharjah, UAE

211. Centrifugal Fans

74. Verger ET Delporte, Sharjah, UAE

212. Air Circuit Breakers

213. Final Distribution Board Devices And Enclosures

214. Modbus Communication

215. Power Monitoring Unit

216. Testing Of Electrical Panels

75. WS Atkins, Sharjah, UAE

217. Process Engineering And Study Of Comprising Elements

219.. Working At Atkins – Oil And Gas Sector

76. Bharti Airtel, Delhi, India

220. 2g And Lte

221. Dsl Fault Rate Reduction

222. System Technical Operations

223. Uplink Of Services In Teleport

77. Fortis Escort , Delhi, India

224. Gamma Camera

225. Use Of Clims In Srl And Turn Around Time

226. Use Of Medtrak And Pacs In Radiology

227. Use Of Medtrak In Opd & Ipd Conversion Rate

78. Microtek Inverters, Delhi, India

228. Impact Of Advertisement & Pop At Outlets And Customer Behaviour In Delhi/Ncr

229. In House Power Generation For Fujikawa Plant

230. Product Pricing And Specifications

231. Value To End Consumers- An Important Pricing Parameter And Demand Analysis

79. Okaya Batteries, Delhi, India

232. Air Pollution Control Systems

233. Okaya Website Design, Smo And Blogs

234. Value To End Consumers - An Important Pricing Parameter And Demand Analysis

80. Agri Gold Projects Limited, Hyderabad, India

235. Agri Gold's Symphony

236. Analysis Of Rates For Building Work

237. Applications Of Autocad In Infrastructure Development

238. Building Material

81. Elogic Solutions, Hyderabad, India

239. Targeted Page Ranking For Seo

82. Srr Projects, Hyderabad, India

240. Construction Of A Pressurizer Or A Pressure Vessel

241. Study On Employee's Welfare Measure At SRR Projects

Annexure B4-20

(4 Pages)

Ref/ AR 2012, Page No. B4-41

COMPUTING FACILITIES ACROSS THE CAMPUS

S.No.	Location	Hardware	QTY	Software
		Equipment		
1	Server Room	Intel Xeon Quad Core E5310 1.60Ghz/1066 Mhz,8MB,IBM 146Gb SFF Non Hot Swap 10K SAS HDD,2Gb(2X1Gb) PC2-5300 667 MHz ECC Chipkill DDR2,Qlogic 4Gb SFF Fibre Channel Expansion Card for IBM eServer Blade Center	2	Windows Server 2003 R2-Enterprise x64 edition, Domain Controllers
		Intel Xeon Quad Core E5310 1.60Ghz/1066 Mhz,8MB L2,2X1GB Chipkill, O/Bay SAS,2Gb(2X2Gb) PC2-5300 667 MHz ECC Chipkill DDR2,IBM 146Gb SFF Non Hot Swap 10K SAS HDD FBDIMM,4gb SFF Fibre Channel Expansion card for IBM eServer Bladecenter	3	Windows Server 2003 R2-Enterprise x64 edition, Microsoft Exchange 2007(HT,CA and MB)
		Intel Xeon Quad Core E5420 80W 2.50GHZ/133Mhz/12Mb L2,2X1Gb chk, O/Bay SAS,2Gb(2X1Gb) PC2-5300 667 MHz ECC Chipkill DDR2 FBDIMM,IBM 146Gb SFF Non Hot Swap 10K SAS HDD	3	Windows Server 2003 R2-Enterprise x64 edition,Proxy
		Intel Xeon Quad Core E5310 1.60Ghz/1066 Mhz,8MB,IBM 146Gb SFF Non Hot Swap 10K SAS HDD,2Gb(2X1Gb) PC2-5300 667 MHz ECC Chipkill DDR2,Qlogic 4Gb SFF Fibre Channel Expansion Card for IBM eServer Blade Center	1	Windows Server 2003 R2-Enterprise x64 edition, DNS,DHCP
		Intel Xeon Quad Core E5310 1.60Ghz/1066 Mhz,8MB,IBM 146Gb SFF Non Hot Swap 10K SAS HDD,2Gb(2X1Gb) PC2-5300 667 MHz ECC Chipkill DDR2,Qlogic 4Gb SFF Fibre Channel Expansion Card for IBM eServer Blade Center	1	Windows Server 2003 R2-Enterprise x64 edition,Mathworks-Matlab
		3. 06Ghz P4Intel Xeon Processor, 2 GB RAM and 80Gb Harddisk	1	Windows Server 2003-Standard Edition, Autocad
		3.05GhzP4 Intel Xeon Processor,1Gb RAM and 80Gb Hard disk	1	Windows Server 2003-Standard Edition, McAfee AntiVirus
		3.6GhzP4 Intel Processor, 1.72Gb RAM and 80Gb Hard disk	1	Windows Server 2003-Standard Edition,Catia
		2.40Ghz P4 Intel Xeon Processor, 1Gb RAM and 80Gb Hard disk	1	Windows Server 2003-Standard Edition,Tally
		Intel Core 2Ghz,1GB Ram,160Gb HDD	2	Windows Server-2003-Enterprise Edition,App Test & Student Projects

S.No.	Location	Hardware		QTY	Software
		Equipment			
		Panasonic TDA 620		3	
		Panasonic TDA 600		1	
		Panasonic TVM 200		1	
2	Computer Programming Lab	ACER: Intel® Pentium 4 - 2.8GHz ACPI uniprocessor PC, 512MB RAM, 40GB Hard Disk, 3COM Ether Link 10/100		33	Windows XP, MS Office 2003
		ACER: Intel® Pentium 4 - 2.8GHz ACPI uniprocessor PC, 512 MB RAM, 40 GB HDD, Broadcom NetXtreme Gigabit Ethernet Network Card		29	
		IBM -LENOVO-Think Centre: Inter® Core 2 CPU 4400@ 2.00 GHz, 1.99Ghz, 1GB RAM, 150GB Hard Disk, Broadcom NetLink Gigabit Ethernet Network Card, DVD Combo		10	
3	Catia Lab	IBM -LENOVO-Think Centre: Inter® Core 2 CPU 4400@ 2.00 GHz, 1.99Ghz, 1GB RAM, 150GB Hard Disk, Broadcom NetLink Gigabit Ethernet Network Card, DVD Combo		31	Windows XP, MS Office 2003 and CATIA V5
4	Engineering Graphics Lab	ACER: Intel® Pentium 4 - 2.8GHz ACPI uniprocessor PC, 512 MB RAM, 40 GB HDD, Broadcom NetXtreme Gigabit Ethernet Network Card		16	Windows XP, MS Office 2003 and AutoCad 2005
		ACER: Intel® Pentium 4 - 2.8GHz ACPI uniprocessor PC, 512MB RAM, 40GB Hard Disk, 3COM Ether Link 10/100		49	
		IBM -LENOVO-Think Centre: Inter® Core 2 CPU 4400@ 2.00 GHz, 1.99Ghz, 1GB RAM, 150GB Hard Disk, Broadcom NetLink Gigabit Ethernet Network Card, DVD Combo		10	
5	Microprocessor Lab	IBM -LENOVO-Think Centre: Inter® Core 2 CPU 4400@ 2.00 GHz, 1.99Ghz, 1GB RAM, 150GB Hard Disk, Broadcom NetLink Gigabit Ethernet Network Card, DVD Combo		26	Windows XP, MS Office 2003 and RedHat Linux 5.0 advanced platform
		Intel Xeon 3060 Dual Core, 2.4 Ghz, 1Gb Ram, 160Gb HDD		1	Red Hat Linux, Linux Server
		IBM -LENOVO-Think Centre: Inter® Core 2 CPU 4400@ 2.00 GHz, 1.99Ghz, 1GB RAM, 150GB Hard Disk, Broadcom NetLink Gigabit Ethernet Network Card, DVD Combo		5	Windows XP, MS Office 2003
6	Physics Lab	ACER 5200, 2.4Ghz \ Intel, 256MB		2	Windows XP, MS Office 2003
7	Communication & Instrumentation Lab	ACER 5600, 2.80Ghz \ Intel, 512 MB RAM		6	Windows XP, MS Office 2003, RS
		Compaq D510, 2.40Ghz \ Intel, 256 MB		1	Logic PLC software and Lab view software

S.No.	Location	Hardware		QTY	Software
		Equipment			
8	Digital Electronics Lab	IBM -LENOVO-Think Centre:Inter® Core 2 CPU 4400@ 2.00 GHz,1.99Ghz , 1GB RAM,150GB Hard Disk, Broadcom NetLink Gigabit Ethernet Network Card,DVD Combo		2	Windows XP, MS Office 2003
9	Analog Electronics Lab	ACER:Intel® Pentium 4 - 2.8GHzACPI uniprocessor PC, 512MB RAM, 40GB Hard Disk,3COM Ether Link 10/100		1	Windows XP, MS Office 2003
10	EMEC Lab	ACER:Intel® Pentium 4 - 2.8GHzACPI uniprocessor PC, 512MB RAM, 40GB Hard Disk,3COM Ether Link 10/100		1	Windows XP, MS Office 2003
11	Heat Transformation Lab	ACER:Intel® Pentium 4 - 2.8GHzACPI uniprocessor PC, 512MB RAM, 40GB Hard Disk,3COM Ether Link 10/100		3	Windows XP, MS Office 2003
		Compaq D510 ,2.40Ghz\Intel		1	
12	Communication Lab	ACER:Intel Core 2 CPU 2.0GHz, 1 GB RAM, 150GB Hard Disk, DVD Writer		2	Windows XP, MS Office 2003 and Matlab 7
		Inter Core i5 CPU 650 @ 3.20 Ghz 2 Gb RAM 500 HDD		1	
13	MT (II) EEE Lab	ACER:Intel® Pentium 4 - 2.8GHzACPI uniprocessor PC, 512MB RAM, 40GB Hard Disk,3COM Ether Link 10/100		1	Windows XP, MS Office 2003
14	MT (II) Non EEE Lab	ACER:Intel® Pentium 4 - 2.8GHzACPI uniprocessor PC, 512MB RAM, 40GB Hard Disk,3COM Ether Link 10/100		1	Windows XP, MS Office 2003
15	Mechanical Workshop	ACER:Intel® Pentium 4 - 2.8GHzACPI uniprocessor PC, 512MB RAM, 40GB Hard Disk,3COM Ether Link 10/100		1	Windows XP, MS Office 2003
16	Transport Phenominon Lab	Assembled-3.0Ghz\Intel, 512 Mb RAM		1	Windows XP, MS Office 2003
17	CNC Lab	Assembled-3.0Ghz\Intel, 512 Mb RAM		2	Windows XP, MS Office 2003
18	Chemistry Lab	ACER:Intel® Pentium 4 - 2.8GHzACPI uniprocessor PC, 512MB RAM, 40GB Hard Disk,3COM Ether Link 10/100		1	Windows XP, MS Office 2003
19	Biology Lab	ACER:Intel® Pentium 4 - 2.8GHzACPI uniprocessor PC, 512MB RAM, 40GB Hard Disk,3COM Ether Link 10/100		1	Windows XP, MS Office 2003
20	Class Rooms	ACER:Intel® Pentium 4 - 2.8GHzACPI uniprocessor PC, 1GB RAM, 40GB Hard Disk,3COM Ether Link 10/100		30	Windows XP, MS Office 2003
21	Divisions(Grading,PSP, PCP, AAR, SW, I&E)	IBM -LENOVO-Think Centre:Inter® Core 2 CPU 4400@ 2.00 GHz,1.99Ghz , 1GB RAM,150GB Hard Disk, Broadcom NetLink Gigabit Ethernet Network Card,DVD Combo		4	Windows XP, MS Office 2003

S.No.	Location	Hardware	QTY	Software
		Equipment		
		ACER: Intel® Pentium 4 - 2.8GHz ACPI uniprocessor PC, 1GB RAM, 40GB Hard Disk, 3COM Ether Link 10/100	9	
22	Library	IBM -LENOVO-Think Centre: Inter® Core 2 CPU 4400@ 2.00 GHz, 1.99Ghz , 1GB RAM, 150GB Hard Disk, Broadcom NetLink Gigabit Ethernet Network Card, DVD Combo	6	Windows XP, MS Office 2003
		HP: Intel® Pentium 4 - 3.2GHz ACPI uniprocessor PC, 1GB RAM, 80GB Hard Disk, 3COM Ether Link 10/100	10	Windows XP, MS Office 2003
		HP Compaq DL320 3.6Ghz Intel Xeon, 1Gb, 80GB HDD	1	Windows Server 2003-Standard Edition, Autolib
		Compaq D510 , 2.40Ghz \ Intel	16	Windows XP, MS Office 2003
		ACER: Intel® Pentium 4 - 2.8GHz ACPI uniprocessor PC, 512MB RAM, 40GB Hard Disk, 3COM Ether Link 10/100	20	Windows XP, MS Office 2003
23	Faculty	IBM -LENOVO-Think Centre: Inter® Core 2 CPU 4400@ 2.00 GHz, 1.99Ghz , 1GB RAM, 150GB Hard Disk, Broadcom NetLink Gigabit Ethernet Network Card, DVD Combo	70	Windows XP, MS Office 2003
24	Administration	IBM -LENOVO-Think Centre: Inter® Core 2 CPU 4400@ 2.00 GHz, 1.99Ghz , 1GB RAM, 150GB Hard Disk, Broadcom NetLink Gigabit Ethernet Network Card, DVD Combo	31	Windows XP, MS Office 2003

Annexure B4-21
(1 page)
Ref/ AR 2012, Page No. B4-42

LIST OF EQUIPMENTS PROCURED DURING THE YEAR 2012

S.No	Name of Equipment	Used for Courses/Thesis /Dissertation Computational/Administrative Work
Production Technique Lab		
1.	Hydraulic Press	Production Technique lab - I
2.	TIG Welding Machine	
3.	Ultrasonic Flaw detector	
4.	Metallurgical microscope with accessories	

Annexure B4-22
(2 pages)
Ref/ AR 2012, Page No. B4-8

NEW COURSES OFFERED DURING 2012

S.NO.	COURSE NO.	COURSE TITLE
1	BIO G512	MOLEC MECH OF GENE EXPRE
2	BIO G513	MICROBIAL FERMENT TECHNO
3	BIO G514	MOLECULAR IMMUNOLOGY
4	BIO G524	ANIMAL CELL TECH
5	BIO G525	ENVIRONMENTAL BIOTECHNOLOGY AND WASTE MANAGEMENT
6	BIO G526	CANCER BIOLOGY
7	BIOT C332	GENETICS
8	BIOT C336	CELL PHYSIOLOGY
9	BIOT C339	BIOPHYSICAL CHEMISTRY
10	BIOT C418	GENETIC ENGINEERING TECH
11	BIOT F211	BIOLOGICAL CHEMISTRY
12	BIOT F212	MICROBIOLOGY
13	BIOT F241	GENETIC ENGINEERING TECH
14	BIOT F243	GENETICS
15	BITS C214	INTRO TO MASS COMM
16	BITS C797T	PH D SEMINAR
17	BITS C799T	PH D THESIS
18	BITS G540	RESEARCH PRACTICE
19	CDP C364	INDUSTRIAL RELATIONS
20	CHE F211	CHEMICAL PROCESS CALCULA
21	CHE F212	FLUID MECHANICS
22	CHE F213	CHEM ENGG THERMODYNAMICS
23	CHE F214	ENGINEERING CHEMISTRY
24	CS F213	OBJECT ORIENTED PROG
25	CS F214	LOGIC IN COMPUTER SCIENCE
26	CS F215	DIGITAL DESIGN
27	CS F222	DISCR STRUC FOR COMP SCI
28	DE G514	FRACTURE MECHANICS
29	EA C441	ROBOTICS
30	ECE F211	ELECTRICAL MACHINES
31	ECE F212	ELECTROMAGNETIC THEORY
32	ECE F214	ELECTRONIC DEVICES
33	ECE F215	DIGITAL DESIGN
34	ECON F211	PRINCIPLES OF ECONOMICS
35	EEE G592	MOBILE PERSONAL COMMUNIC
36	EEE F211	ELECTRICAL MACHINES

S.NO.	COURSE NO.	COURSE TITLE
37	EEE F212	ELECTROMAGNETIC THEORY
38	EEE F214	ELECTRONIC DEVICES
39	EEE F215	DIGITAL DESIGN
40	ENGG C242	MAINTENANCE AND SAFETY
41	ENGL C261	CREATIVE WRITING
42	ET C341	INSTRU & CONTROL
43	ET C351	CHEMICAL PROCESS TECH
44	ET C362	ENVIR POLLUTION CONTROL
45	ET C412	PRODUCT PLAN & CONTROL
46	ET C432	QUALI CONTRO ASSUR & REL
47	ET C491	SPECIAL PROJECTS
48	GS F223	INTRO TO MASS COMM
49	GS F241	CREATIVE WRITING
50	GS F245	EFFECTIVE PUBLIC SPEAK
51	HSS F222	LINGUISTICS
52	HSS F228	PHONETICS & SPOKEN ENGL
53	HUM C371	LINGUISTICS
54	INSTR F211	ELECTRICAL MACHINES
55	INSTR F212	ELECTROMAGNETIC THEO
56	INSTR F214	ELECTRONIC DEVICES
57	INSTR F215	DIGITAL DESIGN
58	IS C415	DATA MINING
59	IS C424	SOFTWARE FOR EMBEDDED SYS
60	ME F211	MECHANICS OF SOLIDS
61	ME F212	FLUID MECHANICS
62	ME F213	MATERIALS SCIENCE & ENGG
63	ME F214	APPLIED THERMODYNAMICS
64	ME F215	MECHANICAL ENGG LAB
65	ME G511	MECHANISMS & ROBOTICS
66	MGTS F211	PRINCIPLES OF MANAGEMENT
67	SS G513	NETWORK SECURITY
68	SS G515	DATA WAREHOUSING
69	SS G515	DATA WEARHOUSING
70	SS G516	COMP ORGA & SOFT SYSTEMS
71	SS G562	SOFTWARE ENGG & MANAGEMT
72	TOC C223	COMFORT COND & REFRI

BITS Pilani

annual report

2012

Part B5: Work-Integrated Learning Programmes

CONTENTS

	Page No.
B5.1 SENIOR OFFICERS OF WILP	B5-1
B5.2 HISTORY	B5-1
B5.3 SALIENT FEATURES	B5-1
B5.4 PROGRAMMES OFFERED	B5-2
B5.5 MAP OF BITS WORK-INTEGRATED LEARNING & COLLABORATIVE PROGRAMMES 2012-2013	B5-3
B5.6 ADMISSIONS	B5-4
B5.7 REGISTRATION OF STUDENTS	B5-4
B5.8 GEOGRAPHICAL DISTRIBUTION OF STUDENTS REGISTERED IN FIRST SEMESTER 2012-2013	B5-4
B5.9 SPONSORED ORGANIZATIONS	B5-5
B5.10 ACADEMIC CALENDAR	B5-5
B5.11 COURSES OFFERED	B5-9
B5.12 NEW COURSES INTRODUCED	B5-9
B5.13 LIVE INTERACTIVE LECTURE SESSIONS	B5-9
B5.14 PROJECT WORK AND DISSERTATION	B5-14
B5.15 ACADEMIC AND PROFESSIONAL COUNSELLING	B5-14
B5.16 AWARD OF DEGREES	B5-14
B5.17 NEW COLLABORATIVE PROGRAMMES INTRODUCED	B5-15
B5.18 COLLABORATIVE PROGRAMMES UNDER DISCUSSION	B5-15
New initiatives	B5-15
B5.19 FUTURE PERSPECTIVES	B5-16

LIST OF ANNEXURES

	Page No.
1. DETAILS OF ADMISSIONS MADE DURING THE YEAR 2012	B5: A-1
2. NUMBER OF STUDENTS REGISTERED IN FIRST SEMESTER 2012-2013	B5: A-3
3. LIST OF ORGANIZATIONS WHO HAVE SPONSORED THEIR EMPLOYEES FOR WORK INTEGRATED LEARNING PROGRAMMES OF BITS	B5: A-5
4. LIST OF PROJECT WORK SUBMITTED BY STUDENTS UNDER THE WORK INTEGRATED LEARNING PROGRAMMES IN THE YEAR 2012	B5: A-83
5. LIST OF DISSERTATION SUBMITTED BY STUDENTS UNDER THE WORK INTEGRATED LEARNING PROGRAMMES IN THE YEAR 2012	B5: A-94
6. STATEMENT OF DEGREES AWARDED	B5: A-128
7. A SCHEMATIC DEPICTING PERSON-CENTRED APPROACH TO A STUDENT'S PROGRAMME OF STUDY IN THE NONFORMAL SYSTEM AS VIEWED FROM THE STUDENT'S STAND-POINT	B5: A-130

WORK-INTEGRATED LEARNING PROGRAMMES

B5.1 SENIOR OFFICERS OF THE WORK-INTEGRATED LEARNING PROGRAMMES

(a) Senior Officers

Prof. G Sundar, Deputy Director

Prof. S Gurunayanan, Dean

Mr. K Venkatasubramanian, Assistant Dean

Dr. G Venkiteswaran, Assistant Dean

Dr. Raghunath Ratabole, Assistant Dean

(b) New appointments

Mr. Anirban Mukherjee, Manager Operations

B5.2 HISTORY

Since 1979, the Institute has been participating in the human resource development needs of the industries. The Institute has evolved several degree programmes by integrating the working environment of the employees with the learning environment required by the Institute. These programmes were first started as M.E. (Collaborative) programmes in 1979. Later, from 1988, the Institute ventured into Off-campus Work-Integrated Learning Programmes in Science and Technology areas. These programmes

- (a) are targeted to meet the needs of continuing education of employed professionals;
- (b) are based on Science & Technology approach and operate disciplines that are non-conventional and Science & Technology oriented;
- (c) are designed for the purposeful acquisition of scientific methods, modern skills and involvement in open-ended experiments;
- (d) judiciously combine the flexibility and ingenuity of the off-campus system with all the regular features of the on-campus system; and
- (e) allow the employed professionals to pursue a meaningful and relevant university degree with minimum dislocation from their work environment.

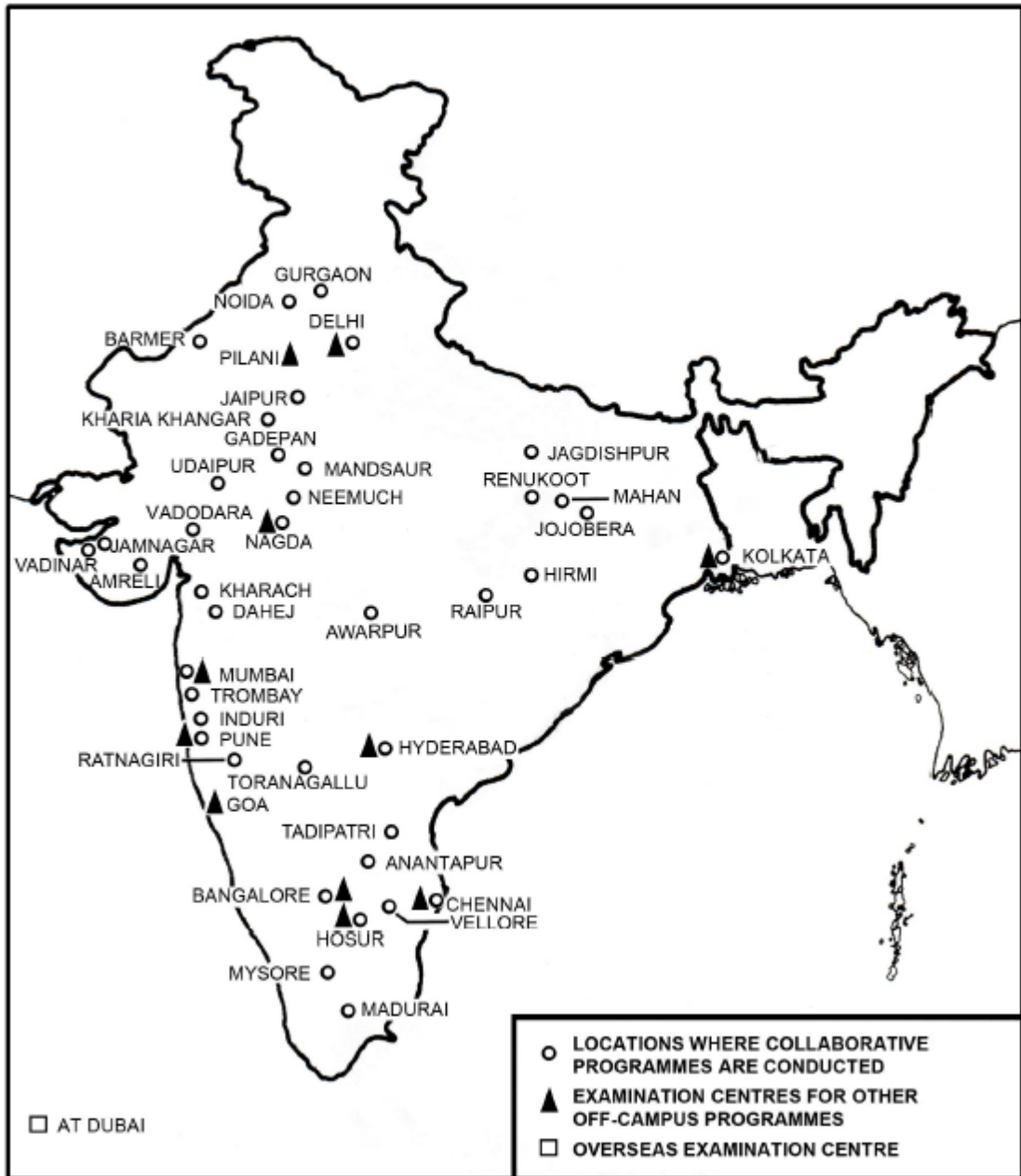
B5.3 SALIENT FEATURES

All programmes offered under the Work-Integrated Learning Programmes are characterized by a person - centered approach where the rigour and standard are maintained as in the institute's on-campus programmes. While a number of on-campus programmes are also available under off-campus, the Institute interacts with various organizations like industries, hospitals and national laboratories with a view to design and offer specialized programmes. Many organizations sponsor their employees for various programmes, in order to prepare their human resources to meet the challenges posed by the growth of industries and rapid advancement of technology in India and abroad.

B5.4 PROGRAMMES OFFERED

Programmes	Collaborating / Sponsoring Organization
B.S. Programmes	
1. Engineering Design	- Eaton Technologies, Pune; L&T IES, Vadodara
2. Engineering Technology	- Designed for the HRD needs of a diverse spectrum of Engineering Industries
3. Information Systems	- Designed for the HRD needs of a diverse spectrum of IT Industries, as well as Wipro Infotech, Mumbai, Wipro Technologies, Bangalore
4. Manufacturing Engineering	- Bharath Forge, Pune, TACO, Pune
5. Marine Engineering	- Tolani Maritime Institute, Induri; RL Institute of Nautical Sciences, Madurai
6. Nautical Technology	- Tolani Maritime Institute, Induri; RL Institute of Nautical Sciences, Madurai
7. Optometry	- Sankara Nethralaya, Chennai; L V Prasad Eye Institute, Hyderabad; THONEH-NIOS, Malaysia
8. Physician Assistant	- Madras Medical Mission, Chennai; Frontier Lifeline, Chennai
9. Power Engineering	- ABG, JSW Energy; Tata Power, Mumbai, Essar Power, Hazira
10. Process Engineering	- Aditya Birla Group (Cement Business); Hindalco, Renukoot HZL, Udaipur; JSW, Toranagallu; IndoGulf, Jagdishpur, Birla Cellulosic, Kosamba, Hindalco, Dahej;
M.S. Programmes	
1. Consultancy Management	- Consultancy Development Centre, New Delhi
2. Design Engineering	- Eaton Technologies, Pune;
3. Embedded Systems	- Eaton Technologies, John Deere, Pune; L&T IES, Vadodara
4. Manufacturing Management	- Designed for the HRD needs of a diverse spectrum of Engineering Industries
5. Medical Laboratory Technology	- Sankara Nethralaya, Chennai
6. Microelectronics	- Wipro Technologies, Bangalore
7. Pharmaceutical Operations & Management	- Lupin, Mumbai; Strides Arcolab Ltd., Bangalore
8. Pharmaceuticals	- Dr. Reddy's Laboratories, Hyderabad
9. Project Engineering & Management	- DCPL, Kolkata
10. Quality Management	- Indian Institute of Quality Management, Jaipur
11. Science Communication	National Council of Science Museums, Kolkata
12. Software Engineering	- Wipro Technologies, Wipro Infotech, Yahoo, SAP Labs, Sabre, EMC, Bangalore; Cognizant, Chennai; Mahindra Satyam, Qualcomm, Hyderabad; Tech Mahindra, Persistent Systems, Cybage, BMC Software, Pune; iGate Patni, Mumbai; Virtusa, Chennai
13. Software Systems	- Designed for the HRD requirements of a diverse spectrum of IT Industries
14. Systems Engineering	- Wipro Infotech, Wipro Technologies, Bangalore
15. Telecommunications & Software Engineering	- Tech Mahindra, Avaya, Pune
M.Phil.	
1. Hospital and Health Systems Management	- CMC Vellore; Bombay Hospital, Mumbai
2. Optometry	- Sankara Nethralaya, Chennai

B5.5 MAP OF BITS WORK-INTEGRATED LEARNING & COLLABORATIVE PROGRAMMES 2012-2013



B5. 6 ADMISSIONS

The number of students admitted in each of the semester is given below.

	Integrated First Degree Programmes	Higher Degree Programmes	Associate Students	Total
Second Semester 2011-2012	303(33)	4669(2143)	1(0)	4973(2176)
First Semester 2012-2013	942(89)	2159(505)	-	3101(594)

The programme-wise details are given in **Annexure 1 (Part B5)**.

B5. 7 REGISTRATION OF STUDENTS

The registration processes for both the semesters was completed on the first day of each semester.

Semester	Number of students registered
Second Semester 2011-2012	17974
First Semester 2012-2013	18173

Details of Registration of students for the First Semester 2012-2013 are given in **Annexure 2 (Part B5)**.

B5.8 GEOGRAPHICAL DISTRIBUTION OF STUDENTS REGISTERED IN FIRST SEMESTER 2012-20123**(A) INDIA**

State	No. of students		
	Specific	Non Specific	Total
Andhra Pradesh	294	407	701
Assam		12	12
Bihar		14	14
Chandigarh		10	10
Chattisgarh		13	13
Dadra & Nagar Haveli		4	4
Delhi		186	186
Goa		13	13
Gujarat	76	130	206
Haryana		179	179
Himachal Pradesh		14	14
Jammu & Kashmir		9	9
Jharkhand		16	16
Karnataka	7685	1358	9043
Kerala		198	198
Madhya Pradesh		45	45
Maharashtra	2765	775	3540
Manipur		1	1
Mizoram		2	2

State	No. of students		
	Specific	Non Specific	Total
Nagaland		1	1
Orissa		26	26
Pondicherry		37	37
Punjab		34	34
Rajasthan	22	91	113
Tamil Nadu	1212	1568	2780
Uttar Pradesh	30	236	266
Uttarakhand		23	23
West Bengal	27	114	141
Total	12111	5516	17627

(B) Foreign

Country	No. of students		
	Specific	Non Specific	Total
Bahrain		2	2
Kuwait		17	17
Malaysia	129	1	130
Oman		17	17
Qatar		39	39
Saudi Arabia		18	18
Singapore		30	30
Thailand		2	2
UAE		282	282
UK		5	5
USA		4	4
Total	129	417	546
Grand Total	12240	5933	18173

B5.9 SPONSORED ORGANIZATIONS

During the year, 4261 organizations have sponsored their employees for Work Integrated Learning Programmes. List of the organizations are given in *Annexure 'B5-3'*.

B5.10 ACADEMIC CALENDAR

For the year 2012, Second Semester 2011-2012 started on 17-12-2011 and ended on 30-04-2012, while First Semester 2012-2013 started on 09-07-2012 and ended on 15-12-2012 for all programmes except the following:

Second Semester 2011-2012

Degree Programme	Organization	Starting Date	Ending Date
B.S. Information Systems	Wipro Infotech, Mumbai	21-01-2012	10-06-2012
B.S. Information Systems	Wipro Technologies, Bangalore	21-01-2012	10-06-2012
B.S. Manufacturing Engineering	Bharat Forge, Pune	29-01-2012	17-06-2012

Degree Programme	Organization	Starting Date	Ending Date
B.S. Marine Engineering	RLINS, Madurai	20-01-2012	11-07-2012
B.S. Marine Engineering	TMI, Pune	13-02-2012	14-07-2012
B.S. Nautical Technology	RLINS, Madurai	20-01-2012	11-07-2012
B.S. Nautical Technology	TMI, Pune	13-02-2012	14-07-2012
B.S. Optometry	LVPEI, Hyderabad	02-01-2012	19-05-2012
B.S. Optometry	Sankara Nethralaya, Chennai	04-01-2012	28-04-2012
B.S. Optometry	THONEH-NIOS, Malaysia	02-01-2012	19-05-2012
B.S. Physician Assistant	Frontier Lifeline, Chennai	10-01-2012	01-06-2012
B.S. Physician Assistant	Madras Medical Mission, Chennai	03-01-2012	07-05-2012
B.S. Power Engineering	Aditya Birla Group	08-01-2012	30-06-2012
B.S. Power Engineering	Essar Power, Hazira	08-01-2012	30-06-2012
B.S. Power Engineering	Tata Power, Mumbai	08-01-2012	30-06-2012
B.S. Process Engineering	ABG Cement, Mumbai	08-01-2012	30-06-2012
B.S. Process Engineering	Birla Cellulosic, Kosamba	08-01-2012	30-06-2012
B.S. Process Engineering	Hindalco, Dahej	08-01-2012	30-06-2012
B.S. Process Engineering	Hindalco, Renukoot	08-01-2012	30-06-2012
B.S. Process Engineering	Hindustan Zinc, Udaipur	05-02-2012	13-05-2012
B.S. Process Engineering	Indogulf, Jagdishpur	08-01-2012	30-06-2012
B.S. Process Engineering	JSW Steel, Toranagallu	05-02-2012	13-05-2012
M.Phil. Optometry	Sankara Netralaya, Chennai	04-01-2012	28-04-2012
M.S. Consultancy Management	CDC, New Delhi	17-12-2011	30-04-2012
M.S. Design Engineering	Eaton, Pune	22-01-2012	03-06-2012
M.S. Embedded Systems	Eaton, Pune	22-01-2012	03-06-2012
M.S. Embedded Systems	L&T, Mysore	22-01-2012	03-06-2012
M.S. Engineering Management	Ashok Leyland, Chennai, Hosur	07-01-2012	20-06-2012
M.S. Engineering Management	Technip, Chennai	07-01-2012	20-06-2012
M.S. Medical Laboratory Technology	Sankara Netheralya, Chennai	16-01-2012	16-05-2012
M.S. Microelectronics	PDC, Bangalore	05-02-2012	30-06-2012
M.S. Microelectronics	Wipro Technologies, Kochi	21-01-2012	10-06-2012
M.S. Pharmaceutical Operations and Management	Lupin, Mumbai	21-01-2012	10-06-2012
M.S. Pharmaceutics	Dr. reddy's Laboratories, Hyderabad	18-02-2012	10-07-2012
M.S. Project Engineering & Management	DCPL, Kolkata	18-02-2012	01-07-2012
M.S. Science Communication	NCSM, Kolkata	02-01-2012	26-05-2012
M.S. Software Engineering	CTS, Chennai	21-01-2012	05-07-2012
M.S. Software Engineering	Cybage, Pune	21-01-2012	26-05-2012

Degree Programme	Organization	Starting Date	Ending Date
M.S. Software Engineering	Mahindra Satyam, Hyderabad	22-01-2012	17-06-2012
M.S. Software Engineering	iGate Patni, Mumbai	04-02-2012	16-06-2012
M.S. Software Engineering	Persistent, Pune	07-01-2012	12-05-2012
M.S. Software Engineering	Sabre, Bangalore	18-02-2012	15-07-2012
M.S. Software Engineering	SAP Labs, Bangalore	25-01-2012	30-06-2012
M.S. Software Engineering	Tech Mahindra, Pune	21-01-2012	26-05-2012
M.S. Software Engineering	Wipro Infotech, Bangalore	21-01-2012	10-06-2012
M.S. Software Engineering	Wipro Technologies, Bangalore	21-01-2012	10-06-2012
M.S. Software Engineering	Yahoo, Bangalore	21-01-2012	16-06-2012
M.S. Systems Engineering	Wipro Infotech, Bangalore	21-01-2012	10-06-2012
M.S. Systems Engineering	Wipro Technologies, Bangalore	21-01-2012	10-06-2012
M.S. Telecommunications and Software Engineering	Tech Mahindra, Pune	21-01-2012	26-05-2012
M.Sc.(Tech)Pharmaceutical Chemistry	Dr. Reddy's Laboratories, Hyderabad	18-02-2012	10-07-2012
M.Sc.(Tech)Pharmaceutical Chemistry	Matrix Labs, Hyderabad	21-02-2012	16-06-2012

First Semester 2012-2013

Degree Programme	Collaborating Organization	Starting Date	Ending Date
B.S. Information Systems	Wipro Infotech, Mumbai	28/07/2012	24/11/2012
B.S. Information Systems	Wipro Technologies, Bangalore	28/07/2012	24/11/2012
B.S. Manufacturing Engineering	Bharat Forge, Pune	22/07/2012	09/12/2012
B.S. Manufacturing Engineering	TACO, Pune	22/07/2012	08/12/2012
B.S. Marine Engineering	RLINS, Madurai	13/08/2012	19/01/2013
B.S. Marine Engineering	TMI, Pune	13/08/2012	19/01/2013
B.S. Nautical Technology	RLINS, Madurai	13/08/2012	19/01/2013
B.S. Nautical Technology	TMI, Pune	13/08/2012	19/01/2013
B.S. Optometry	LVPEI, Hyderabad	07/07/2012	26/11/2012
B.S. Optometry	Sankara Nethralaya, Chennai	09/07/2012	10/11/2012
B.S. Optometry	THONEH-NIOS, Malaysia	07/08/2012	22/12/2012
B.S. Physician Assistant	Frontier Lifeline, Chennai	06/08/2012	23/12/2012
B.S. Physician Assistant	Madras Medical Mission, Chennai	09/07/2012	11/12/2012
B.S. Power Engineering	Aditya Birla Group	01/08/2012	22/12/2012
B.S. Power Engineering	Essar Power, Hazira	01/08/2012	22/12/2012
B.S. Power Engineering	Tata Power, Mumbai	01/08/2012	22/12/2012
B.S. Process Engineering	ABG Cement, Mumbai	01/08/2012	22/12/2012

Degree Programme	Collaborating Organization	Starting Date	Ending Date
B.S. Process Engineering	Birla Cellulosic, Kosamba	01/08/2012	22/12/2012
B.S. Process Engineering	Hindalco, Dahej	01/08/2012	22/12/2012
B.S. Process Engineering	Hindalco, Renukoot	01/08/2012	22/12/2012
B.S. Process Engineering	Hindustan Zinc, Udaipur	01/08/2012	22/12/2012
B.S. Process Engineering	Indogulf, Jagdishpur	01/08/2012	22/12/2012
B.S. Process Engineering	JSW Steel, Toranagallu	01/08/2012	22/12/2012
M.Phil. Optometry	Sankara Netralaya, Chennai	01/08/2012	30/12/2012
M.S. Consultancy Management	CDC, New Delhi	09/07/2012	15/12/2012
M.S. Design Engineering	Eaton, Pune	22/07/2012	08/12/2012
M.S. Embedded Systems	Eaton, Pune	22/07/2012	08/12/2012
M.S. Embedded Sytems	L&T, Mysore	22/07/2012	08/12/2012
M.S. Embedded Sytems	Tech Mahindra, Pune	04/08/2012	15/12/2012
M.S. Medical Laboratory Technology	Sankara Netheralya, Chennai	14/06/2012	12/12/2012
M.S. Microelectronics	Wipro, Kochi	28/07/2012	24/11/2012
M.S. Pharmaceutical Operations and Management	Lupin, Mumbai	27/08/2012	23/12/2012
M.S. Pharmaceutical Operations and Management	Strides Arcolab, Bangalore	23/06/2012	10/11/2012
M.S. Project Engineering & Management	DCPL, Kolkata	25/07/2012	26/11/2012
M.S. Science Communication	NCSM, Kolkata	02/07/2012	22/11/2012
M.S. Software Engineering	BMC Software, Pune	07/07/2012	10/11/2012
M.S. Software Engineering	CTS, Chennai	04/08/2012	24/11/2012
M.S. Software Engineering	Cybage, Pune	28/07/2012	24/11/2012
M.S. Software Engineering	EMC, Bangalore	18/08/2012	05/01/2013
M.S. Software Engineering	Mahindra Satyam, Hyderabad	29/07/2012	23/12/2012
M.S. Software Engineering	iGate Patni, Mumbai	11/08/2012	22/12/2012
M.S. Software Engineering	Persistent, Pune	07/07/2012	10/11/2012
M.S. Software Engineering	Sabre, Bangalore	04/08/2012	24/11/2012
M.S. Software Engineering	SAP Labs, Bangalore	11/08/2012	22/12/2012
M.S. Software Engineering	Tech Mahindra, Pune	04/08/2012	15/12/2012
M.S. Software Engineering	Wipro Infotech, Bangalore	28/07/2012	24/11/2012
M.S. Software Engineering	Wipro Technologies, Bangalore	28/07/2012	24/11/2012
M.S. Software Engineering	Yahoo, Bangalore	30/06/2012	31/11/2012
M.S. Systems Engineering	Wipro Infotech, Bangalore	28/07/2012	24/11/2012
M.S. Systems Engineering	Wipro Technologies, Bangalore	28/07/2012	24/11/2012
M.S. Telecommunications And Software Engineering	Tech Mahindra, Pune	04/08/2012	15/12/2012

B5.11 COURSES OFFERED

The number of courses, offered during the year 2012 is as follows:

	Number of Courses offered
Second Semester 2011-2012	595
First Semester 2012-2013	599

B5.12 NEW COURSES INTRODUCED

The new courses introduced during the year 2012 is as follows

S.No.	Course No.	Course Title
1.	OPTO ZG696	Advanced Occupational Optometry I
2.	OPTO ZG697	Advanced Occupational Optometry II
3.	OPTO ZG698	Advanced Binocular Vision I
4.	OPTO ZG699	Advanced Binocular Vision II
5.	SS ZG519	Data Structures & Algorithm Design

B5.13 LIVE INTERACTIVE LECTURE SESSIONS

For the WILP courses offered during II Semester 2011-2012 and I Semester 2012-2013 for the B.S. Engineering Technology, B.S. Information Systems, B.S. Process Engineering, B.S. Power Engineering, M.S. Software Systems, M.S. Manufacturing Management, M.S. Embedded Systems degree programmes, live interactive online lecture sessions were delivered through Internet Based Desktop Video Conferencing systems using Cisco WebEx technology. The video lectures were also recorded and made available on-demand. The students and faculty could also interact asynchronously and share learning resources through an online Learning Management System named Taxila, based on Moodle technology.

Second Semester 2011-2012

S.NO.	Course No.	Course Title
1.	AAOC ZC111	Probability & Statistics
2.	AAOC ZC221	Graphs and Networks
3.	AAOC ZC222	Optimization
4.	BITS ZC411	Object Oriented Programming
5.	BITS ZC461	Software Engineering
6.	BITS ZC471	Management Information Systems
7.	BITS ZC481	Computer Networks
8.	BITS ZG553	Real Time Systems
9.	BITS ZG659	Technical Communication
10.	CM ZC471	Management Information Systems
11.	CM ZG523	Project Management
12.	CM ZG532	Total Quality Management
13.	CM ZG611	Strategic Mgt & Business Policy
14.	CS ZG623	Advanced Operating Systems
15.	EA ZC412	Flexible Manufacturing Systems
16.	EA ZC451	Internetworking Technologies
17.	EA ZC473	Multimedia Computing

S.NO.	Course No.	Course Title
18.	EEE ZG512	Embedded System Design
19.	ENGG ZC111	Electrical & Electronics Technology
20.	ENGG ZC232	Engineering Materials
21.	ENGG ZC241	Mechanical Technology
22.	ENGG ZC242	Maintenance and Safety
23.	ES ZC261	Digital Electronics & Microprocessors
24.	ESLT ZG512	Embedded System Design
25.	ESLT ZG523	Project Management
26.	ESLT ZG553	Real Time Systems
27.	ESLT ZG573	Digital Signal Processing
28.	ET ZC341	Instrumentation & Control
29.	ET ZC342	Materials Management
30.	ET ZC362	Environmental Pollution Control
31.	ET ZC412	Production Planning & Control
32.	ET ZC414	Project Appraisal
33.	ET ZC432	Quality Control Assurance & Reliability
34.	HHSM ZC417	Managerial Communication
35.	HHSM ZC471	Management Information Systems
36.	HHSM ZG518	Total Quality Management
37.	HHSM ZG519	Project Management
38.	IS ZC332	Database Systems & Applications
39.	IS ZC342	Structure of Programming Languages
40.	IS ZC351	Computer Organization & Architecture
41.	IS ZC361	Data Structures and Algorithms
42.	IS ZC362	Operating Systems
43.	IS ZC415	Data Mining
44.	IS ZC424	Software for Embedded Systems
45.	IS ZC462	Network Programming
46.	MATH ZC161	Engineering Mathematics – I
47.	MATH ZC222	Discrete Structures for Comp Science
48.	MATH ZC232	Engineering Mathematics – II
49.	MGTS ZC211	Principles of Management
50.	MM ZC411	Marketing
51.	MM ZC441	Human Resource Management
52.	MM ZG511	Manufacturing Organization & Management
53.	MM ZG521	Financial Management
54.	MM ZG522	Total Quality Management
55.	MM ZG523	Project Management
56.	MM ZG541	Product Design
57.	MM ZG542	Just-In-Time Manufacturing
58.	MM ZG611	Strategic Mgt & Business Policy
59.	MM ZG621	Supply Chain Management
60.	PEAB ZC314	Power Plant Engineering

S.NO.	Course No.	Course Title
61.	PEAB ZC331	Quality Control Assurance & Reliability
62.	PEAB ZC382	Cement Technology
63.	PEAB ZC413	Process Plant Safety & Environment
64.	PEHC ZC311	Chemical Engineering Thermodynamics
65.	PEHC ZC321	Chemical Process Calculation
66.	PEHC ZC341	Heat Transfer
67.	PEHC ZC351	Mass Transfer
68.	POWAB ZC311	Prime Movers & Fluid Machines
69.	POWAB ZC321	Technical Report Writing
70.	POWAB ZC322	Power Generation
71.	POWAB ZC331	Instrumentation & Control
72.	POWES ZC311	Prime Movers & Fluid Machines
73.	POWES ZC321	Technical Report Writing
74.	POWES ZC322	Power Generation
75.	POWES ZC331	Instrumentation & Control
76.	POWTP ZC311	Prime Movers & Fluid Machines
77.	POWTP ZC321	Technical Report Writing
78.	POWTP ZC322	Power Generation
79.	POWTP ZC331	Instrumentation & Control
80.	QMJ ZC411	Marketing
81.	QMJ ZG523	Project Management
82.	QMJ ZG611	Strategic Mgt & Business Policy
83.	QMJ ZG621	Supply Chain Management
84.	SS ZG513	Network Security
85.	SS ZG514	Object Oriented Analysis and Design
86.	SS ZG515	Data Warehousing
87.	SS ZG516	Computer Organization & Soft Systems
88.	SS ZG531	Pervasive Computing
89.	SS ZG562	Software Engineering & Management
90.	SS ZG653	Software Architectures
91.	TA ZC142	Computer Programming
92.	TA ZC232	Engineering Measurements
93.	TA ZC312	Technical Report Writing

First Semester 2012-2013

S.NO.	Course No.	Course Title
1.	AAOC ZC111	Probability & Statistics
2.	AAOC ZC221	Graphs and Networks
3.	AAOC ZC222	Optimization
4.	BITS ZC411	Object Oriented Programming
5.	BITS ZC461	Software Engineering
6.	BITS ZC471	Management Information Systems

S.NO.	Course No.	Course Title
7.	BITS ZC481	Computer Networks
8.	BITS ZG553	Real Time Systems
9.	BITS ZG659	Technical Communication
10.	CM ZC471	Management Information Systems
11.	CM ZC473	International Business
12.	CM ZG511	Consultancy Practices
13.	CM ZG523	Project Management
14.	CM ZG532	Total Quality Management
15.	CM ZG611	Strategic Mgt & Business Policy
16.	CS ZG623	Advanced Operating Systems
17.	EA ZC412	Flexible Manufacturing Systems
18.	EA ZC451	Internetworking Technologies
19.	EA ZC473	Multimedia Computing
20.	EEE ZG512	Embedded System Design
21.	ENGG ZC111	Electrical & Electronics Technology
22.	ENGG ZC232	Engineering Materials
23.	ENGG ZC241	Mechanical Technology
24.	ENGG ZC242	Maintenance and Safety
25.	ES ZC261	Digital Electronics & Microprocessors
26.	ESLT ZC424	Software for Embedded Systems
27.	ESLT ZG511	Mechatronics
28.	ESLT ZG611	Advanced Control Systems
29.	ESLT ZG641	Hardware Software Co-Design
30.	ET ZC341	Instrumentation & Control
31.	ET ZC342	Materials Management
32.	ET ZC362	Environmental Pollution Control
33.	ET ZC412	Production Planning & Control
34.	ET ZC414	Project Appraisal
35.	ET ZC432	Quality Control Assurance & Reliability
36.	HHSM ZC417	Managerial Communication
37.	HHSM ZC471	Management Information Systems
38.	HHSM ZG513	Biostatistics & Epidemiology
39.	HHSM ZG518	Total Quality Management
40.	HHSM ZG519	Project Management
41.	HHSM ZG531	Health Economics & Financial Management
42.	HHSM ZG631	Introduction to Health Systems and Environmental Health
43.	HHSM ZG665	Hospital Operations Management
44.	IS ZC332	Database Systems & Applications
45.	IS ZC342	Structure of Programming Languages
46.	IS ZC351	Computer Organization & Architecture
47.	IS ZC361	Data Structures and Algorithms
48.	IS ZC362	Operating Systems
49.	IS ZC415	Data Mining

S.NO.	Course No.	Course Title
50.	IS ZC424	Software for Embedded Systems
51.	IS ZC462	Network Programming
52.	MATH ZC161	Engineering Mathematics – I
53.	MATH ZC222	Discrete Structures for Comp Science
54.	MATH ZC232	Engineering Mathematics – II
55.	MGTS ZC211	Principles of Management
56.	MM ZC411	Marketing
57.	MM ZC441	Human Resource Management
58.	MM ZG511	Manufacturing Organization & Management
59.	MM ZG521	Financial Management
60.	MM ZG522	Total Quality Management
61.	MM ZG523	Project Management
62.	MM ZG541	Product Design
63.	MM ZG542	Just-In-Time Manufacturing
64.	MM ZG611	Strategic Mgt & Business Policy
65.	MM ZG621	Supply Chain Management
66.	PEHC ZC322	Kinetics & Reactor Design
67.	PEHC ZC352	Energy Management
68.	PEHC ZC412	Process Equipment Design
69.	PEHC ZC441	Process Control & Instrumentation
70.	POWAB ZC312	Quality Control Assurance & Reliability
71.	POWAB ZC332	Energy Management
72.	POWAB ZC342	Power System Engineering – I
73.	POWAB ZC481	Plant Layout & Design
74.	POWES ZC312	Quality Control Assurance & Reliability
75.	POWES ZC332	Energy Management
76.	POWES ZC342	Power System Engineering – I
77.	POWES ZC481	Plant Layout & Design
78.	POWJS ZC211	Computer Programming
79.	POWJS ZC221	Engineering Mathematics I
80.	POWJS ZC231	Thermodynamics
81.	POWJS ZC251	Electrical Technology
82.	POWTP ZC312	Quality Control Assurance & Reliability
83.	POWTP ZC332	Energy Management
84.	POWTP ZC342	Power System Engineering – I
85.	POWTP ZC481	Plant Layout & Design
86.	QMJ ZC411	Marketing
87.	QMJ ZG523	Project Management
88.	QMJ ZG611	Strategic Mgt & Business Policy
89.	QMJ ZG621	Supply Chain Management
90.	SS ZG513	Network Security
91.	SS ZG514	Object Oriented Analysis and Design
92.	SS ZG515	Data Warehousing

S.NO.	Course No.	Course Title
93.	SS ZG516	Computer Organization & Soft Systems
94.	SS ZG531	Pervasive Computing
95.	SS ZG562	Software Engineering & Management
96.	SS ZG653	Software Architectures
97.	TA ZC142	Computer Programming
98.	TA ZC232	Engineering Measurements
99.	TA ZC312	Technical Report Writing

B5.14 PROJECT WORK AND DISSERTATION

Students of B.S. programmes do a full-semester Project Work in their final semester, while students of higher degree programmes like M.S. and M.Phil. submit a Dissertation based on a research and development effort.. **Annexure 4** and **Annexure 5** list some of the Projects and Dissertations submitted by the students of WILP during the year 2012.

B5.15 ACADEMIC AND PROFESSIONAL COUNSELLING

During the year, the Academic Monitoring Board (AMB), estimated the extent to which students under its purview fell short of the minimum academic performance, drew up a time-frame within which afflictions were to be removed, determined the package of courses for their registration in each semester and laid down the necessary stipulations for achieving intermediate targets. It further monitored their progress and applied necessary mid-course corrections, wherever required. The statistical summary of the number of students under its purview during the year is given below:

		II Semester 2011-2012	I Semester 2012-2013
1.	Registered and under the under the purview of AMB at the beginning of the semester	1557	1248
2.	Declared outside the purview of AMB at the end of the semester	652	230
3.	Discontinued during the semester	3	4
4.	Continue to be under the purview of AMB	905	1018
5.	New cases referred to AMB at the end of the Semester	343	728
6.	Under the purview of AMB at the beginning of the next semester	1248	1746
7.	Registered and under the purview of AMB at the beginning of the next semester	1152	1367

B5.16 AWARD OF DEGREES

During the year, a total of 5707 students graduated. The details on the award of degrees are given below.

	Number of degrees awarded
70 th Award (vide Board of Governors meeting held on 31.03.2012)	3529
71 st Award (vide Board of Governors meeting held on 19.07.2012)	2178
Total:	5707
72 nd Award (subject to approval from Board of Governors meeting in its next meeting)	3007

Statistical details of these degrees are given in **Annexure 6 (Part B5)**.

B5.17 NEW COLLABORATIVE PROGRAMMES INTRODUCED

The following new degree programmes were introduced during the year 2012

1. B.S. Manufacturing Engineering (TACO, Pune)
2. M.S. Embedded Systems (L&T IES, Vadodara)
3. M.S. Embedded Systems (Tech Mahindra, Pune)
4. M.S. Software Engineering (BMC Software, Pune)
5. M.S. Software Engineering (EMC Software, Bangalore)
6. M.S. Software Engineering (Virtusa, Chennai)
7. M.S. Systems Engineering (Wipro Technologies, Bangalore)
8. M.S. Telecommunications and Software Engineering (Avaya, Pune)

B5.18 COLLABORATIVE PROGRAMMES UNDER DISCUSSION

It is heartening to report that a number of other leading organizations have approached the Institute for suitable Work Integrated Learning programmes to meet their HRD needs. The proposed new collaborative programmes under discussion are indicated below:

1. B.S. Manufacturing Engineering (Bajaj Auto, Pune)
2. B.S. Manufacturing Engineering (Ceat Tyres, Halol)
3. B.S. Manufacturing Engineering (Force Motors, Pune)
4. B.S. Manufacturing Engineering (Maruti Suzuki India Ltd.)
5. B.S. Manufacturing Engineering (Kirloskar Oil Engines, Pune)
6. B.S. Process Engineering (Bhushan Steel, Orissa)
7. M.S. Microelectronics (Cypress Semiconductor Technology, Bangalore)
8. M.S. Microelectronics (IBM India, Bangalore)
9. M.S. Pharmaceutical Operations and Management (Glenmark Generics Ltd.)
10. M.S. Pharmaceutical Operations and Management (Wockhardt Ltd.)
11. M.S. Power Engineering (Essar Power, Hazira)
12. M.S. Power Engineering (NALCO, Angul)
13. M.S. Power Engineering (Tata Power, Mumbai)
14. M.S. Software Engineering (Oracle India, Bangalore)
15. M.S. Software Engineering (Syntel India, Bangalore)

New initiatives

WILP Digital Recording Studio

BITS Pilani has embarked on a ambitious project of content development for courses offered as a part of its degree programs, in particular those courses which are of relevance to WILP. To support such an activity, a state of the art recording studio has been setup to record lectures rich in animation and multimedia content. This development may the very nature of the model of instruction in courses, particularly those with substantial enrollments. The studio is spacious to accommodate video recording of experimental setups and demonstrations.

The studio is equipped with an interactive whiteboard, document camera, writing panel, projector and a Sony HD camera that can record at 1080p. The studio also has a high-end Mac Pro system used to process and render the captured video. The studio can comfortably seat upto thirty students if the instructor wishes to have them present during the recording. The studio annexe has five acoustically-isolated webcast classrooms that are used to conduct the WILP lecture sessions via CISCO Webex.

Google-Moodle Integration

BITS, Pilani has partnered with Google to provide email services across all of the university campuses for faculty and students. As every individual associated with the university will have an official Google email id, we would like to leverage this by integrating other campus-wide and university-wide applications through Google Directory authentication. Google-Moodle integration is the pilot project that will integrate the WILP Learning Management System (Taxila) based on Moodle with the Google email system for WILP students and faculty. All users will login into a unified portal only once using their BITS Mail (Google based)

credentials and will be authenticated through single sign-on to access their email Inbox and Taxila account through an app-like interface.

WILP Issue Management System

In December 2012, a new web-based software system called Issue Management System (IMS) was introduced, to provide a common platform and facilitate smooth communication between WILP officers, faculty, coordinators and other staff members, with a provision to monitor and improve the processes continuously. The IMS helps the stakeholders to keep track of, remind, escalate, and view the status of various issues needing resolution by the staff members concerned. So far, several operational issues needing immediate attention have been resolved successfully.

Computer Based Task-Centric Assessment

During the year 2012, with the objective of enhancing the online learning experience of WILP students in several programmes, BITS partnered with Radix Learning Pvt. Ltd., Bangalore, and enabled students to experience interactive e-learning through their 'Actionable! Learning' technology. Students were encouraged to 'Learn by Doing' using the Practice Centre modules, and evaluated periodically through 'Task Centric Assessments' for certain courses like Computer Programming, Structured Programming, Advanced Programming Techniques, Database Management Systems, Database Systems & Applications, Database Design & Applications, Object Oriented Analysis & Design, and Object Oriented Programming. A total of 7188 students, and 9211 students, had taken the Task Centric Assessments, during Second Semester 2011-2012 and First Semester 2012-2013, respectively.

Student Satisfaction Survey and Feedback Analysis

During the year 2012, as part of our continuing efforts to improve the quality of Work Integrated Learning Programmes, BITS partnered with Eduquity Career Technologies Pvt. Ltd., Bangalore, and collected online feedback about the courses and faculty from WILP students of several programmes, and shared the detailed feedback analysis reports with the faculty, Heads of Departments and off-campus programme coordinators concerned. During Second Semester 2011-2012, the feedback survey was conducted twice, once after Mid-Semester Tests, and once again, at the end of the semester, after the Comprehensive Examinations, for 349 courses involving 15,595 students. During the First Semester 2012-13, a similar feedback survey was conducted for 347 courses involving 15,943 students. A comprehensive end-of programme feedback was also collected from 2072 students graduating from 17 degree programmes, at the end of Second Semester 2011-12. A similar feedback survey was conducted at the end of First Semester 2012-13 among 2633 students graduating from 11 degree programmes.

Engagement with the Industry to improve continuing technical education

With the objective of broadening its engagement with the Industry, BITS partnered with HT-Media, to organize a series of media events in Pune, Chennai and Gurgaon between December 2012 and March 2013, with a select audience of around 40 senior HR managers from reputed companies in the manufacturing, chemical, pharmaceutical, energy, automotive, heavy industry, information technology, telecom, services and infrastructure sectors. Several discussions were held around the central theme, "Continuing technical education for working professionals - present status, challenges, and future directions."

B5.19 FUTURE PERSPECTIVES

Blended Learning initiatives, with high-quality recorded e-content and interactive asynchronous e-learning environments, through an integrated Learning Management System, would be a thrust area for enhancing the quality of delivery of courses in our Work Integrated Learning Programmes. Lectures have been recorded for several courses at the state-of-the-art digital studios in Pilani and Goa campuses, and the e-content has been integrated with the online delivery.

DETAILS OF ADMISSIONS MADE DURING THE YEAR 2012

(A) Second Semester 2011-2012

PROGRAMMES	No. of students joined	
1. Integrated First Degree Programmes:		
B.S.		
Engineering Technology	187(02)	
Information Systems	116(31)	
		303(0033)
2. Higher Degree Programme:		
M.S.		
Embedded Systems	91(0015)	
Manufacturing Management	150(0005)	
Microelectronics	44(0010)	
Software Engineering	3490(1807)	
Software Systems	539(0134)	
Systems Engineering	355(0172)	
		4669(2143)
Associate Student	1(00)	1(0000)
Total		4973(2176)

(B) First Semester 2012-2013

PROGRAMMES	No. of students joined	
1. Integrated First Degree Programmes:		
B.S.		
Engineering Design	27(05)	
Engineering Technology	283(05)	
Manufacturing Engineering	86(01)	
Marine Engineering	245(02)	
Nautical Technology	79(01)	
Optometry	88(65)	
Physician Assistant	9(08)	
Power Engineering	50(00)	
Process Engineering	75(02)	
		942(089)

2. Higher Degree Programmes:

M.S.

Consultancy Management	116(014)
Manufacturing Management	294(016)
Pharmaceutical Operations and Management	51(002)
Quality Management	140(023)
Software Engineering	373(140)
Software Systems	975(246)
Systems Engineering	3(000)
Telecommunications & Software Engineering	159(039)

M.Phil.

Hospital and Health Systems Management	41(21)
Optometry	7(04)

2159(505)

Total

3101(594)

SUMMARY

	II Semester 2011-12	I Semester 2012-13
Integrated First Degree Programmes	303(0033)	942(089)
Higher Degree Programmes	4669(2143)	2159(505)
Associate Students	1(0)	-
Total	4973(2176)	3101(594)

NUMBER OF STUDENTS REGISTERED IN FIRST SEMESTER 2012-2013

Programme	Year of Admission						Total
	2007 and earlier	2008	2009	2010	2011	2012	
A. Integrated First Degree Programmes							
B.S.							
Engineering Design		3(00)		32(06)		27(05)	62(11)
Engineering Technology	144(09)	148(09)	259(09)	293(16)	368(08)	283(05)	1495(56)
Information Systems	43(01)	16(03)	41(13)	97(17)	127(31)		324(65)
Manufacturing Engineering			2(00)	39(00)	81(03)	86(01)	208(04)
Marine Engineering	20(00)	75(02)	339(04)	339(13)	283(02)	245(02)	1301(13)
Nautical Technology	14(00)	28(00)	161(00)	113(01)	78(01)	79(01)	473(03)
Optometry		16(12)	65(49)	73(49)	93(75)	88(65)	335(250)
Physician Assistant	1(01)		12(10)	35(28)	27(20)	9(08)	84(67)
Power Engineering				120(00)		50(00)	170(00)
Process Engineering		1(00)	102(00)	77(01)		75(02)	255(03)
Sub. Total	222(11)	(287(26))	981(85)	1218(121)	1057(140)	942(89)	4707(472)

B. Higher Degree Programmes

M.S.

Consultancy Management	1(00)	3(00)	7(00)	4(00)	64(17)	116(14)	195(31)
Design Engineering				3(00)	33(01)		36(01)
Embedded Systems					87(15)	-	87(15)
Manufacturing Management	8(00)	7(00)	27(02)	153(07)	340(14)	294(16)	829(39)
Medical Laboratory Technology				4(03)	1(01)		5(04)
Microelectronics					38(09)		38(09)
Pharmaceutical Operations and Management					28(02)	51(02)	79(04)
Pharmaceutics			3(00)				3(00)
Project Engineering & Management				17(02)			17(02)
Quality Management	2(00)	3(01)	6(02)	14(01)	115(15)	140(23)	280(42)

Programme	Year of Admission						Total
	2007 and earlier	2008	2009	2010	2011	2012	
Science Communication					10(02)		10(02)
Software Engineering	46(25)	1005(527)	529(312)	2486(1222)	3584(1842)	373(140)	8023(4068)
Software Systems	50(12)	55(09)	145(36)	528(130)	1176(287)	975(246)	2929(720)
Systems Engineering		15(03)		87(27)	352(171)	3(00)	457(201)
Telecommunications & Software Engineering			4(01)	13(02)	197(73)	159(39)	373(115)
M.Phil.							
Hospital & Health Systems Management		2(00)	2(01)	4(01)	42(13)	41(21)	91(36)
Optometry					7(07)	7(04)	14(11)
Sub. Total	107(37)	1090(540)	723(354)	3313(1395)	6074(2469)	2159(505)	13466(5300)
Total Off-campus							18173(5772)

Note: The numbers in brackets indicate number of female students.

**LIST OF ORGANIZATIONS WHO HAVE SPONSORED THEIR EMPLOYEES FOR
WORK INTEGRATED LEARNING PROGRAMMES OF BITS**

1.	1010LOGIC PVT. LTD.	COIMBATORE
2.	3DPLM SOFTWARE SOLUTIONS LTD.	KURDUWADI
3.	3DPLM SOFTWARE SOLUTIONS LTD.	MUMBAI
4.	3DPLM SOFTWARE SOLUTIONS LTD.	PUNE
5.	3I INFOTECH LTD.	CHENNAI
6.	3I INFOTECH LTD.	TANJORE
7.	3I TECHNOLOGY SOLUTIONS PVT. LTD.	BANGALORE
8.	3M INDIA LTD.	BANGALORE
9.	3M INDIA LTD.	CHENNAI
10.	3M INDIA LTD.	HOSUR
11.	7N CONSULTING PVT. LTD.	NEW DELHI
12.	A.O. SMITH INDIA WATER HEATING PVT. LTD.	BANGALORE
13.	A.P.BAVA CONSTRUCTION COMPANY LLC	DUBAI
14.	A3LOGICS INDIA LTD.	JAIPUR
15.	AAM SONA AXLE PVT. LTD.	UDHAMSINGH NAGAR
16.	AB SCIEX PTE. LTD.	VELLORE
17.	ABB GLOBAL INDUSTRIES & SERVICES LTD.	BANGALORE
18.	ABB GLOBAL INDUSTRIES & SERVICES LTD.	CALICUT
19.	ABB GLOBAL INDUSTRIES & SERVICES LTD.	CHENNAI
20.	ABB GLOBAL INDUSTRIES & SERVICES LTD.	TIRUNELVELI
21.	ABB GLOBAL SERVICES & INDUSTRIES LTD.	NASIK
22.	ABB INDUSTRIES LLC	DUBAI
23.	ABB LTD.	BANGALORE
24.	ABB LTD.	COIMBATORE
25.	ABB LTD.	ERNAKULAM
26.	ABB LTD.	FARIDABAD
27.	ABB LTD.	JAMSHEDPUR
28.	ABB LTD.	KOLKATA
29.	ABB LTD.	KOTA
30.	ABB LTD.	NASIK
31.	ABB LTD.	NAVI MUMBAI
32.	ABB LTD.	NEYVELI
33.	ABB LTD.	TRICHY
34.	ABB LTD.	VADODARA
35.	ABB PTE.LTD.	SINGAPORE
36.	ABB TRANSMISSION & DISTRIBUTION	ABU DHABI
37.	ABCL SAFETY CONSULTANTS	DUBAI
38.	ABDULLAH A M AL KHODARI SONS CO	AL JUBAIL
39.	ABI SHOWATECH (INDIA) LTD.	SALALAH
40.	ABI SHOWATECH (INDIA) LTD.	SHOLINGHUR
41.	ABU DHABI AIRCRAFT TECHNOLOGIES	ABU DHABI
42.	ABU DHABI GAS INDUSTIES LTD.	RUWAIS
43.	ABU DHABI HEALTH SERVICES CO	AL GARBIA
44.	ABU DHABI OIL REFINING COMPANY	ABU DHABI
45.	ABU DHABI POWER & CONTROL SYSTEMS	ABU DHABI
46.	ACC CONCRETE LTD.	THANE
47.	ACC LTD.	KOLKATA
48.	ACCEL FRONTLINE LTD.	CHENNAI

49.	ACCEL FRONTLINE LTD.	DELHI
50.	ACCEL FRONTLINE LTD.	ERNAKULAM
51.	ACCEL FRONTLINE LTD.	THRISSUR
52.	ACCEL TREE SOFTWARE PVT. LTD.	PUNE
53.	ACCELYA KALE SOLUTIONS LTD.	PUNE
54.	ACCENTURE SERVICES PVT. LTD.	ALLAHABAD
55.	ACCENTURE SERVICES PVT. LTD.	ALWAR
56.	ACCENTURE SERVICES PVT. LTD.	AMBALA
57.	ACCENTURE SERVICES PVT. LTD.	ANANTAPUR
58.	ACCENTURE SERVICES PVT. LTD.	BANGALORE
59.	ACCENTURE SERVICES PVT. LTD.	BHARATPUR
60.	ACCENTURE SERVICES PVT. LTD.	CHANDIGARH
61.	ACCENTURE SERVICES PVT. LTD.	CHENNAI
62.	ACCENTURE SERVICES PVT. LTD.	COIMBATORE
63.	ACCENTURE SERVICES PVT. LTD.	GHAZIABAD
64.	ACCENTURE SERVICES PVT. LTD.	GURGAON
65.	ACCENTURE SERVICES PVT. LTD.	HYDERABAD
66.	ACCENTURE SERVICES PVT. LTD.	KOCHI
67.	ACCENTURE SERVICES PVT. LTD.	MEERUT
68.	ACCENTURE SERVICES PVT. LTD.	MUMBAI
69.	ACCENTURE SERVICES PVT. LTD.	MUZAFFARPUR
70.	ACCENTURE SERVICES PVT. LTD.	MYSORE
71.	ACCENTURE SERVICES PVT. LTD.	NAMAKKAL
72.	ACCENTURE SERVICES PVT. LTD.	NOIDA
73.	ACCENTURE SERVICES PVT. LTD.	PONDICHERRY
74.	ACCENTURE SERVICES PVT. LTD.	PUNE
75.	ACCENTURE SERVICES PVT. LTD.	ROHTAK
76.	ACCENTURE SERVICES PVT. LTD.	THANE
77.	ACCENTURE SERVICES PVT. LTD.	THIRUVALLA
78.	ACCENTURE SERVICES PVT. LTD.	THIRUVANANTHAPURAM
79.	ACCENTURE SERVICES PVT. LTD.	THRISSUR
80.	ACCENTURE SERVICES PVT. LTD.	TRICHY
81.	ACCOLITE SOFTWARE INDIA PVT. LTD.	HYDERABAD
82.	ACCORD SOFTWARE & SYSTEMS PVT. LTD.	BANGALORE
83.	ACCORD SOFTWARE & SYSTEMS PVT. LTD.	BELLARY
84.	ACE STEEL FAB PVT. LTD.	PALWAL
85.	ACME ELECTROMECHANICAL WORKS LLC	DUBAI
86.	ACS OF INDIA PVT. LTD.	GURGAON
87.	ACS OF INDIA PVT. LTD.	KOCHI
88.	ACS OF INDIA PVT. LTD.	TRIVANDRUM
89.	ACSYS SOFTWARE INDIA PVT. LTD.	CHENNAI
90.	ACTAVIS PHARMA MFG PVT. LTD.	CHENGALPET
91.	ACTIANCE INDIA PVT. LTD.	BANGALORE
92.	ACTION ISPAT & POWER(P) LTD.	KANPUR
93.	ACUMENT FASTENING SYSTEMS	COIMBATORE
94.	ADAEQUARE INFO PVT. LTD.	KARIMNAGAR
95.	ADAMS STUDIO INDIA PVT. LTD.	CHENNAI
96.	ADANI INFRA INDIA LTD.	AMBALA
97.	ADANI POWER MAHARASHTRA LTD.	GONDIA
98.	ADC INTERNATIONAL DMCC	DUBAI
99.	ADD ENERGY & PARTNER LLC	NAGERCOIL
100.	ADICO FORGE PVT. LTD.	PUNE
101.	ADITECH IT & CONSULTANCY SERVICES PVT. LTD.	PUNE
102.	ADITI TECHNOLOGIES PVT. LTD.	BANGALORE
103.	ADITYA BIRLA GROUP	HIRMI

104.	ADITYA MULTI CARE HOSPITAL	TUNI
105.	ADOBE SYSTEMS INDIA PVT. LTD.	BANGALORE
106.	ADOBE SYSTEMS INDIA PVT. LTD.	DELHI
107.	ADOBE SYSTEMS INDIA PVT. LTD.	GHAZIABAD
108.	ADOBE SYSTEMS INDIA PVT. LTD.	GURGAON
109.	ADOBE SYSTEMS INDIA PVT. LTD.	NOIDA
110.	ADOBE SYSTEMS INDIA PVT. LTD.	RISHIKESH
111.	ADOR FONTECH LTD.	COIMBATORE
112.	ADP PVT. LTD.	HYDERABAD
113.	ADP PVT. LTD.	PUNE
114.	ADRENALIN ESYSTEMS LTD.	CHENNAI
115.	ADVAIYA SOLUTIONS PVT. LTD.	UDAIPUR
116.	ADVANCED DIGITAL BROADCAST INDIA PVT. LTD.	NAVI MUMBAI
117.	ADYA SYSTEM & SOFTWARE PVT. LTD.	FARIDABAD
118.	ADYARD ABU DHABI LLC.	ABU DHABI
119.	AECOM INDIA PVT. LTD.	KOLKATA
120.	AECOM MIDDLE EAST LTD.	SHARJAH
121.	AEQUOR INFORMATION TECHNOLOGIES PVT. LTD.	CHENNAI
122.	AES INSTITUTE OF COMPUTER STUDIES	AHMEDABAD
123.	AFCONS INFRASTRUCTURE LTD.	CHENNAI
124.	AFTEK LTD.	PUNE
125.	AGARAM INSTRUMENTS PVT. LTD.	TRICHY
126.	AGGREKO ENERGY RENTAL INDIA PVT. LTD.	FARIDABAD
127.	AGIECHARMILLES (SEA) PTE LTD.	BANGALORE
128.	AGILENT TECHNOLOGIES INTERNATIONAL PVT. LTD.	DELHI
129.	AGILENT TECHNOLOGIES INTERNATIONAL PVT. LTD.	ERNAKULAM
130.	AGILENT TECHNOLOGIES INTERNATIONAL PVT. LTD.	GURGAON
131.	AGILENT TECHNOLOGIES INTERNATIONAL PVT. LTD.	MEERUT
132.	AHEX TECHNOLOGIES	SURAT
133.	AHMADIAH CONTRACTING & TRADING COMPANY	VIZIANAGARAM
134.	AIBEL PTE LTD.	BUKIT BATOK
135.	AIBEL PTE LTD.	CHENNAI
136.	AIBEL PTE LTD.	SINGAPORE
137.	AIBEL PTE LTD.	TANJAVUR
138.	AIR PRODUCTS ME FZE	JEBEL ALI
139.	AIR WORLDWIDE INDIA PVT. LTD.	HYDERABAD
140.	AIRBUS ENGINEERING CENTRE INDIA PVT. LTD.	BANGALORE
141.	AIRCOM INTERNATIONAL (INDIA) PVT. LTD.	DELHI
142.	AIRCOM INTERNATIONAL (INDIA) PVT. LTD.	MEERUT
143.	AIRVANA NETWORKS INDIA PVT. LTD.	BANGALORE
144.	AK AEROTEK SOFTWARE CENTRE PVT. LTD.	BANGALORE
145.	AKAMAI TECHNOLOGIES INDIA PVT. LTD.	BANGALORE
146.	AKER SOLUTIONS MMO AS	CHENNAI
147.	AKER SOLUTIONS MMO AS	PUNE
148.	AKSA SOFTWARE SOLUTIONS	SRINAGAR
149.	AKZONOBEL COATINGS INDIA PVT. LTD.	NAMAKKAL
150.	AKZONOBEL COATINGS INDIA PVT. LTD.	THANJAVUR
151.	AKZONOBEL COATINGS INDIA PVT. LTD.	TRICHY
152.	AL AHLIA INSURANCE CO SAOC	MUSCAT
153.	AL ATTAR ELECTROMECHANICAL ENGINEERING	MUVATTUPUZHA
154.	AL EZZEL O & M COMPANY	MANAMA
155.	AL FARAA GEN. CONT. CO.	UAE
156.	AL FARDAN GROUP	SHARJAH
157.	AL FUTTAIM CARILLION LLC	ABU DHABI
158.	AL FUTTAIM ENGINEERING	CHENNAI

159.	AL GHURAIR IRON & STEEL LLC	ABU DHABI
160.	AL HOSN GAS (ADNOC)	ABU DHABI
161.	AL JABER ALUMINIUM EXTRUSIONS LLC	ABU DHABI
162.	AL JABER LEGT ENGINEERING CONTRACTING CO	ABU DHABI
163.	AL MANSOORI SPECIALIZED ENGINEERING	DOHA
164.	AL MASAOOD BERGUM	MUSSAFAH
165.	AL MAZROUEI BOWYER BUILDING LLC	DUBAI
166.	AL OTHMAN HOLDING CO	NAGERCOIL
167.	AL RAJHI TAKAFUL	AL MALAZ
168.	AL SHIRAWI ENTERPRISES	AL QUOZ
169.	AL TAJIR GLASS INDUSTRIES	DUBAI
170.	ALCATEL LUCENT INDIA LTD.	BANGALORE
171.	ALCATEL LUCENT INDIA LTD.	CHENNAI
172.	ALCATEL LUCENT INDIA LTD.	GURGAON
173.	ALCATEL LUCENT INDIA LTD.	KARUR
174.	ALCATEL LUCENT INDIA LTD.	KOTA
175.	ALCATEL LUCENT INDIA LTD.	LAKHIMPUR
176.	ALCATEL LUCENT INDIA LTD.	RAJAPALAYAM
177.	ALDERLEY FZE	JABEL ALI
178.	ALFANAR ELECTRICAL SYSTEMS	RIYADH
179.	AL-GHANIM INTERNATIONAL	KUWAIT
180.	ALI & SONS MARINE ENGINEERING FACTORY LLC	ABU DHABI
181.	AL-JABER ENERGY SERVICES LLC	TIRUCHIRAPPALLI
182.	AL-JAZIRAH ENGINEERS & CONSULTANT	AL-KHOBAR
183.	ALL CHECK DEALS INDIA PVT. LTD.	NEW DELHI
184.	ALL INDIA RADIO	NEW DELHI
185.	ALLAHABAD BANK	KOLKATA
186.	ALLCARGO LOGISTICS LTD.	MUMBAI
187.	ALLEGIS SERVICE INDIA	BANGALORE
188.	ALLGO EMBEDDED SYSTEMS PVT. LTD.	BANGALORE
189.	ALLIANZ CORNHILL INFORMATION SERVICES PVT. LTD.	NAGERCOIL
190.	ALLISON TRANSMISSION INDIA PVT. LTD.	CHENNAI
191.	ALLSCRIPTS (INDIA) PVT. LTD.	BANGALORE
192.	ALSA ENGINEERING & CONSTRUCTION CO. LLC	ABU DHABI
193.	ALSA ENGINEERING & CONSTRUCTION CO. LLC	KOLLAM
194.	ALSTOM MIDDLE EAST	DUBAI
195.	ALSTOM MIDDLE EAST	JEBEL ALI
196.	ALSTOM PROJECTS INDIA LTD.	BAIDYABATI
197.	ALSTOM PROJECTS INDIA LTD.	BANGALORE
198.	ALSTOM PROJECTS INDIA LTD.	DURGAPUR
199.	ALSTOM PROJECTS INDIA LTD.	GHAZIABAD
200.	ALSTOM PROJECTS INDIA LTD.	HOSUR
201.	ALSTOM PROJECTS INDIA LTD.	KOLKATA
202.	ALSTOM PROJECTS INDIA LTD.	NEW DELHI
203.	ALSTOM PROJECTS INDIA LTD.	NOIDA
204.	ALSTOM T&D INDIA LTD.	HOSUR
205.	ALSTOM T&D INDIA LTD.	TRIVANDRUM
206.	ALTISOURCE BUSINESS SOLUTIONS PVT.LTD.	BANGALORE
207.	ALTRAN INDIA	CHENNAI
208.	AL-TURKI ENTERPRISES LLC	OMAN
209.	ALUMNUS SOFTWARE LTD.	KOLKATA
210.	ALZONOBEL INDIA	NAVI MUMBAI
211.	AMANA STEEL BUILDINGS CONTRACTING.CO.WLL	DOHA
212.	AMARA RAJA ELECTRONICS LTD.	TIRUPATHI
213.	AMAZON DEVELOPMENT CENTER INDIA PVT. LTD.	CHENNAI

214.	AMAZON DEVELOPMENT CENTER INDIA PVT. LTD.	HYDERABAD
215.	AMAZON DEVELOPMENT CENTER INDIA PVT. LTD.	SECUNDERABAD
216.	AMAZON DEVELOPMENT CENTER INDIA PVT. LTD.	TRICHY
217.	AMBE ENGINEERS PVT. LTD.	FARIDABAD
218.	AMBUJA CEMENT LTD.	SAWAI MADHOPUR
219.	AMD INDIA PVT. LTD.	BANGALORE
220.	AMD R&D CENTER INDIA PVT. LTD.	HYDERABAD
221.	AMDOCS INDIA LTD.	AJMER
222.	AMDOCS INDIA LTD.	DELHI
223.	AMDOCS INDIA LTD.	GURGAON
224.	AMDOCS INDIA LTD.	MANGROL
225.	AMDOCS INDIA LTD.	NEW DELHI
226.	AMDOCS INDIA LTD.	PUNE
227.	AMDOCS INDIA LTD.	ROHTAK
228.	AMEC BLACKCAT LLC	KANNUR
229.	AMERICAN EXPRESS INDIA PVT. LTD.	BHOPAL
230.	AMERICAN EXPRESS INDIA PVT. LTD.	GURGAON
231.	AMERICAN SOLUTIONS PVT. LTD.	VISAKHAPATNAM
232.	AMITY UNIVERSITY	NOIDA
233.	AMW AUTOCOMPONENTS LTD.	BHUJ
234.	ANALOG DEVICES INDIA PVT. LTD.	BANGALORE
235.	ANALOGIC TECHNOMATICS PVT. LTD.	HYDERABAD
236.	ANAND TEKNOV AIDA ENGINEERING INDIA LTD.	COIMBATOTE
237.	ANCHOR SEMICONDUCTOR INC	ALLAHABAD
238.	ANDOR TECH (INDIA) PVT. LTD.	BANGALORE
239.	ANG AUTOMATION SOLUTIONS FZCO	CHENNAI
240.	ANG AUTOMATION SOLUTIONS FZCO	COIMBATORE
241.	ANGLER TECHNOLOGIES INDIA PVT. LTD.	COIMBATORE
242.	ANR SOFTWARE PVT. LTD.	KURUKSHETRA
243.	ANRAK ALUMINIUM LTD.	RAJAHMUNDRY
244.	ANRAK ALUMINIUM LTD.	YANAM
245.	ANSALDO CALDAIE BOILERS INDIA PVT. LTD.	CHENNAI
246.	ANSALDO CALDAIE BOILERS INDIA PVT. LTD.	TRICHY
247.	ANSALDO STS TRANSPORTATION SYSTEMS INDIA	BANGALORE
248.	ANSALDO-STG PVT. LTD.	GHAZIABAD
249.	ANSYS FLUENT INDIA PVT. LTD.	PUNE
250.	ANTHELIO BUSINESS TECHNOLOGIES PVT. LTD.	HYDERABAD
251.	ANZ TECH & OPERATIONS(ANZ BANK)	BANGALORE
252.	AOL ONLINE INDIA PVT. LTD.	BANGALORE
253.	AON HEWITT (INDIA) PVT. LTD.	CHENNAI
254.	AON HEWITT (INDIA) PVT. LTD.	CHIRAWA
255.	AON HEWITT (INDIA) PVT. LTD.	DELHI
256.	AON HEWITT (INDIA) PVT. LTD.	FARIDABAD
257.	AON HEWITT (INDIA) PVT. LTD.	GURGAON
258.	AON HEWITT (INDIA) PVT. LTD.	NEW DELHI
259.	AONE TECHNOLOGY PVT. LTD.	NEW DELHI
260.	AP TECHNOLOGY SERVICES LTD.	HYDERABAD
261.	APARA ENTERPRISE SOLUTIONS PVT. LTD.	BANGALORE
262.	APC (INDIA) PVT. LTD.	BANGALORE
263.	APIGEE CORPORATION	BANGALORE
264.	APNA INSTRUMENTATION SOLUTIONS PVT. LTD.	BANGALORE
265.	APNA INSTRUMENTATION SOLUTIONS PVT. LTD.	CHENNAI
266.	APOLLO HEALTH & LIFESTYLE LTD.	HYDERABAD
267.	APOLLO HEALTH HIWAY	KOTA
268.	APOLLO HOSPITALS	CHENNAI

269.	APOLLO TYRES LTD.	CHENGALPET
270.	APOLLO TYRES LTD.	CHENNAI
271.	APOLLO TYRES LTD.	COIMBATORE
272.	APOLLO TYRES LTD.	ERNAKULAM
273.	APOLLO TYRES LTD.	TINDIVANAM
274.	APOLLO TYRES LTD.	VADODARA
275.	APONLINE(TCS)	HYDERABAD
276.	APPLABS A CSC COMPANY	HYDERABAD
277.	APPLABS A CSC COMPANY	SECUNDERABAD
278.	APPLE HOSPITAL	SURAT
279.	APPLIED ELECTRO MAGNETICS PVT. LTD.	MEERUT
280.	APPLIED MATERIALS INDIA PVT. LTD.	BANGALORE
281.	APPLIED MATERIALS INDIA PVT. LTD.	CHENNAI
282.	APTUIT LAURUS PVT. LTD.	HYDERABAD
283.	ARABI- ENERTECH KUWAIT	FAHEHEEL
284.	ARABIAN AIRCONDITIONING CONTRACTING	DOHA
285.	ARABIAN AUTOMOBILES CO LLC	MADURAI
286.	ARABIAN CONSTRUCTION COMPANY	ABU DHABI
287.	ARABIAN POWER COMPANY	ABU DHABI
288.	ARABIAN TECHNICAL TRADING EST.	DAMMAM
289.	ARADA SYSTEMS PVT. LTD.	BANGALORE
290.	ARADA SYSTEMS PVT. LTD.	VELLORE
291.	ARCELOR NEEL TAILORED BLANK LTD.	CHENNAI
292.	ARCELOMITTAL DHAMM PROCESSING PVT. LTD.	HOSUR
293.	ARCHIRODON CONSTRUCTION OVERSEAS	QATAR
294.	ARCO GENERAL CONTRACTING	DUBAI
295.	ARENDA INDIA PVT. LTD.	DELHI
296.	AREVA T & D INDIA LTD.	CHENNAI
297.	ARIBA TECHNOLOGIES INDIA PVT. LTD.	BANGALORE
298.	ARIBA TECHNOLOGIES INDIA PVT. LTD.	DUBAI
299.	ARIBA TECHNOLOGIES INDIA PVT. LTD.	ERODE
300.	ARIBA TECHNOLOGIES INDIA PVT. LTD.	KANCHIPURAM
301.	ARICENT TECHNOLOGIES HOLDINGS LTD.	ALLAHABAD
302.	ARICENT TECHNOLOGIES HOLDINGS LTD.	BANGALORE
303.	ARICENT TECHNOLOGIES HOLDINGS LTD.	BIKANER
304.	ARICENT TECHNOLOGIES HOLDINGS LTD.	CHARKHI DADRI
305.	ARICENT TECHNOLOGIES HOLDINGS LTD.	CHENNAI
306.	ARICENT TECHNOLOGIES HOLDINGS LTD.	CHITRADURGA
307.	ARICENT TECHNOLOGIES HOLDINGS LTD.	CHITTOOR
308.	ARICENT TECHNOLOGIES HOLDINGS LTD.	COIMBATORE
309.	ARICENT TECHNOLOGIES HOLDINGS LTD.	DELHI
310.	ARICENT TECHNOLOGIES HOLDINGS LTD.	ERODE
311.	ARICENT TECHNOLOGIES HOLDINGS LTD.	GURGAON
312.	ARICENT TECHNOLOGIES HOLDINGS LTD.	HYDERABAD
313.	ARICENT TECHNOLOGIES HOLDINGS LTD.	JODHPUR
314.	ARICENT TECHNOLOGIES HOLDINGS LTD.	MADURAI
315.	ARICENT TECHNOLOGIES HOLDINGS LTD.	NAMAKKAL
316.	ARICENT TECHNOLOGIES HOLDINGS LTD.	NEW DELHI
317.	ARICENT TECHNOLOGIES HOLDINGS LTD.	NEYVELI
318.	ARICENT TECHNOLOGIES HOLDINGS LTD.	ROHTAK
319.	ARICENT TECHNOLOGIES HOLDINGS LTD.	THANJAVUR
320.	ARICENT TECHNOLOGIES HOLDINGS LTD.	WEST GODAVARI
321.	ARIES MARINE ENGINEERING SERVICES	ABU DHABI
322.	ARIS GLOBAL SOFTWARE PVT. LTD.	BANGALORE
323.	ARISTOCRAT TECHNOLOGIES INDIA PVT. LTD.	DELHI

324.	ARISTOCRAT TECHNOLOGIES INDIA PVT. LTD.	FARIDABAD
325.	ARISTOCRAT TECHNOLOGIES INDIA PVT. LTD.	HAPUR
326.	ARM EMBEDDED TECH PVT. LTD.	BANGALORE
327.	ARMSEL MHE PVT. LTD.	BANGALORE
328.	ARMSTRONG INTERNATIONAL PVT. LTD.	CHENNAI
329.	ARMY MEDICAL CORPS(MOD)	LUCKNOW
330.	ARROW COACH BUILDERS	VILLUPURAM
331.	ARROW ELECTRONICS INDIA PVT. LTD.	BANGALORE
332.	ARTECH INFOSYSTEMS PVT. LTD.	BANGALORE
333.	ASAHI INDIA GLASS LTD.	CHENNAI
334.	ASAHI INDIA GLASS LTD.	DELHI
335.	ASCO NUMATICS INDIA PVT.LTD.	CHENNAI
336.	ASHLEY ALTEAMS INDIA LTD.	CHENNAI
337.	ASHLEY ALTEAMS INDIA LTD.	CHEYYAR
338.	ASHLEY ALTEAMS INDIA LTD.	KANCHIPURAM
339.	ASHOK LEYLAND LTD.	CHENNAI
340.	ASHOK LEYLAND LTD.	COIMBATORE
341.	ASHOK LEYLAND LTD.	ENNORE
342.	ASHOK LEYLAND LTD.	GHAZIABAD
343.	ASHOK LEYLAND LTD.	HOSUR
344.	ASHOK LEYLAND LTD.	LATUR
345.	ASHOK LEYLAND LTD.	NAMAKKAL
346.	ASHOK LEYLAND LTD.	NOIDA
347.	ASHOK LEYLAND LTD.	PANTNAGAR
348.	ASHOK LEYLAND LTD.	PONDICHERRY
349.	ASHOK LEYLAND LTD.	RAJAPALAYAM
350.	ASHOK LEYLAND LTD.	SALEM
351.	ASHTON TECHNOLOGIES	MUMBAI
352.	ASHWIN INDUSTRIES	CHENNAI
353.	ASIA MOTOR WORKS LTD.	BHUJ
354.	ASIA MOTOR WORKS LTD.	CHENNAI
355.	ASIA MOTOR WORKS LTD.	COIMBATORE
356.	ASIA MOTOR WORKS LTD.	HYDERABAD
357.	ASIA MOTOR WORKS LTD.	KANAIYABE
358.	ASIA MOTOR WORKS LTD.	VILLUPURAM
359.	ASIAN METALS & ALUMINIUM CASTING	BANGALORE
360.	ASIANPAINTS LTD.	MUMBAI
361.	ASM TECHNOLOGIES LTD.	BANGALORE
362.	ASPECT TECHNOLOGY CENTER	KANNUR
363.	ASPIRE SYSTEMS INDIA PVT. LTD.	CHENNAI
364.	ASPIRE SYSTEMS INDIA PVT. LTD.	MADURAI
365.	ASPIRE SYSTEMS INDIA PVT. LTD.	SRIKALAHASTI
366.	ASSAM ENGINEERING INSTITUTE	CHANDMARI
367.	ASSAM POWER DISTRIBUTION COMPANY LTD.	GUWAHATI
368.	ASSAM POWER DISTRIBUTION COMPANY LTD.	SILCHAR
369.	ASWAN INTERNATIONAL ENGG CO LLC	DUBAI
370.	ASWINI HOSPITAL	KAKINADA
371.	ASYS GROUP ASIA PTE LTD.	BANGALORE
372.	ATHENTA TECHNOLOGIES PVT. LTD.	NOIDA
373.	ATIBIR INDUSTRIES CO.LTD.	RAMAVARAPPADU
374.	ATLANTIS LAB PVT. LTD.	DINDIGUL
375.	ATLAS COPCO INDIA LTD.	CHENNAI
376.	ATLAS COPCO INDIA LTD.	PUNE
377.	ATLAS COPCO SERVICES MIDDLE EAST	DUBAI
378.	ATMEL R&D INDIA PVT. LTD.	CHENNAI

379.	ATMEL R&D INDIA PVT. LTD.	MYSORE
380.	ATOS ORIGIN INDIA PVT. LTD.	KALYAN
381.	ATOS ORIGIN INDIA PVT. LTD.	KOLKATA
382.	ATOS ORIGIN INDIA PVT. LTD.	MEERUT
383.	ATOS ORIGIN INDIA PVT. LTD.	MUMBAI
384.	ATOS ORIGIN INDIA PVT. LTD.	NASIK
385.	AUDCO INDIA LTD.	CHENNAI
386.	AUDCO INDIA LTD.	THENI
387.	AUJAS NETWORKS PVT. LTD.	BANGALORE
388.	AURIC MERCHANDISING SERVICES PVT. LTD.	FARIDABAD
389.	AUROBINDO PHARMA LTD.	VISAKHAPATNAM
390.	AURONEXT PHARMA PVT.LTD.	BHIWADI
391.	AUSTIN ENERGY ASIA PTE LTD.	KANCHIPURAM
392.	AUTOLINE INDUSTRIES LTD.	MALEGAON
393.	AUTOLIV INDIA PVT. LTD.	BANGALORE
394.	AUTOLIV INDIA PVT. LTD.	DHARMAPURI
395.	AUTOMOTIVE COACHES & COMPONENTS LTD.	MAYILADUTHURAI
396.	AUTOMOTIVE INFOTRONICS PVT. LTD.	CHENNAI
397.	AUTOMOTIVE ROBOTICS INDIA PVT. LTD.	CHENNAI
398.	AUTOMOTIVE ROBOTICS INDIA PVT. LTD.	PONNERI
399.	AUTORISK MANAGEMENT SERVICES PVT. LTD.	JALANDHAR
400.	AVANI INFORMATION TECHNOLOGIES	BANGALORE
401.	AVASARALA TECHNOLOGIES LTD.	BANGALORE
402.	AVASARALA TECHNOLOGIES LTD.	THIRUKKALUKUNDRAM
403.	AVAYA INDIA PVT. LTD.	BANGALORE
404.	AVAYA INDIA PVT. LTD.	HYDERABAD
405.	AVAYA INDIA PVT. LTD.	PUNE
406.	AVERY DENNISON	BANGALORE
407.	AVEVA INFORMATION TECHNOLOGY	BANGALORE
408.	AVINEON INDIA PVT. LTD.	HYDERABAD
409.	AVL INDIA PVT. LTD.	GURGAON
410.	AVL INDIA SOFTWARE PVT. LTD.	DELHI
411.	AVTEC LTD.	COIMBATORE
412.	AVTEC LTD.	HOSUR
413.	AVTEC LTD.	INDORE
414.	AVTEC LTD.	KRISHNAGIRI
415.	AVTEC LTD.	TUTICORIN
416.	AWALGULF MANUFACTURING CO.BSC.	CHENNAI
417.	AWALGULF MANUFACTURING CO.BSC.	TRICHIRAPPALLI
418.	AWALGULF MANUFACTURING CO.BSC.	VILLUPURAM
419.	AXA TECHNOLOGY SERVICES	BANGALORE
420.	AXA TECHNOLOGY SERVICES	PATNA
421.	AXCEND AUTOMATION & SOFTWARE SOLUTION	BANGALORE
422.	AXIS AEROSPACE & TECHNOLOGIES PVT. LTD.	BANGALORE
423.	AXIS IT&T LTD.	HYDERABAD
424.	AXIS IT&T LTD.	THIRUVALLUR
425.	AZURI CONSTRUCTIONS	RAS AL KHAIMAH
426.	B.P.MIDDLE EAST(AIR BP)	DUBAI
427.	BA CONTINUUM INDIA PVT. LTD.	CHENNAI
428.	BA CONTINUUM INDIA PVT. LTD.	HYDERABAD
429.	BA CONTINUUM INDIA PVT. LTD.	NAMAKKAL
430.	BACARDI INDIA PVT. LTD.	MYSORE
431.	BACK OFFICE IT SOLUTIONS PVT. LTD.	JAIPUR
432.	BADER MULLA BROTHERS ENGINEERING GROUP	RAJAPALAYAM
433.	BAEHAL SOTWARE LTD.	BANGALORE

434.	BAHWAN ENGINEERING COMPANY LLC	MUSCAT
435.	BAHWAN ENGINEERING COMPANY LLC	RUWI
436.	BAJAJ ALLIANZ LIFE INSURANCE COMPANY LTD.	PUNE
437.	BAJAJ AUTO LTD.	BHAVNAGAR
438.	BAJAJ AUTO LTD.	PUNE
439.	BAJAJ ELECTRICALS LTD.	PUNE
440.	BAKER HUGHES	DUBAI
441.	BAKER HUGHES	MUMBAI
442.	BALAJI GROUP SYSTEM	DEHRADUN
443.	BALDOR ELECTRIC INDIA PVT. LTD.	CHENNAI
444.	BALLY TECHNOLOGIES INDIA PVT. LTD.	CHENNAI
445.	BALLY TECHNOLOGY PVT. LTD.	BANGALORE
446.	BALLY TECHNOLOGY PVT. LTD.	PUDUCHERRY
447.	BANCA SELLA S.P.A	CHENNAI
448.	BANGALORE BAPTIST HOSPITAL	BANGALORE
449.	BANK NOTE PRESS DEWAS	DEWAS
450.	BANK OF AMERICA	GURGAON
451.	BANK OF AMERICA CONTINUUM INDIA	HYDERABAD
452.	BAPS PRAMUKH SWAMI HOSPITAL	SURAT
453.	BAPTIST CHRISTIAN HOSPITAL	TEZPUR
454.	BARALA HOSPITAL	JHUNJHUNU
455.	BARCLAYS TECHNOLOGY CENTRE INDIA PVT. LTD.	GANDHINAGAR
456.	BARCLAYS TECHNOLOGY CENTRE INDIA PVT. LTD.	PUNE
457.	BARCO ELECTRONIC SYSTEMS PVT. LTD.	DELHI
458.	BARCO ELECTRONIC SYSTEMS PVT. LTD.	NOIDA
459.	BARMALT INDIA PVT. LTD.	ALWAR
460.	BARODA EQUIPMENT & VESSELS PVT.LTD.	VADODARA
461.	BASE CONTROL TECH FZC	SHARJAH
462.	BASF INDIA LTD.	BANGALORE
463.	BASF INDIA LTD.	MANGALORE
464.	BAXTER HEALTHCARE SA	SINGAPORE
465.	BAY TALKITEC PVT. LTD.	CHENNAI
466.	BAYER CROPSCIENCE LTD.	THANE
467.	BCS INFOSOFT INDIA PVT. LTD.	GURGAON
468.	BE WELL HOSPITALS	CHENNAI
469.	BEACON TECHNOLOGICAL SOLUTIONS PVT. LTD.	SALEM
470.	BECTOR AUTOMATION RML INDIA PVT. LTD.	PUNE
471.	BEHR PROCESS PAINTS	PUNE
472.	BELHOUL SPECIALITY HOSPITAL	DUBAI
473.	BELSARE ENGINEERING PVT. LTD.	PUNE
474.	BEML LTD.	BANGALORE
475.	BEML LTD.	CHENNAI
476.	BEML LTD.	KOLAR
477.	BEML LTD.	MYSORE
478.	BEML LTD.	TRICHY
479.	BENCHMARK SOFTWARE SOLUTIONS	CHENNAI
480.	BENCHMARK TECHNOLOGY	RIYADH
481.	BENTLEY SYSTEMS	PUNE
482.	BERGEN GROUP ROSENBERG AS	TRICHIRAPPALLI
483.	BETHANY MEDICAL CENTRE	COIMBATORE
484.	BEUMER TECHNOLOGY INDIA PVT. LTD.	MUMBAI
485.	BG EXPLORATION & PRODUCTION INDIA LTD.	HYDERABAD
486.	BGR ENERGY SYSTEMS LTD.	ARIYALUR
487.	BGR ENERGY SYSTEMS LTD.	CHENNAI
488.	BGR ENERGY SYSTEMS LTD.	NAGAI

489.	BHAKTIVEDANTA HOSPITAL	MUMBAI
490.	BHAKTIVEDANTA INSTITUTE	MUMBAI
491.	BHARAT EARTH MOVERS LTD.	CHENNAI
492.	BHARAT ELECTRONICS LTD.	BANGALORE
493.	BHARAT ELECTRONICS LTD.	DAVANGERE
494.	BHARAT ELECTRONICS LTD.	GHAZIABAD
495.	BHARAT ELECTRONICS LTD.	HYDERABAD
496.	BHARAT ELECTRONICS LTD.	VARANASI
497.	BHARAT FORGE LTD.	PUNE
498.	BHARAT FRITZ WERNER	BANGALORE
499.	BHARAT HEAVY ELECTRICALS LTD.	DELHI
500.	BHARAT HEAVY ELECTRICALS LTD.	TIRUCHIRAPPALLI
501.	BHARAT HEAVY ELECTRICALS LTD.	TRICHY
502.	BHARAT PETROLEUM CORPORATION LTD.	KARUR
503.	BHARAT PETROLEUM CORPORATION LTD.	MADURAI
504.	BHARAT SANCHAR NIGAM LTD.	RAIPUR
505.	BHARAT SANCHAR NIGAM LTD.	TRIVANDRUM
506.	BHARATH NIKETAN ENGG COLLEGE	THENI
507.	BHARATI SHIPYARD LTD.	MUMBAI
508.	BHARATIYA RESERVE BANK NOTE MUDRAN PVT. LTD.	MYSORE
509.	BHARATIYA RESERVE BANK NOTE MUDRAN PVT. LTD.	WEST MIDNAPORE
510.	BHARTI AIRTEL LTD.	CHENNAI
511.	BHARTI AIRTEL LTD.	GURGAON
512.	BHARTI INFRATEL LTD.	INDORE
513.	BHATIA HOSPITAL	TARDEO
514.	BHAWAN ENGINEERING CO LLC	PUNE
515.	BHAWAN ENINGEERING COMPANY	PERAMBALUR
516.	BHEEMA CEMENTS LTD.	BOINACHERUVUPALLY
517.	BHORUKA CHARITABLE TRSUT	JAIPUR
518.	BHUMITRA ENERGY AUDITING & CONSULTANCY	GUNTUR
519.	BHUSHAN STEEL LTD.	ANGUL
520.	BHUSHAN STEEL LTD.	BHUBANESWAR
521.	BHUSHAN STEEL LTD.	DHENKANAL
522.	BIBRAIN ENGINEERING SYSTEMS PVT. LTD.	MADURAI
523.	BIECCO LAWRIE LTD.	KOLKATA
524.	BILLROTH HOSPITALS LTD.	TIRUTTANI
525.	BILT MIDDLE EAST LLC	VIRUDHUNAGAR
526.	BIMAKING.COM	NEW DELHI
527.	BIN KHAMIS COMMUNICATION LLC	DUBAI
528.	BIN MOOSA & DALY LTD.	DUBAI
529.	BIN SALIM ENTERPRISES	MUSCAT
530.	BIN SAUD TECHNICAL TRADING ESTATE	CHENNAI
531.	BIN SAUD TECHNICAL TRADING ESTATE	TIRUPUR
532.	BINANI ZINC LTD.	ERNAKULAM
533.	BINGHALIB ENGINEERING INDU. LLC	SHARJAH
534.	BIOCON LTD.	BANGALORE
535.	BIOPHARMAX INDIA PVT. LTD.	CHENNAI
536.	BIRLA CORPORATION LTD.	SATNA
537.	BIRLA TYRES	KOLKATA
538.	BIRLASOFT (INDIA) LTD.	GHAZIABAD
539.	BIRLASOFT INDIA LTD.	CHENNAI
540.	BIRLASOFT INDIA LTD.	NOIDA
541.	BITS PILANI HYDERABAD CAMPUS	HYDERABAD
542.	BITS PILANI K K BIRLA GOA CAMPUS	GOA
543.	BITS PILANI PILANI CAMPUS	PILANI

544.	BITS-PILANI DUBAI CAMPUS	DUBAI
545.	BK BIRLA INSTITUTE OF ENGG & TECH	PILANI
546.	BLOOM ENERGY INDIA PVT. LTD.	BANGALORE
547.	BLUE STAR INFOTECH	MUMBAI
548.	BLUE STAR LTD.	BANGALORE
549.	BLUE STAR LTD.	HOWRAH
550.	BLUE STAR LTD.	HYDERABAD
551.	BLUE STAR LTD.	KOLKATA
552.	BLUE STAR LTD.	VISAKHAPTNAM
553.	BLUE WHALE ADVISORY SERVICES PVT. LTD.	FARIDABAD
554.	BMC SOFTWARE INDIA PVT. LTD.	BANGALORE
555.	BMC SOFTWARE INDIA PVT. LTD.	PUNE
556.	BMC SOFTWARE INDIA PVT. LTD.	SUNNYVALE
557.	BMW INDIA PVT. LTD.	CHENNAI
558.	BMW INDIA PVT. LTD.	KANCHIPURAM
559.	BNP PARIBAS INDIA SOLUTIONS PVT. LTD.	CHENNAI
560.	BOC INDIA LTD.	KOLKATA
561.	BOC INDIA LTD.	SANDUR
562.	BOLLHOFF FASTENINGS PVT. LTD.	HOSUR
563.	BOLTELL INFOMEDIA PVT. LTD.	BANGALORE
564.	BOMBARDIER TRANSPORTATION INDIA LTD.	VADODARA
565.	BOMBAY HOSPITAL	INDORE
566.	BOMBAY HOSPITAL	MUMBAI
567.	BOMBAY HOSPITAL	THANE
568.	BON MAHARAJ ENGINEERING COLLEGE	MUZAFFAR NAGAR
569.	BONFIGLIOLI TRANSMISSIONS PVT. LTD.	CHENNAI
570.	BONFIGLIOLI TRANSMISSIONS PVT. LTD.	POONAMALLE
571.	BORAQ FOR ELECTRONICS INDUSTRIES	BANGALORE
572.	BORG WARNER COOLING SYSTEMS INDIA PVT. LTD.	CHENNAI
573.	BORG WARNER COOLING SYSTEMS INDIA PVT. LTD.	TIRUVALLUR
574.	BORQS SOFTWARE SOLUTIONS PVT. LTD.	BANGALORE
575.	BOSCH CHASSIS SYSTEMS INDIA LTD.	BANGALORE
576.	BOSCH CHASSIS SYSTEMS INDIA LTD.	PUNE
577.	BOSCH CHASSIS SYSTEMS INDIA LTD.	ROHA
578.	BOSCH ELECTRICAL DRIVES INDIA PVT. LTD.	CHENNAI
579.	BOSCH LTD.	BANGALORE
580.	BOSCH LTD.	COIMBATORE
581.	BOSCH LTD.	DABOLIM
582.	BOSCH LTD.	DHULE
583.	BOSCH LTD.	GOA
584.	BOSCH LTD.	JAIPUR
585.	BOSCH LTD.	KOTTAYAM
586.	BOSCH LTD.	KRISHNAGIRI
587.	BOSCH LTD.	MUMBAI
588.	BOSCH LTD.	NASIK
589.	BOSCH LTD.	TRICHY
590.	BOSCH REXROTH INDIA LTD.	AHMEDABAD
591.	BOSCH REXROTH INDIA LTD.	BANGALORE
592.	BPL TELECOM PVT. LTD.	PALAKKAD
593.	BRAHMOS AEROSPACE	HYDERABAD
594.	BRAKES INDIA LTD.	CHENNAI
595.	BRAKES INDIA LTD.	HYDERABAD
596.	BRAKES INDIA LTD.	TIRUPPUR
597.	BREMBO BRAKES INDIA PVT.LTD.	PUNE
598.	BRIDGE & HILL TRADING	SHARJAH

599.	BRIDGECO SOFTWARE SERVICES PVT. LTD.	BANGALORE
600.	BRIDGESTONE INDIA PVT. LTD.	MUMBAI
601.	BRISTLECONE INDIA PVT. LTD.	BANGALORE
602.	BRITANNIA INDUSTRIES LTD.	AMBATTUR
603.	BROADCOM COMMUNICATIONS TECHNOLOGIES PVT. Ltd.	JANGAON
604.	BROADCOM INDIA RESEARCH PVT. LTD.	BANGALORE
605.	BROCADE COMMUNICATIONS LTD.	BANGALORE
606.	BROCADE COMMUNICATIONS LTD.	KANASAVI
607.	BROOKFIELD MULTIPLEX	DUBAI
608.	BROOKFIELD MULTIPLEX LLC	NAGAI
609.	BSA COLLEGE OF ENGINEERING & TECHNOLOG	MATHURA
610.	BSES YAMUNA POWER LTD.	GHAZIABAD
611.	BSN INDUSTRIES PVT. LTD.	NEW DELHI
612.	BT INDIA PVT. LTD.	NEW DELHI
613.	BUHLER INDIA PVT. LTD.-BANGLORE	LUCKNOW
614.	BUILDING CONTROL SOLUTION INDIA PVT. LTD.	BANGALORE
615.	BURCKHARDT COMPRESSION (INDIA) PVT. LTD.	PUNE
616.	BUREAU OF INDIAN STANDARDS	NEW DELHI
617.	BUREAU VERITAS	BAPATLA
618.	BUREAU VERITAS	DEIRA
619.	BUREAU VERITAS	WADIKABIR
620.	BUSYSOFT SYSTEMS PVT. LTD.	DELHI
621.	BWE ENERGY INDIA PVT. LTD.	TRICHY
622.	BYDESIGN INDIA PVT. LTD.	BANGALORE
623.	BYMAA LABORATORIES PVT. LTD.	THENI
624.	C&S ELECTRIC LTD.	NEW DELHI
625.	C&S ELECTRIC LTD.	NOIDA
626.	C1 INDIA PVT. LTD.	GURGAON
627.	CA (INDIA) TECHNOLOGIES PVT. LTD.	BANGALORE
628.	CA (INDIA) TECHNOLOGIES PVT. LTD.	HYDERABAD
629.	CA (INDIA) TECHNOLOGIES PVT. LTD.	MEDAK
630.	CA (INDIA) TECHNOLOGIES PVT. LTD.	NALGONDA
631.	CABLE & WIRELESS WORLDWIDE	BANGALORE
632.	CADENCE DESIGN SYSTEMS INDIA PVT. LTD.	BANGALORE
633.	CADENCE DESIGN SYSTEMS INDIA PVT. LTD.	DELHI
634.	CADENCE DESIGN SYSTEMS INDIA PVT. LTD.	NOIDA
635.	CADENCE DESIGN SYSTEMS INDIA PVT. LTD.	SOLAN
636.	CADES DIGITECH PVT. LTD.	BANGALORE
637.	CADES DIGITECH PVT. LTD.	HYDERABAD
638.	CADILA HEALTHCARE LTD.	AHMEDABAD
639.	CAIRN ENERGY INDIA PTY LTD.	JAMNAGAR
640.	CAIRN ENERGY INDIA PTY LTD.	NEW DELHI
641.	CALIBER INTERCONNECT PVT. LTD.	COIMBATORE
642.	CALIBRATION TECHNICAL SERVICES	SHARJAH
643.	CALNEX SOLUTIONS	BANGALORE
644.	CALSOFT LABS INDIA PVT. LTD.	BANGALORE
645.	CALSOFT LABS INDIA PVT. LTD.	CHENNAI
646.	CALSOFT LABS INDIA PVT. LTD.	KOCHI
647.	CALSOFT LABS INDIA PVT. LTD.	TRICHUR
648.	CAMBRIDGE SOLUTION PVT. LTD.	BANGALORE
649.	CAMBRIDGE SOLUTION PVT. LTD.	CHENNAI
650.	CAMERON MANUFACTURING INDIA PVT. LTD.	COIMBATORE
651.	CAMERON SINGAPORE PTE LTD.	JURONG
652.	CANARA HYDRAULICS PVT. LTD.	COIMBATORE
653.	CANON INDIA PVT. LTD.	BANGALORE

654.	CANON INDIA PVT. LTD.	NOIDA
655.	CANVASM TECHNOLOGIES LTD.	NEW DELHI
656.	CANVERA DIGITAL TECHNOLOGIES PVT. LTD.	BANGALORE
657.	CAP GEMINI CONSULTING LTD.	BANGALORE
658.	CAPARO CORPORATE SERVICES	GURGAON
659.	CAPARO ENGINEERING INDIA PVT. LTD.	CHENNAI
660.	CAPE EAST LTD.	DOHA
661.	CAPGEMINI BUISNESS SERVICES INDIA LTD.	BANGALORE
662.	CAPGEMINI CONSULTING INDIA PVT. LTD.	BANGALORE
663.	CAPGEMINI INDIA PVT. LTD.	ALWAR
664.	CAPGEMINI INDIA PVT. LTD.	AMRAVATI
665.	CAPGEMINI INDIA PVT. LTD.	CHENNAI
666.	CAPGEMINI INDIA PVT. LTD.	CHIKMAGALORE
667.	CAPGEMINI INDIA PVT. LTD.	DHARMAPURI
668.	CAPGEMINI INDIA PVT. LTD.	GHAZIABAD
669.	CAPGEMINI INDIA PVT. LTD.	HYDERABAD
670.	CAPGEMINI INDIA PVT. LTD.	KANCHIPURAM
671.	CAPGEMINI INDIA PVT. LTD.	PALAKKAD
672.	CAPGEMINI INDIA PVT. LTD.	PUNE
673.	CAPGEMINI INDIA PVT. LTD.	THANE
674.	CAPGEMINI INDIA PVT. LTD.	VIRUDHUNAGAR
675.	CAPITAL ONE FINANCIAL CORPORATIN	BANGALORE
676.	CAPITAL TOWER GENERAL MAINTENANCE LLC	DUBAI
677.	CARBORUNDUM UNIVERSAL LTD.	CHENNAI
678.	CARBORUNDUM UNIVERSAL LTD.	COCHIN
679.	CARBORUNDUM UNIVERSAL LTD.	ERNAKULAM
680.	CARBORUNDUM UNIVERSAL LTD.	HOSUR
681.	CARBORUNDUM UNIVERSAL LTD.	KALAMASSERY
682.	CARBORUNDUM UNIVERSAL LTD.	KOLKATA
683.	CARBORUNDUM UNIVERSAL LTD.	MARAIMALAI
684.	CARBORUNDUM UNIVERSAL LTD.	OACHIRA
685.	CARBORUNDUM UNIVERSAL LTD.	ROORKEE
686.	CARE HOSPITALS	BANJARA HILLS
687.	CARGOTEC INDIA PVT. LTD.	NAVI MUMBAI
688.	CARGOTEC QATAR WLL	DOHA
689.	CARL BECHEM INDIA PVT. LTD.	PANRUTI
690.	CARRARO TECHNOLOGIES INDIA PVT. LTD.	PUNE
691.	CARRIER AIRCONDITIONING & REFRIGERATION	DELHI
692.	CARRIER AIRCONDITIONING & REFRIGERATION	THANE
693.	CASTLEROCK RESEARCH INFORMATION PVT. LTD.	BANGALORE
694.	CATERPILLAR INDIA PVT. LTD.	BANGALORE
695.	CATERPILLAR INDIA PVT. LTD.	CHENNAI
696.	CATERPILLAR INDIA PVT. LTD.	COIMBATORE
697.	CATERPILLAR INDIA PVT. LTD.	HOSUR
698.	CATERPILLAR INDIA PVT. LTD.	MADURAI
699.	CATERPILLAR INDIA PVT. LTD.	MELNALLATHUR
700.	CATERPILLAR INDIA PVT. LTD.	THIRUVALLUR
701.	CATERPILLAR INDIA PVT. LTD.	TIRUCHIRAPPALLI
702.	CATERPILLAR INDIA PVT. LTD.	VELLORE
703.	CATERPILLAR INDIA PVT. LTD.	VILLUPURAM
704.	CAVIUM NETWORKS INDIA PVT. LTD.	CHENNAI
705.	CB&I LUMMUS INDIA PVT. LTD.	GURGAON
706.	CBI EASTERN ANSTALT	SALEM
707.	CEGEDIM SOFTWARES INDIA PVT. LTD.	BANGALORE
708.	CEGELEC PTE LTD.	VADALUR

709.	CENTUM RAKON INDIA PVT. LTD.	BANGALORE
710.	CERNER HEALTHCARE SOLUTION PVT. LTD.	BANGALORE
711.	CESC LTD.	KOLKATA
712.	CGI INFORMATION SYS & MGMT CONSULTANTS PVT. LTD.	BANGALORE
713.	CGI INFORMATION SYS & MGMT CONSULTANTS PVT. LTD.	ERNAKULAM
714.	CGI INFORMATION SYS & MGMT CONSULTANTS PVT. LTD.	HOOGLY
715.	CGI INFORMATION SYS & MGMT CONSULTANTS PVT. LTD.	KADAPA
716.	CGI INFORMATION SYS & MGMT CONSULTANTS PVT. LTD.	MUMBAI
717.	CH2M HILL INDIA PVT. LTD.	DELHI
718.	CH2M HILL VECO ENGINEERING	ABU DHABI
719.	CHAIN-SYS (INDIA) PVT. LTD.	CHENNAI
720.	CHAINSYS INDIA PVT. LTD.	KANCHIPURAM
721.	CHAITANYA INDUSTRIES PVT. LTD.	PURI
722.	CHAITANYA PRECI TECH PVT. LTD.	BANGALORE
723.	CHAKRAPANI MULTI SPECIALITY DENTAL HOSPI	GUNTUR
724.	CHANGEPOND TECHNOLOGIES LTD.	CHENNAI
725.	CHANNEL MENTOR PVT. LTD.	BANGALORE
726.	CHARNOCK HOSPITAL PVT. LTD.	KOLKATA
727.	CHECKTRONIX INDIA PVT. LTD.	SALEM
728.	CHEMTROLS INDUSTRIES LTD.	PANJIM
729.	CHENNAI INDUSTRIES	CHENNAI
730.	CHETTINAD CEMENT CORPORATION LTD.	DINDIGUL
731.	CHICAGO BRIDGE & IRON	DUBAI
732.	CHILWORTH TECHNOLOGY P. LTD.	TRICHY
733.	CHILWORTH TECHNOLOGY PVT. LTD.	VELLORE
734.	CIBERSITES INDIA PVT. LTD.	BANGALORE
735.	CIENA INDIA PVT. LTD.	DELHI
736.	CIENA INDIA PVT. LTD.	GURGAON
737.	CIENA INDIA PVT. LTD.	NEW DELHI
738.	CII CONFEDERATION OF INDIA INDUSTRY	BANGALORE
739.	CIMAC FZCO	COIMBATORE
740.	CIMAC FZCO	DUBAI
741.	CIMTECH SYSTEMS(P)LTD.	HYDERABAD
742.	CIRCOR FLOW TECHNOLOGIES INDIA PVT. LTD.	COIMBATORE
743.	CIRCOR FLOW TECHNOLOGIES INDIA PVT. LTD.	NAMAKKAL
744.	CISCO SYSTEMS INDIA PVT. LTD.	BANGALORE
745.	CISCO SYSTEMS INDIA PVT. LTD.	CHENNAI
746.	CISCO SYSTEMS INDIA PVT. LTD.	DEN HAAG
747.	CISCO SYSTEMS INDIA PVT. LTD.	KOTTAYAM
748.	CISCO SYSTEMS INDIA PVT. LTD.	KOZHIKODE
749.	CISCO SYSTEMS INDIA PVT. LTD.	LONAVLA
750.	CISCO SYSTEMS INDIA PVT. LTD.	MADURAI
751.	CISCO SYSTEMS INDIA PVT. LTD.	MARATHAHALLI
752.	CISCO SYSTEMS INDIA PVT. LTD.	MYSORE
753.	CISCO SYSTEMS INDIA PVT. LTD.	NEW DELHI
754.	CISCO SYSTEMS INDIA PVT. LTD.	PONDICHERRY
755.	CISCO SYSTEMS INDIA PVT. LTD.	PUNALUR
756.	CISCO SYSTEMS INDIA PVT. LTD.	PUNE
757.	CISCO SYSTEMS INDIA PVT. LTD.	TIRUNELVELI
758.	CISCO SYSTEMS INDIA PVT. LTD.	TRICHY
759.	CITIUS IT SOLUTIONS PVT. LTD.	MUMBAI
760.	CITRIX R&D INDIA PVT. LTD.	BANGALORE
761.	CITRIX R&D INDIA PVT. LTD.	GHAZIABAD
762.	CITRIX R&D INDIA PVT. LTD.	MYSORE
763.	CITRIX R&D INDIA PVT. LTD.	PUNE

764.	CITRIX R&D INDIA PVT. LTD.	THANJAVUR
765.	CIVIL-AID TECHNOCLINIC PVT. LTD.	BANGALORE
766.	CKM GOVT.MATERNITY HOSPITAL	WARANGAL
767.	CKR CONSULTING ENGINEERS	DUBAI
768.	CLAAS INDIA PVT. LTD.	PATIALA
769.	CLAIRVOYANT INFOVISION PVT. LTD.	PUNE
770.	CLAIRVOYANT TECH SOFT PVT. LTD.	TRICHY
771.	CLARKE SAMADHIN ASSOCIATES	DUBAI
772.	CLASSIC DESIGN ENGINEERING SYSTEM PVT. LTD.	CHENNAI
773.	CLASSIC INFORMATICS PVT. LTD.	SONEPAT
774.	CLASSIC METALLIC SHEET METAL FACTORY LLC	KANCHIPURAM
775.	CLEARCELLGROUP (INDIA)	VADODARA
776.	CLICKANDBUY SERVICES INDIA PVT. LTD.	KAKINADA
777.	CMC LTD.	BANGALORE
778.	CMC LTD.	CHENNAI
779.	CMC LTD.	GHAZIABAD
780.	CMC LTD.	SULLURUPETA
781.	CMC LTD.	TIRUMALAGIRI
782.	CMC VELLORE	VELLORE
783.	CMS INFOSYSTEM	NOIDA
784.	CNA ENGINEERING	KANNUR
785.	COASTAL GUJARAT POWER LTD.	MUNDRA
786.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	BANGALORE
787.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	BHOPAL
788.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	CHANDIGARH
789.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	CHENNAI
790.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	COCHIN
791.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	COIMBATORE
792.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	DAVANGERE
793.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	DURGAPUR
794.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	ERODE
795.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	HDYERABAD
796.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	KOCHI
797.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	KOLKATA
798.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	MARGAO
799.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	NAVALLUR
800.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	NEW DELHI
801.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	PONDICHERRY
802.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	PUNE
803.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	RAIGANJ
804.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	RAJAHMUNDRY
805.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	THRISSUR
806.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	TRICHY
807.	COGNIZANT TECHNOLOGY SOLUTIONS INDIA PVT. LTD.	VILLUPURAM
808.	COLGATE PALMOLIVE INDIA LTD.	NAVI MUMBAI
809.	COLGATE-PALMOLIVE(I)	MUMBAI
810.	COLLABERA SOLUTIONS PVT. LTD.	BANGALORE
811.	COLLABNET SOFTWARE PVT. LTD.	CHENNAI
812.	COLORLINES PRINTING PRESS	DIERA
813.	COLUMBIA ASIA HOSPITALS	GURGAON
814.	COMMTEL NETWORKS PVT. LTD.	MUMBAI
815.	COMMVAULT SYSTEMS	BANGALORE
816.	COMPRO TECHNOLOGIES PVT. LTD.	DELHI
817.	COMPUCOM-CSI SYSTEMS INDIA PVT. LTD.	SAHARSA
818.	COMPUTER ASSOCIATES TECHNOLOGIES PVT. LTT.	HYDERABAD

819.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	BANGALORE
820.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	CHENNAI
821.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	DELHI
822.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	DINDIGUL
823.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	DUBAI
824.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	GHAZIABAD
825.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	HYDERABAD
826.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	KURNOOL
827.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	LUCKNOW
828.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	LUDHIANA
829.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	MADURAI
830.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	MUMBAI
831.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	NEW DELHI
832.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	NOIDA
833.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	SIVAGANGAI
834.	COMPUTER SCIENCES CORPORATION INDIA PVT. LTD.	TRICHY
835.	COMPUTRONICS ENGINEERS	NAGERCOIL
836.	COMTECH ENGINEERS & CONSULTANTS PVT. LTD.	AHMEDABAD
837.	COMVIVA TECHNOLOGIES LTD.	BANGALORE
838.	COMVIVA TECHNOLOGIES LTD.	DELHI
839.	COMVIVA TECHNOLOGIES LTD.	TUMKUR
840.	CONCEPT & SOLUTIONS	NAVI MUMBAI
841.	CONCEPTIA SOFTWARE TECHNOLOGIES PVT. LTD.	VISAKHAPATNAM
842.	CONCORDIA COMMUNITY MANAGEMENT	DUBAI
843.	CONSOLIDATED CONSTRUCTION CONSORTIUM LTD.	SALEM
844.	CONSOLIDATED CONTRACTORS INTL. COMPANY	ABU DHABI
845.	CONSTRUCTION DEVELOPMENT COMPANY	ARAKONAM
846.	CONSTRUCTIVE TECHNOLOGIES GROUP	DUBAI
847.	CONTINENTAL AUTOMOTIVE COMPONENTS PVT. LTD.	BANGALORE
848.	CONTINENTAL AUTOMOTIVE COMPONENTS PVT. LTD.	GURGAON
849.	CONTINENTAL AUTOMOTIVE COMPONENTS PVT. LTD.	HOSUR
850.	CONTINENTAL ENGINE LTD.	REWARI
851.	CONTINENTAL INDIA LTD.	KHANDWA
852.	CONTINENTAL TECHNICAL CENTER INDIA	BANGALORE
853.	CONTINENTAL-RICO HYDRAULIC BRAKES INDIA	GWALIOR
854.	CONTINUOUS COMPUTING INDIA PVT. LTD.	BANGALORE
855.	CONTINUOUS COMPUTING INDIA PVT. LTD.	DAVANGERE
856.	CONTINUOUS COMPUTING INDIA PVT. LTD.	MYSORE
857.	CONTROL & APPLICATIONS EMIRATES	ABU DHABI
858.	CONTROL & APPLICATIONS EMIRATES	TRICHIRAPPALLI
859.	CONTROL COMPONENT INDIA PVT. LTD.	CHENNAI
860.	CONTROLLERATE OF QUALITY ASSURANCE	MEDAK
861.	CONVERGYS IMG INDIA PVT. LTD.	HYDERABAD
862.	CONVERGYS INFORMATION MANAGEMENT PVT.LTD.	GURGAON
863.	CONVERTEAM EDC PVT. LTD.	CHENNAI
864.	CORDYS SOFTWARE INDIA PVT. LTD.	HYDERABAD
865.	CORDYS UK LTD.	KANNUR
866.	CORE PROJECTS & TECHNOLOGIES LTD.	HYDERABAD
867.	COREEL TECHNOLOGIES	BANGALORE
868.	CORMART NIGERIA LTD.	MANNARGUDI
869.	COROMANDEL INTERNATIONAL LTD.	ANKLESHWAR
870.	CORPORATE EXECUTIVE BOARD (INDIA) PVT. LTD.	GURGAON
871.	CORPUS SOFTWARE PVT. LTD.	MALAPPURAM
872.	COVANSYS A CSC COMPANY	CHENNAI
873.	COVANSYS INDIA PVT. LTD.	BANGALORE

874.	CPA GLOBAL SUPPORT SERVICES INDIA PRIVAT	DELHI
875.	CREATIVE NET SOLUTION	BARAUT
876.	CREATIVE SYNERGIES CONSULTING INDIA PVT. LTD.	BANGALORE
877.	CREATIVE SYNERGIES CONSULTING INDIA PVT. LTD.	TIRUVARUR
878.	CREATIVE SYNERGIES CONSULTING INDIA PVT. LTD.	VELLORE
879.	CREATIVE SYNERGIES GROUP	KARUNAGAPPALLY
880.	CREATIVE VISION ELECTRONICS	DUBAI
881.	CREDENCE ANALYTICS (I) PVT. LTD.	MUMBAI
882.	CROMPTON GREAVES LTD.	MUMBAI
883.	CROMPTON GREAVES LTD.	NASIK
884.	CRYOGEN INSTRUMENTS INDIA PVT. LTD.	THANE
885.	CRYOLOR ASIA PACIFIC PVT. LTD.	NEYVELI
886.	CRYSTAL CROP PROTECTION PVT. LTD.	GHAZIABAD
887.	CSC INDIA PVT. LTD.	ALLAHABAD
888.	CSC INDIA PVT. LTD.	BANGALORE
889.	CSC INDIA PVT. LTD.	CHENNAI
890.	CSC INDIA PVT. LTD.	COIMBATORE
891.	CSC INDIA PVT. LTD.	GHAZIABAD
892.	CSC INDIA PVT. LTD.	GREATER NOIDA
893.	CSC INDIA PVT. LTD.	HOSUR
894.	CSC INDIA PVT. LTD.	HYDERABAD
895.	CSC INDIA PVT. LTD.	NOIDA
896.	CSC INDIA PVT. LTD.	SECUNDERABAD
897.	CSR INDIA PVT. LTD.	BANGALORE
898.	CTR MANUFACTURING INDUSTRIES LTD.	AURANGABAD
899.	CUMMINS INDIA LTD.	BANGALORE
900.	CUMMINS INDIA LTD.	COIMBATORE
901.	CUMMINS INDIA LTD.	PUNE
902.	CUMMINS MIDDLE EAST	DUBAI
903.	CUMMINS RESEARCH & TECHNOLOGY INDIA LTD.	PUNE
904.	CUMMINS TECHNOLOGIES INDIA LTD.	INDORE
905.	CUMMINS TECHNOLOGIES INDIA LTD.	PUNE
906.	CURSIVE TECHNOLOGIES PVT. LTD.	PUNE
907.	CUSHMAN & WAKEFIELD PMS INDIA PVT. LTD.	MUMBAI
908.	CYBAGE SOFTWARE PVT. LTD.	BEGUSARAI
909.	CYBAGE SOFTWARE PVT. LTD.	HYDERABAD
910.	CYBAGE SOFTWARE PVT. LTD.	PUNE
911.	CYBERQ CONSULTING PVT. LTD.	NEW DELHI
912.	CYBRAIN SOFTWARE SOLUTIONS	HAMIRPUR
913.	CYPRESS SEMICONDUCTOR TECHNOLOGY INDIA PVT. LTD.	BANGALORE
914.	CYPRESS SEMICONDUCTOR TECHNOLOGY INDIA PVT. LTD.	TRICHUR
915.	D E SHAW INDIA SOFTWARE PVT. LTD.	HYDERABAD
916.	D E SHAW INDIA SOFTWARE PVT. LTD.	SHIMOGA
917.	D&B TRANSUNION ANALYTIC DECISION CENTER	CHENNAI
918.	D&B TRANSUNION ANALYTIC DECISION CENTER	TIRUNELVELI
919.	D. Y. PATIL HOSPITAL	NAVI MUMBAI
920.	D.E.SHAW INDIA SOFTWARE PVT. LTD.	KOPPAL
921.	DAELIM INDUSTRIAL CO LTD.	KOLKATA
922.	DAESUNG ELECTRIC INDIA PVT. LTD.	CHENNAI
923.	DAIKIN MCQUAY LLC	DUBAI
924.	DAIMLER INDIA COMMERCIAL VEHICLE PVT. LTD.	CHENNAI
925.	DAIMLER INDIA COMMERCIAL VEHICLE PVT. LTD.	WALAJAPET
926.	DAKSHIN SPEAKER MANUFACTURING PVT. LTD.	CHENNAI
927.	DALMIA CEMENT (B) LTD.	TRICHIRAPPALLI
928.	DALMIA CEMENT (BHARAT) LTD.	CHENNAI

929.	DALMIA CEMENT (BHARAT) LTD.	CHINNAKOMERLA
930.	DALMIA CEMENT (BHARAT) LTD.	JAMMALAMADUGU
931.	DALMIA CEMENT (BHARAT) LTD.	SALEM
932.	DALMIA CEMENT (BHARAT) LTD.	SIRKALI
933.	DAMCO SOLUTION PVT. LTD.	FARIDABAD
934.	DANA INDIA PVT. LTD.	MADHUBANI
935.	DANA INDIA PVT. LTD.	PUNE
936.	DANWAY EME	DUBAI
937.	DASMAN DIABETES INSTITUTE	DASMAN
938.	DATAMATICS GLOBAL SERVICES LTD.	MUMBAI
939.	DATAPROCTOR PVT. LTD.	MUMBAI
940.	DATTA MEGHE INSTITUTE OF MEDICAL SCIENCE	NAGPUR
941.	DAVIS SOFTWARE SOLUTIONS PVT. LTD.	HYDERABAD
942.	DAYCO VIKAS POWER TRANSMISSION PVT. LTD.	MANESAR
943.	DC INDUSTRIAL PLANT SERVICES PVT. LTD.	KOLKATA
944.	DCM ENGG. PRODUCTS LTD.	PANCHKULA
945.	DECCAN I SERVICES	CHENNAI
946.	DEEM ROLL TECH LTD.	HISSAR
947.	DEEPTI ELECTRONICS & ELECTRO-OPTICS PVT.	BANGALORE
948.	DEEWAN DIAGNOSTICS	GHAZIABAD
949.	DEFENCE LAND SYSTEM INDIA PVT. LTD.	FARIDABAD
950.	DEFENCE RESEARCH & DEVELOPMENT ORGANIZAT	HYDERABAD
951.	DEFIANCE TECHNOLOGIES LTD.	CHENNAI
952.	DEGREMONT LTD.	NEW DELHI
953.	DELCAM CONSULTING & TECHNOLOGY SERVICES	PUNE
954.	DELCAM SOFTWARE (INDIA) PVT. LTD.	PUNE
955.	DELL INTERNATIONAL SERVICES INDIA PVT. LTD.	BANGALORE
956.	DELL INTERNATIONAL SERVICES INDIA PVT. LTD.	CHENNAI
957.	DELL INTERNATIONAL SERVICES INDIA PVT. LTD.	ERNAKULAM
958.	DELL INTERNATIONAL SERVICES INDIA PVT. LTD.	GHAZIABAD
959.	DELL INTERNATIONAL SERVICES INDIA PVT. LTD.	KANCHIPURAM
960.	DELL INTERNATIONAL SERVICES INDIA PVT. LTD.	NOIDA
961.	DELL PEROTSYSTEMS	NEW DELHI
962.	DELL PEROTSYSTEMS	NOIDA
963.	DELL SONICWALL INFOSECURITY PVT. LTD.	CHENNAI
964.	DELMIA SOLUTIONS PVT. LTD.	BANGALORE
965.	DELOITTE CONSULTING INDIA PVT. LTD.	BANGALORE
966.	DELOITTE CONSULTING INDIA PVT. LTD.	HYDERABAD
967.	DELPHI - TVS DIESEL SYSTEMS LTD.	CHENNAI
968.	DELPHI - TVS DIESEL SYSTEMS LTD.	KANCHIPURAM
969.	DELPHI - TVS DIESEL SYSTEMS LTD.	REWARI
970.	DELPHI - TVS DIESEL SYSTEMS LTD.	SALEM
971.	DELPHI - TVS DIESEL SYSTEMS LTD.	SECUNDERABAD
972.	DELPHI AUTOMOTIVE SYSTEMS PVT. LTD.	BANGALORE
973.	DELPHI AUTOMOTIVE SYSTEMS PVT. LTD.	DELHI
974.	DELPHI AUTOMOTIVE SYSTEMS PVT. LTD.	GREATER NOIDA
975.	DELTA EMBEDDED SOLUTIONS PVT. LTD.	BARAMATI
976.	DELTA POWER SOLUTIONS (I) PVT. LTD.	GURGAON
977.	DEMAG CRANES & COMPONENTS INDIA PVT. LTD.	PUNE
978.	DENSO INDIA LTD.	DELHI
979.	DENSO INDIA LTD.	NANGLOI
980.	DENSO KIRLOSKAR INDUSTRIES PVT. LMTD	BANGALORE
981.	DENTAL CARE CENTRE	GHAZIABAD
982.	DEODITA TECHNOLOGIES	MUMBAI
983.	DEPA INTERIORS LLC	DUBAI

984.	DEPARTMENT OF HEALTH & FAMILY WELFARE	MANGALORE
985.	DESICREW SOLUTIONS PVT. LTD.	CHENNAI
986.	DESIGN TECH ENGINEERS	CHENNAI
987.	DEUTSCH INDIA POWER CONNECTORS PVT. LTD.	KANNUR
988.	DEV EMBEDDED SOFTWARE SERVICES PVT. LTD.	CHENNAI
989.	DEVELOPMENT CONSULTANTS PVT. LTD.	KOLKATA
990.	DGINFOTECH CONSULTANCY LLC LTD.	ABU DHABI
991.	DHOFAR BEVERAGE FOOD STUFF CO(S.A.O.G)	SALALAH
992.	DIAMLER FINANCIAL SERVICES INDIA PVT. LTD.	CHENNAI
993.	DICKINSON FOWLER PVT.LTD.	HOSUR
994.	DIEBOLD INDIA PVT. LTD.	PONDA
995.	DIEBOLD SOFTWARE SERVICES LTD.	HYDERABAD
996.	DIMENSIONS CONSULTANTS	MUMBAI
997.	DIMEXON DIAMONDS LTD.	COIMBATORE
998.	DINSHAWS DAIRY FOODS LTD.	NAGPUR
999.	DIPAK CONSTRUCTIONS	ERNAKULAM
1000.	DIRECTI INTERNET SOLUTIONS	NAVI MUMBAI
1001.	DIRECTOR OF HEALTH	HYDERABAD
1002.	DIRK MEDIA PVT. LTD.	NASIK
1003.	DISA INDIA LTD.	TUMKUR
1004.	DISTRIBUTED OBJECT TECHNOLOGIES LTD.	HYDERABAD
1005.	DIVGI WARNER PVT. LTD.	PUNE
1006.	DIVUM CORPORATE SERVICES PVT. LTD.	BANGALORE
1007.	DNJ ENERGY LLC	DUBAI
1008.	DOCKENDALE SHIP MANAGEMENT	MUMBAI
1009.	DODSAL ENGINEERING & CONSTRUCTION LLC	KOVILPATTI
1010.	DOEACC SOCIETY	GWALIOR
1011.	DOEACC SOCIETY	NEW DELHI
1012.	DOEACC SOCIETY	SRINAGER
1013.	DOLI SYSTEMS PVT. LTD.	CHENNAI
1014.	DOLPHIN ENERGY LTD.	DOHA
1015.	DONALDSON INDIA FILTER SYSTEMS PVT. LTD.	GURGAON
1016.	DOOSAN CHENNAI WORKS PVT. LTD.	CHENNAI
1017.	DOOSAN POWER SYSTEMS INDIA PVT. LTD.	CHENNAI
1018.	DOT TECHNOLOGIES	GURGAON
1019.	DOVER INDIA PVT. LTD.	BANGALORE
1020.	DOW CHEMICAL INTERNATIONAL PVT. LTD.	CHENNAI
1021.	DR SULAIMAN AL HABIB MEDICAL GROUP	RIYADH
1022.	DR. KOGANTI'S DENTAL IMPLANT CENTRE	MUMBAI
1023.	DR. REDDY'S LABORATORY LTD.	CHANDIGARH
1024.	DR. REDDY'S LABORATORY LTD.	HYDERABAD
1025.	DR. REDDY'S LABORATORY LTD.	KARUR
1026.	DR. REDDY'S LABORATORY LTD.	MEERUT
1027.	DRESSER RAND MATERIALS CENTER	DUBAI
1028.	DRESSER-RAND INDIA PVT. LTD.	TIRUPUR
1029.	DSM SOFT PVT. LTD.	AUNDIPATTY
1030.	DSP GROUP INDIA PVT. LTD.	AHMEDABAD
1031.	DST WORLDWIDE SERVICES INDIA PVT. LTD.	HYDERABAD
1032.	DUBAI AIRPORT FREEZONE	DUBAI
1033.	DUBAI ALUMINIUM COMPANY	DUBAI
1034.	DUBAI ALUMINIUM COMPANY	JABEL ALI
1035.	DUBAI CABLE COMPANY	DUBAI
1036.	DUBAI ELECTRICITY & WATER AUTHORITY	DUBAI
1037.	DUBAI ELECTRICITY & WATER AUTHORITY	JEBEL ALI
1038.	DUBAI ELECTRICITY & WATER AUTHORITY	SHARJAH

1039.	DURGABAI DESHMUKH HOSPITAL & RESERCH CENTRE	HYDERABAD
1040.	DUTCO MC CONNELL DOWELL	DUBAI
1041.	DYANSYS INDIA PVT. LTD.	CHENNAI
1042.	DYNAMIC AUTOLOOMS INDIA PVT. LTD.	AHMEDABAD
1043.	DYNAMIC ENGINEERING CONSULTANTS	PORT SAEED
1044.	DYNASPEDE INTEGRATED SYSTEMS PVT. LTD.	BANGALORE
1045.	DYYNO INDIA PVT. LTD.	PHALTAN
1046.	E.I.D.PARRY INDIA LTD.	CHENNAI
1047.	E.I.DUPONT INDIA PVT. LTD.	HYDERABAD
1048.	E.I.DUPONT INDIA PVT. LTD.	VADODARA
1049.	E.I.DUPONT INDIA PVT.LTD.	NEW DELHI
1050.	E4E HEALTH CARE BUSSINESS SOLUTIONS	CHENNAI
1051.	EAGLEBURGMANN INDIA PVT. LTD.	PUNE
1052.	EASUN REYROLLE LTD.	HOSUR
1053.	EASUN REYROLLE LTD.	HOSUR
1054.	EATON TECHNOLOGIES PVT. LTD.	CHINCHWAD
1055.	EATON TECHNOLOGIES PVT. LTD.	MUMBAI
1056.	EATON TECHNOLOGIES PVT. LTD.	PUNE
1057.	EATON TECHNOLOGIES PVT. LTD.	SHIKRAPUR
1058.	EBIZNEEDS	JAIPUR
1059.	EC SOFTWARE INDIA	CHENNAI
1060.	E-CENTRIC SOLUTIONS PVT. LTD.	NEW DELHI
1061.	ECI TELECOM INDIA PVT. LTD.	BANGALORE
1062.	ECI TELECOM INDIA PVT. LTD.	TOHANA
1063.	ECLINICALWORKS INDIA PVT. LTD.	MUMBAI
1064.	ECOLOGIKOL ADVISORS INDIA PVT. LTD.	CHENNAI
1065.	E-CONNECT SOLUTIONS PVT. LTD.	UDAIPUR
1066.	ECONOSTO MIDEAST B.V.	DUBAI
1067.	EDUTECH MIDDLE EAST LLC	ABU DHABI
1068.	EDUTECH MIDDLE EAST LLC	DUBAI
1069.	EDVNSYS SOLUTIONS PVT. LTD.	HYDERABAD
1070.	E-EMPHASYS SYSTEMS LTD.	DOMBIVLE
1071.	EFFECTIVE TELESERVICES PVT. LTD.	AHMEDABAD
1072.	EFFECTIVE TELESERVICES PVT. LTD.	GANDHINAGAR
1073.	EGAIN COMMUNICATIONS	PUNE
1074.	EGESTALT TECHNOLOGIES PVT. LTD.	BANGALORE
1075.	EHEURISTIC SOLUTIONS	RAJKOT
1076.	EICHER TRACTORS	BHOPAL
1077.	EICHER TRACTORS	MADHUBANI
1078.	EIMCO ELECON (I) LTD.	KARAMSAD
1079.	E-INFOCHIPS PVT. LTD.	AHMEDABAD
1080.	E-INFOCHIPS PVT. LTD.	HALVAD
1081.	E-INFOCHIPS PVT. LTD.	PUNE
1082.	E-INFOCHIPS PVT. LTD.	SIDHPUR
1083.	E-INFOCHIPS PVT. LTD.	SOLAPUR
1084.	E-INFOCHIPS PVT. LTD.	VALSAD
1085.	EIQNETWORKS LTD.	HYDERABAD
1086.	EISYSTEMS SERVICES	MATHURA
1087.	ELCOM INDIA PVT. LTD.	COIMBATORE
1088.	ELCOME INTERNATIONAL LLC	DUBAI
1089.	ELCOME INTERNATIONAL LLC	JABEL ALI
1090.	ELCOTEQ ELECTRONICS INDIA PVT. LTD.	BANGALORE
1091.	ELECTRA CARD SERVICES PVT. LTD.	PUNE
1092.	ELECTRO INDUSTRIES	DUBAI
1093.	ELECTRO MECHANICAL CO. LLC	ABU DHABI

1094.	ELECTROARC CONSULTING ENGINEERS	BANGALORE
1095.	ELECTRONICS & RADAR DEVELOPMENT ESTABLIS	BANGALORE
1096.	ELECTRONICS CORPORATION OF INDIA LTD.	HYDERABAD
1097.	ELECTRONICS CORPORATION OF INDIA LTD.	SECUNDERABAD
1098.	ELECTRONICS FOR IMAGING PVT. LTD.	BANGALORE
1099.	ELECTROPNEUMATICS & HYDRAULICS (I) PVT.	NIGDI
1100.	ELECTROSTEEL CASTING LTD.	KOLKATA
1101.	ELECTROTHERM (I) LTD.	SURENDRANAGAR
1102.	ELEGANT METERING SOLUTIONS FZE	DUBAI
1103.	ELFIT ARABIA	COIMBATORE
1104.	ELFIT ARABIA	DUBAI
1105.	ELGI EQUIPMENTS LTD.	COIMBATORE
1106.	ELGI EQUIPMENTS LTD.	GUDIYATTAM
1107.	ELGI EQUIPMENTS LTD.	TUTICORIN
1108.	ELITE SCHOOL OF OPTIMETRY	CHENNAI
1109.	ELMECH ELECTROMECHANICAL WORKS LLC	ABU DHABI
1110.	ELSYTEC POWER PROJECTS PVT. LTD.	CHENNAI
1111.	ELTECON CONSULTANCY SERVICES	CHENNAI
1112.	ELTEL INDUSTRIES	KRISHNAGIRI
1113.	EMBASSY OF THE REPUBLIC OF KOREA	DELHI
1114.	EMBITEL TECHNOLOGIES INDIA PVT. LTD.	BANGALORE
1115.	EMC DATA STORAGE INDIA PVT. LTD.	BANGALORE
1116.	EMC DATA STORAGE INDIA PVT. LTD.	ERODE
1117.	EMC SOFTWARE & SERVICES INDIA PVT. LTD.	BANGALORE
1118.	EMC SOFTWARE & SERVICES INDIA PVT. LTD.	HYDERABAD
1119.	EMCO LTD.	KOLKATA
1120.	EMDA ENGINEERING AS	TRICHY
1121.	EMERGYS SOFTWARE PVT. LTD.	CHENNAI
1122.	EMERGYS SOFTWARE PVT. LTD.	GUDUVANCHERI
1123.	EMERSON PROCESS MANAGEMENT	DUBAI
1124.	EMERSON PROCESS MANAGEMENT(I) PVT. LTD.	DELHI
1125.	EMERSON PROCESS MANAGEMENT(I) PVT. LTD.	DOMBIVLI
1126.	EMERSON PROCESS MANAGEMENT(I) PVT. LTD.	JEBEL ALI
1127.	EMERSON PROCESS MANAGEMENT(I) PVT. LTD.	MADURAI
1128.	EMERSON PROCESS MANAGEMENT(I) PVT. LTD.	MUMBAI
1129.	EMERSON PROCESS MANAGEMENT(I) PVT. LTD.	NOIDA
1130.	EMERSON PROCESS MANAGEMENT(I) PVT. LTD.	PUNE
1131.	E-MIDS TECHNOLOGIES	BANGALORE
1132.	EMIRATES ALUMINUM CO	ABU DHABI
1133.	EMIRATES ALUMINUM CO	AL TAWEELAH
1134.	EMIRATES ALUMINUM CO	CHENNAI
1135.	EMIRATES ALUMINUM CO	DUBAI
1136.	EMIRATES ALUMINUM CO	GUDIYATTAM
1137.	EMIRATES ALUMINUM CO	JABEL ALI
1138.	EMIRATES ALUMINUM CO	KARAIKAL
1139.	EMIRATES ALUMINUM CO	SHARJAH
1140.	EMIRATES ELECTRICAL ENGINEERING LLC	DUBAI
1141.	EMIRATES FLOAT GLASS LLC	ABU DHABI
1142.	EMIRATES GAS LLC	FUJAIRAH
1143.	EMIRATES TECHNICAL ASSOCIATES	ABU DHABI
1144.	EMIRATES TECHNICAL ASSOCIATES	TIRUNELVELI
1145.	EMIRATES TRADING AGENCY	ABU DHABI
1146.	EMIRATES TRADING AGENCY	CHENNAI
1147.	EMIRATES TRADING AGENCY	DEIRA
1148.	EMIRATES TRADING AGENCY	KADAYANALLUR

1149.	EMPI BUSINESS SCHOOL	NEW DELHI
1150.	EMPIRE INDUSTRIAL EQUIPMENT	CHENNAI
1151.	EMPIRE MACHINE TOOLS	CHENNAI
1152.	EMERALD RESILIENT TYRE MANUFACTURERS PVT. LTD.	CHENNAI
1153.	E-MUG TECHNOLOGIES PVT. LTD.	HYDERABAD
1154.	ENCO ENGINEERS COMBINE PVT. LTD.	GURGAON
1155.	ENCORA TECHNOLOGIES PVT. LTD.	BANGALORE
1156.	ENDEKA CERAMICS INDIA PVT. LTD.	HOSUR
1157.	ENDURANCE TECHNOLOGIES PVT. LTD.	AURANGABAD
1158.	ENDURANCE TECHNOLOGIES PVT. LTD.	HOSUR
1159.	ENDURANCE TECHNOLOGIES PVT. LTD.	PUNE
1160.	ENERCON INDIA LTD.	DAMAN
1161.	ENGAGE LOGIC PVT. LTD.	PUNE
1162.	ENGINEERING & DESIGNS TECNIMONT ICB	MUMBAI
1163.	ENGINEERING SOLUTIONS CO LLC	ABU DHABI
1164.	ENGLISH TOOLS & CASTINGS LTD.	COIMBATORE
1165.	ENIGMA SOLUTIONS PVT. LTD.	TRIVANDRUM
1166.	ENMAS GB POWER SYSTEMS PROJECTS LTD.	CHENNAI
1167.	ENVESTNET ASSET MANAGEMENT (INDIA) PVT. LTD.	TRIVANDRUM
1168.	EPCOS INDIA PVT. LTD.	REWARI
1169.	EPCOS PTE LTD.	SINGAPORE
1170.	EQ TECHNOLOGIC	PUNE
1171.	EQUATE PETROCHEMICAL	FAHAHEEL
1172.	EQUATE PETROCHEMICAL COMPANY	AHMADI
1173.	ERA INFRA ENGG LTD.	GURGAON
1174.	ERICSSON INDIA GLOBAL SERVICES PVT. LTD.	BANGALORE
1175.	ERICSSON INDIA GLOBAL SERVICES PVT. LTD.	GURGAON
1176.	ERICSSON INDIA GLOBAL SERVICES PVT. LTD.	KOLKATA
1177.	ERICSSON INDIA GLOBAL SERVICES PVT. LTD.	TUMKUR
1178.	ERICSSON INDIA PVT. LTD.	ASANSOL
1179.	ERICSSON INDIA PVT. LTD.	CHANDIGARH
1180.	ERICSSON INDIA PVT. LTD.	CHENNAI
1181.	ERICSSON INDIA PVT. LTD.	COIMBATORE
1182.	ERICSSON INDIA PVT. LTD.	DELHI
1183.	ERICSSON INDIA PVT. LTD.	ERNAKULAM
1184.	ERICSSON INDIA PVT. LTD.	FARIDABAD
1185.	ERICSSON INDIA PVT. LTD.	GHAZIABAD
1186.	ERICSSON INDIA PVT. LTD.	GURGAON
1187.	ERICSSON INDIA PVT. LTD.	JAIPUR
1188.	ERICSSON INDIA PVT. LTD.	NANGAL
1189.	ERICSSON INDIA PVT. LTD.	NOIDA
1190.	ERICSSON INDIA PVT. LTD.	TRICHY
1191.	ESAB INDIA LTD.	CHENNAI
1192.	ESAB MIDDLE EAST LLC	THANJAVUR
1193.	ESCORTS LTD.	DELHI
1194.	ESCORTS LTD.	FARIDABAD
1195.	ESPIRE INFOLABS PVT. LTD.	LUDHIANA
1196.	ESPIRE INFOLABS PVT. LTD.	NEW DELHI
1197.	ESSAE DIGITRONICS PVT. LTD.	BANGALORE
1198.	ESSAR ENERGY SERVICES LTD.	JAMNAGAR
1199.	ESSAR OIL LTD.	JAMNAGAR
1200.	ESSAR POWER LTD.	SURAT
1201.	ESSAR STEEL INDIA LTD.	SURAT
1202.	ESSAR STEEL LTD.	JODHPUR
1203.	ESSJAY ERICSSON INDIA PVT. LTD.	JAMMU

1204.	ESSQCON INSTRUMENTS	CHENNAI
1205.	ETA ASCON (M&E DIVISION)	MUMBAI
1206.	ETA ASCONGROUP OF COMPANY	DEIRA
1207.	ETA ENGINEERING PVT. LTD.	DELHI
1208.	ETA-PCS SWITCHGEAR MANUFACTURING LLC	KAYALPATNAM
1209.	EURONET INDIA PVT. LTD.	PUNE
1210.	EUROTECH FZCO	DUBAI
1211.	EVERSENDI ENGINEERING FZE	SHARJAH
1212.	EVERSENDI ENGINEERING LLC	AL QUSAIS
1213.	EVERSENDI ENGINEERING LLC	DUBAI
1214.	EVERSENDI ENGINEERING LLC	SHARJAH
1215.	EVONIK OIL ADDITIVES PVT. LTD.	MADURAI
1216.	EXCEL CLEAN ROOM TECHNOLOGIES	HYDERABAD
1217.	EXCEL LIFE SCIENCES	JODHPUR
1218.	EXCELACOM TECHNOLOGIES	DINDIGUL
1219.	EXCELACOM TECHNOLOGIES PVT. LTD.	CHENNAI
1220.	EXCELLENCE INFONET	AHMEDABAD
1221.	EXFO INDIA PVT.LTD.(EXFO)	PUNE
1222.	EXILANT TECHNOLOGIES PVT. LTD.	BANGALORE
1223.	EXILANT TECHNOLOGIES PVT. LTD.	MYSORE
1224.	EXINOSIS TECHNOLOGIES PVT. LTD.	BANGALORE
1225.	EXOVA WARRINGTONFIRE CONSULTING ME	ABU DHABI
1226.	EXPERT GLOBAL SOLUTIONS	MYSORE
1227.	EXTERRAN EASTERN HEMISPHERE FZE	CHENNAI
1228.	EXXON MOBIL CHEMIL OPERATION PVT. LTD.	THELLAR
1229.	EXXONMOBIL CHEMICAL OPERATIONS	CHENNAI
1230.	F.L.SMIDTH PVT. LTD.	CHENNAI
1231.	FABTECH INTERNATIONAL LTD.	COCHIN
1232.	FACEBOOK	INDORE
1233.	FAG BEARINGS INDIA LTD.	VADODARA
1234.	FAIR ISAAC SOFTWARE INDIA LTD.	BANGALORE
1235.	FAIVELEY TRANSPORT INDIA LTD.	BANGALORE
1236.	FAIVELEY TRANSPORT INDIA LTD.	HOSUR
1237.	FANUC INDIA PVT. LTD.	BANGALORE
1238.	FANUC INDIA PVT. LTD.	GURGAON
1239.	FAREPORTAL INDIA PVT. LTD.	NEW DELHI
1240.	FARO BUISNESS TECHNOLOGIES INDIA PVT. LTD.	VADODARA
1241.	FATPIPE NETWORKS INDIA LTD.	CHENNAI
1242.	FAURECIA EMISSION CONTROL TECH INDIA PVT.	CHENNAI
1243.	FAURECIA TECHNOLOGY CENTER.PVT.LTD.PUNE	PUNE
1244.	FCC RICO LTD.	REWARI
1245.	FCI OEN CONNECTORS LTD.	COCHIN
1246.	FCI TECHNOLOGY SERVICE LTD.	CHENNAI
1247.	FCI TECHNOLOGY SERVICE LTD.	PALAKKAD
1248.	FEARNLEY PROCTER FZE	DUBAI
1249.	FEDERAL-MOGUL CORPORATION	CHENNAI
1250.	FEDERAL-MOGUL VSP INDIA LTD.	HYDERABAD
1251.	FEEDBACK INFRASTRUCTURES PVT. LTD.	KOTA
1252.	FEEDBACK VENTURES PVT. LTD.	DWARKA
1253.	FENNER INDIA LTD.	CHENNAI
1254.	FERNAS CONSTRUCTION COMPANY LTD.	BAHADURGARH
1255.	FEROZE GANDHI INSTT. OF ENGG. & TECH.	RAEBARELI
1256.	FESTO CONTROLS PVT. LTD.	BANGALORE
1257.	FG WILSON ENGINEERING FZE	DUBAI
1258.	FIAT INDIA AUTOMOBILES LTD.	PUNE

1259.	FICHTNER CONSULTING ENGINEERS INDIA PVT. LTD.	CHENNAI
1260.	FIDELITY BUSINESS SERVICES INDIA PVT. LTD.	BANGALORE
1261.	FIDELITY BUSINESS SERVICES INDIA PVT. LTD.	DHARWAD
1262.	FINANCIAL SOFTWARE &SYSTEM PVT. LTD.	COIMBATORE
1263.	FINANCIAL TECHNOLOGIES (INDIA) LTD.	PUNE
1264.	FINEORE TECHNOLOGIES LTD.	GURGAON
1265.	FIRST INSIGHT SOFTWARE SOLUTIONS	PUNE
1266.	FIRSTAPEX SOFTWARE TECHNOLOGIES LTD.	BANGALORE
1267.	FIS GLOBAL BUSINESS SOLUTIONS PVT. LTD.	CHENNAI
1268.	FISERV INDIA PVT. LTD.	BANGALORE
1269.	FISERV INDIA PVT. LTD.	DELHI
1270.	FISERV INDIA PVT. LTD.	NOIDA
1271.	FISERV INDIA PVT. LTD.	PUNE
1272.	FISHER SANMAR LTD.	CHENNAI
1273.	FL SMIDTH PVT. LTD.	CHENNAI
1274.	FLEXTRONICS TECHNOLOGIES (I) PVT. LTD.	CHENNAI
1275.	FLEXTRONICS TECHNOLOGIES (I) PVT. LTD.	KANCHIPURAM
1276.	FLEXTRONICS TECHNOLOGIES (I) PVT. LTD.	KARUR
1277.	FLIPKART INDIA PVT. LTD.	BANGALORE
1278.	FLOVEL ENERGY PVT. LTD.	DELHI
1279.	FLOWSERVE INDIA CONTROLS PVT. LTD.	BARODA
1280.	FLOWSERVE INDIA CONTROLS PVT. LTD.	CHENNAI
1281.	FLOWSERVE INDIA CONTROLS PVT. LTD.	HOSUR
1282.	FLOWSERVE INDIA CONTROLS PVT. LTD.	KANCHIPURAM
1283.	FLOWSERVE INDIA CONTROLS PVT. LTD.	TRICHY
1284.	FLSMIDTH MINERALS PVT. LTD.	ARANTHANGI
1285.	FLSMIDTH MINERALS PVT. LTD.	CHENNAI
1286.	FLSMIDTH PVT. LTD.	ELURU
1287.	FLSMIDTH PVT. LTD.	KARUR
1288.	FLSMIDTH PVT. LTD.	MADURAI
1289.	FLSMIDTH PVT. LTD.	TANJORE
1290.	FLSMIDTH PVT. LTD.	TRICHY
1291.	FLUOR DANIEL INDIA PVT. LTD.	NEW DELHI
1292.	FOLEYDESIGNS PVT. LTD.	BANGALORE
1293.	FORBES MARSHALL PVT. LTD.	PUNE
1294.	FORCE MOTORS LTD.	CHENNAI
1295.	FORCE MOTORS LTD.	INDORE
1296.	FORCE MOTORS LTD.	MUMBAI
1297.	FORCE MOTORS LTD.	PUNE
1298.	FORCE10 NETWORKS INDIA PVT. LTD.	CHENNAI
1299.	FORCE10 NETWORKS INDIA PVT. LTD.	SALEM
1300.	FORD INDIA PVT. LTD.	CHENNAI
1301.	FORD INDIA PVT. LTD.	DELHI
1302.	FORD INDIA PVT. LTD.	NASIK
1303.	FORTIS HOSPITAL	JAIPUR
1304.	FORTIS HOSPITAL	NEW DELHI
1305.	FORTUNEPAY SOLUTIONS PVT. LTD.	BANGALORE
1306.	FORWARD TECHNOLOGY AGENCY PVT. LTD.	CHENNAI
1307.	FOSECO INDIA LTD.	PONDICHERRY
1308.	FOSTER WHEELER INDIA PVT. LTD.	CHENNAI
1309.	FRAMES BUILDING SYSTEMS FZC	COIMBATORE
1310.	FREESCALE SEMICONDUCTORS INDIA PVT. LTD.	DELHI
1311.	FREESCALE SEMICONDUCTORS INDIA PVT. LTD.	HYDERABAD
1312.	FREESCALE SEMICONDUCTORS INDIA PVT. LTD.	MALAPPURAM
1313.	FRESENIUS KABI ONCOLOGY LTD.	NADIA

1314.	FRESENIUS KABI ONCOLOGY LTD.	PANCHKULA
1315.	FRONTIER LIFELINE PVT. LTD.	CHENNAI
1316.	FRONTIER PRECI PARTS	MADURAI
1317.	FTV PROCLAD LLC	BUR BUBAI
1318.	FUJAIRAH ASIA POWER COMPANY	QIDFA
1319.	FUJITSU CONSULTING INDIA	PUNE
1320.	FUJSENG CONSTRUCTION LLC	MUSIRI
1321.	FUNIZEN SOLUTIONS PVT. LTD.	CHENNAI
1322.	G.R.ENGINEERING WORKS	COIMBATORE
1323.	G.S AUTO COMPONENTS	CHENNAI
1324.	GABRIEL INDIA LTD.	CHENNAI
1325.	GABRIEL INDIA LTD.	HOSUR
1326.	GABRIEL INDIA LTD.	PARWANOO
1327.	GABRIEL INDIA LTD.	SALEM
1328.	GABRIEL INDIA LTD.	SOLAN
1329.	GACTEL TURNKEY PROJECTS LTD.	MUMBAI
1330.	GALAXE SOLUTIONS INDIA PVT. LTD.	BANGALORE
1331.	GALE TECHNOLOGIES INC.	DELHI
1332.	GALFAR ENGG. & CONTRACTING SAOG	GUDIYATTAM
1333.	GAMESA WIND TURBINES LTD.	NAGERCOIL
1334.	GAMESA WIND TURBINES LTD.	VADODARA
1335.	GAMMON INDIA LTD.	KOLKATA
1336.	GAMMON INDIA LTD.	RAJAPALAYAM
1337.	GARGASH MOTORS & GENERAL TRADING LLC.	AL QUOZ
1338.	GATEFORUM EDUCATIONAL SERVICES (P.) LTD.	UDAIPUR
1339.	GATES ENGINEERING & SERVICES FZCO	DUBAI
1340.	GATES UNITTA INDIA COMPANY PVT. LTD.	CHENNAI
1341.	GATEWAY INFOTECH SYSTEMS PVT. LTD.	BANGALORE
1342.	GAVS INFORMATION SERVICES PVT. LTD.	CHENNAI
1343.	GDES PVT. LTD.	MADURAI
1344.	GE APPLIANCES & LIGHTING	BANGALORE
1345.	GE ENERGY - DRESSER VALVE INDIA PVT. LTD.	COIMBATORE
1346.	GE ENERGY - DRESSER VALVE INDIA PVT. LTD.	HOSUR
1347.	GE ENERGY - DRESSER VALVE INDIA PVT. LTD.	HYDERABAD
1348.	GE ENERGY - DRESSER VALVE INDIA PVT. LTD.	TIRUNELVELI
1349.	GE HEALTHCARE	BANGALORE
1350.	GE HEALTHCARE	RAJGANGPUR
1351.	GE INDIA EXPORTS PVT. LTD.	BANGALORE
1352.	GE INDIA EXPORTS PVT. LTD.	HYDERABAD
1353.	GE INDIA EXPORTS PVT. LTD.	SECUNDERABAD
1354.	GE INDIA INDUSTRIAL PVT. LTD.	HYDERABAD
1355.	GE INTELLIGENT PLATFORMS	CUDDLALORE
1356.	GE INTELLIGENT PLATFORMS	HYDERABAD
1357.	GE MEDICAL SYSTEMS PVT. LTD.	BANGALORE
1358.	GEA BGR ENERGY SYSTEM (I) LTD.	CHENNAI
1359.	GECO MECHANICAL & ELECTRICAL LTD.	SHARJAH
1360.	GEITC PVT. LTD.	BANGALORE
1361.	GENERAL COMMISSION FOR SURVEY	HYDERABAD
1362.	GENERAL ELECTRIC INTERNATIONAL INC.	PUNE
1363.	GENERAL ELECTRIC POWER CONVERSION	CHENNAI
1364.	GENERAL ELECTRICS COMPANY	BAHRAIN
1365.	GENERAL ELECTRICS COMPANY	BANGALORE
1366.	GENERAL ELECTRICS COMPANY	SECUNDERABAD
1367.	GENERAL ELECTRICS COMPANY	TIRUPUR
1368.	GENERAL ELECTRICS COMPANY	TUTICORIN

1369.	GENERAL INDUSTRIAL CONTROLS PVT. LTD.	PUNE
1370.	GENERAL MOTORS TECHNICAL CENTER PVT. LTD.	AURANGABAD
1371.	GENERAL MOTORS TECHNICAL CENTER PVT. LTD.	BANGALORE
1372.	GENERAL MOTORS TECHNICAL CENTER PVT. LTD.	COIMBATORE
1373.	GENERAL MOTORS TECHNICAL CENTER PVT. LTD.	PUNE
1374.	GENERAL MOTORS TECHNICAL CENTER PVT. LTD.	THIRUVARUR
1375.	GENPACT INDIA PVT. LTD.	GHAZIABAD
1376.	GENUS POWER INFRASTRUCTURES LTD.	JAIPUR
1377.	GEOMETRIC LTD.	BANGALORE
1378.	GEOMETRIC LTD.	HOSUR
1379.	GEOMETRIC LTD.	ISLAMPUR
1380.	GEOMETRIC LTD.	JAYSINGPUR
1381.	GEOMETRIC LTD.	PUNE
1382.	GEOMETRIC LTD.	THANE
1383.	GERMAN EXPRESS SHIPPING AGENCY INDIA PVT.	TIRUNELVELI
1384.	GERMAN GULF ENTERPRISES	SHARJAH
1385.	GERMANISCHER LLOYD	ABU DHABI
1386.	GERMANISCHER LLOYD	MUSSAFA
1387.	GERMANISCHER LLOYD	TRICHY
1388.	GESTAMP SUNGWOO STAMPING & ASSY PVT. LTD.	CHENNAI
1389.	GIESECKE & DEVRIENT INDIA PVT. LTD.	NEW DELHI
1390.	GILLETTE INDIA LTD.	BHIWADI
1391.	GIRNAR SOFTWARES PVT. LTD.	JAIPUR
1392.	GKAR(INDIA) POWER SYSTEMS PVT. LTD.	CHENNAI
1393.	GKN DRIVELINE INDIA LTD.	CHENNAI
1394.	GLOBAL ANALYTICS INDIA PVT. LTD.	CHENNAI
1395.	GLOBAL AUTOMATION INDIA PVT. LTD.	BANGALORE
1396.	GLOBAL CHEMICALS & MAINT. SYSTEMS LLC	COIMBATORE
1397.	GLOBAL EDGE SOFTWARE LTD.	BANGALORE
1398.	GLOBAL EDGE SOFTWARE LTD.	COIMBATORE
1399.	GLOBAL EXCHANGE SERVICES	MYSORE
1400.	GLOBAL FOUNDRIES SINGAPORE PTE LTD.	CHENNAI
1401.	GLOBAL KTECH INC	CHENNAI
1402.	GLOBAL LOGIC INDIA PVT. LTD.	BANGALORE
1403.	GLOBAL LOGIC INDIA PVT. LTD.	DELHI
1404.	GLOBAL LOGIC INDIA PVT. LTD.	GHAZIABAD
1405.	GLOBAL LOGIC INDIA PVT. LTD.	NAGPUR
1406.	GLOBAL LOGIC INDIA PVT. LTD.	NOIDA
1407.	GLOBAL LOGIC INDIA PVT. LTD.	SANGRUR
1408.	GLOBAL PETROLEUM BUSINESS & TRADINGEST	ABU DHABI
1409.	GLOBAL TALENT TRACK	CHENNAI
1410.	GLOBAL TECHNOLOGY SERVICES	MANGALORE
1411.	GLOBALFOUNDRIES SINGAPORE PTE LTD.	MANNARGUDI
1412.	GLOBALFOUNDRIES SINGAPORE PTE LTD.	NAMAKKAL
1413.	GLOCHEM INDUSTRIES LTD.	JADCHERLA
1414.	GMMCO LTD.	CHENNAI
1415.	GMMCO LTD.	VELLORE
1416.	GMMOS KAZAKHSTAN LLP	TIRUCHIRAPPALLI
1417.	GNAT TECHNOLOGIES PVT. LTD.	BANGALORE
1418.	GNOSTICE INFORMATION TECHNOLOGIES	MANDYA
1419.	GNTS TECHNOLOGIES PVT. LTD.	THANJAVUR
1420.	GOA SHIPYARD LTD.	MARGAO
1421.	GOA SHIPYARD LTD.	PANJIM
1422.	GOA SHIPYARD LTD.	PONDA
1423.	GODREJ & BOYCE MFG. CO. LTD.	AMBERNATH

1424.	GODREJ & BOYCE MFG. CO. LTD.	BHUBANESWAR
1425.	GODREJ & BOYCE MFG. CO. LTD.	CALICUT
1426.	GODREJ & BOYCE MFG. CO. LTD.	CHENNAI
1427.	GODREJ & BOYCE MFG. CO. LTD.	COCHIN
1428.	GODREJ & BOYCE MFG. CO. LTD.	DELHI
1429.	GODREJ & BOYCE MFG. CO. LTD.	DOMBIVLI
1430.	GODREJ & BOYCE MFG. CO. LTD.	ERNAKULAM
1431.	GODREJ & BOYCE MFG. CO. LTD.	INDORE
1432.	GODREJ & BOYCE MFG. CO. LTD.	KALYAN
1433.	GODREJ & BOYCE MFG. CO. LTD.	LONAVLA
1434.	GODREJ & BOYCE MFG. CO. LTD.	LUCKNOW
1435.	GODREJ & BOYCE MFG. CO. LTD.	MOHALI
1436.	GODREJ & BOYCE MFG. CO. LTD.	MUMBAI
1437.	GODREJ & BOYCE MFG. CO. LTD.	NALASOPARA
1438.	GODREJ & BOYCE MFG. CO. LTD.	NASIK
1439.	GODREJ & BOYCE MFG. CO. LTD.	NAVI MUMBAI
1440.	GODREJ & BOYCE MFG. CO. LTD.	NEW DELHI
1441.	GODREJ & BOYCE MFG. CO. LTD.	PUNE
1442.	GODREJ & BOYCE MFG. CO. LTD.	THANE
1443.	GODREJ & BOYCE MFG. CO. LTD.	VIKHROLI
1444.	GODREJ INFOTECH LTD.	CHENNAI
1445.	GOKUL NEWTECH HOSPITAL	RAJKOT
1446.	GOLDLINE (FZE) GH. LTD.	TEMA
1447.	GOLDMAN SACHS SERVICES INDIA PVT. LTD.	BANGALORE
1448.	GOMTI BIOTECH LTD.	HALDWANI
1449.	GOODRICH AEROSPACE SERVICE PVT. LTD.	BANGALORE
1450.	GOODRICH AEROSPACE SERVICE PVT. LTD.	MYSORE
1451.	GOODRICH AEROSPACE SERVICE PVT. LTD.	TRICHY
1452.	GOOGLE INDIA PVT. LTD.	GURGAON
1453.	GOOGLE INDIA PVT. LTD.	HYDERABAD
1454.	GOVERNMENT OF INDIA	AMBALA
1455.	GOVT OF J&K DEPARTMENT OF IT JAKEGA	BARAMULLA
1456.	GOVT. OF RAJASTHAN	JAIPUR
1457.	GPC-GLOBAL INFORMATION SOLUTIONS	ABU DHABI
1458.	GPN PROJECTS PVT. LTD.	TIRUCHIRAPPALLI
1459.	GRAPHIC ERA UNIVERSITY DEHRADUN	DEHRADUN
1460.	GRASIM INDUSTRIES LTD.	NAGDA
1461.	GREEN GOLD ANIMATION PVT. LTD.	HYDERABAD
1462.	GREEN PROJECT DESIGN CONSULTANTS	CHENNAI
1463.	GREENFIELD ONLINE PVT. LTD.	GURGAON
1464.	GREENRIDGE SYSTEMS PVT. LTD.	KALYAN
1465.	GREENRIDGE SYSTEMS PVT. LTD.	THANE
1466.	GRINDWELL NORTON LTD.	NAGPUR
1467.	GROUP OF ENGINEERS	SECUNDERABAD
1468.	GROZ ENGINEERING TOOLS PVT. LTD.	GURGAON
1469.	GRUNER INDIA PVT.LTD.	CHORGALIAI
1470.	GSOFT SOFTWARE SOLUTION	DINDIGUL
1471.	GSS INFOTECH	HYDERABAD
1472.	GTNEXUS SOFTWARE PVT. LTD.	BANGALORE
1473.	GUJ INFO PETRO LTD.	AHMEDABAD
1474.	GUJ INFO PETRO LTD.	BHARUCH
1475.	GUJ INFO PETRO LTD.	GANDHINAGAR
1476.	GUJ INFO PETRO LTD.	SURAT
1477.	GUJARAT BOROSIL LTD.	BHARUCH
1478.	GULF BUSINESS MACHINES	CHENNAI

1479.	GULF CONCRETE & BLOCKS	NAKKEEL
1480.	GULF DRUG ESTABLISHMENT	DUBAI
1481.	GULF MARINE MAINTENANCE & OFFSHORE SERVICES Ltd.	SANKARANKOVIL
1482.	GULF SPECIALISED MECH&ENG SRVS	ABU DHABI
1483.	GULF SPIC GENERAL TRADING & CONTRACTING	CHENNAI
1484.	GULF TURBINE SERVICES LLC	JEBEL ALI
1485.	GULF UNIVERSITY FOR SCIENCE & TECHNOLOGY	WEST MISHREF
1486.	GULFGAS PIPELINES INSTALLATION & SUPPLY	ROLLA
1487.	GULFSPIC GENERAL TRADING & CONTRACTING	FAHAHEEL
1488.	GUNNEBO INDIA PVT. LTD.	VADODARA
1489.	GUNTUR ENGINEERING COLLEGE	GUNTUR
1490.	GXS INDIA TECHNOLOGY CENTER PVT. LTD.	BANGALORE
1491.	GYANMERU CONSULTANCY PVT. LTD.	NEW DELHI
1492.	H5 ASIA PACIFIC PVT. LTD.	BANGALORE
1493.	HAINDUSTAN AERONAUTICS LTD.	SECUNDERABAD
1494.	HAL AVIONICS DIVISION KORWA	SULTANPUR
1495.	HALDIA ENERGY LTD.	BANDEL
1496.	HALLIBURTON TECHNOLOGY INDIA PVT. LTD.	GHAZIABAD
1497.	HALLIBURTON TECHNOLOGY INDIA PVT. LTD.	PUNE
1498.	HALLIBURTON WORLD WIDE LTD.	DUBAI
1499.	HANSEN TRANSMISSIONS LTD.	COIMBATORE
1500.	HANYANG AUTOMOTIVE INDIA PVT. LTD.	CHENNAI
1501.	HARBINGER SOFTWARE	PUNE
1502.	HARISVANIKK LEDERS PVT. LTD.	CHENNAI
1503.	HARIT POLYTECH PVT. LTD.	JAIPUR
1504.	HARITA FEHRER LTD.	HOSUR
1505.	HARITA SEATING STSTEMS LTD.	HOSUR
1506.	HARITA SEATING SYSTEMS LTD.	COIMBATORE
1507.	HARITA SEATING SYSTEMS LTD.	VELLORE
1508.	HARMAN INTERNATIONAL INDIA (PVT.) LTD.	BANGALORE
1509.	HARNESS HANDI TOUCH PVT. LTD.	TIRUPUR
1510.	HATCH ASSOCIATES INDIA PVT. LTD.	GURGAON
1511.	HAVELLS INDIA LTD.	SHAHJAHANOUR
1512.	HAWKINS COOKERS LTD.	THANE
1513.	HAYS BUSINESS SOLUTIONS	DELHI
1514.	HBL POWER SYSTEMS LTD.	HYDERABAD
1515.	HBL POWER SYSTEMS LTD.	SECUNDERABAD
1516.	HCL COMNET LTD.	SIWAN
1517.	HCL COMNET SYSTEMS & SERVICES LTD.	NEW DELHI
1518.	HCL INFOSYSTEM PVT. LTD.	GHAZIABAD
1519.	HCL INFOSYSTEMS LTD.	CALICUT
1520.	HCL INFOSYSTEMS LTD.	LUCKNOW
1521.	HCL INFOSYSTEMS LTD.	PONDICHERRY
1522.	HCL TECHNOLOGIES LTD.	ALAPPUZHA
1523.	HCL TECHNOLOGIES LTD.	AMBALA
1524.	HCL TECHNOLOGIES LTD.	BANGALORE
1525.	HCL TECHNOLOGIES LTD.	BETUL
1526.	HCL TECHNOLOGIES LTD.	BHADRAVATHI
1527.	HCL TECHNOLOGIES LTD.	CHENNAI
1528.	HCL TECHNOLOGIES LTD.	COIMBATORE
1529.	HCL TECHNOLOGIES LTD.	CUDDALORE
1530.	HCL TECHNOLOGIES LTD.	DAVANGERE
1531.	HCL TECHNOLOGIES LTD.	DELHI
1532.	HCL TECHNOLOGIES LTD.	ERODE
1533.	HCL TECHNOLOGIES LTD.	GHAZIABAD

1534.	HCL TECHNOLOGIES LTD.	GURGAON
1535.	HCL TECHNOLOGIES LTD.	JAIPUR
1536.	HCL TECHNOLOGIES LTD.	KARNAL
1537.	HCL TECHNOLOGIES LTD.	KASARGOD
1538.	HCL TECHNOLOGIES LTD.	KOLAR
1539.	HCL TECHNOLOGIES LTD.	KOLHAPUR
1540.	HCL TECHNOLOGIES LTD.	KOLLAM
1541.	HCL TECHNOLOGIES LTD.	KOZHICODE
1542.	HCL TECHNOLOGIES LTD.	MADURAI
1543.	HCL TECHNOLOGIES LTD.	MUMBAI
1544.	HCL TECHNOLOGIES LTD.	MYSORE
1545.	HCL TECHNOLOGIES LTD.	NELLORE
1546.	HCL TECHNOLOGIES LTD.	NEW DELHI
1547.	HCL TECHNOLOGIES LTD.	NOIDA
1548.	HCL TECHNOLOGIES LTD.	PONDICHERRY
1549.	HCL TECHNOLOGIES LTD.	RAJSAMAND
1550.	HCL TECHNOLOGIES LTD.	SALEM
1551.	HCL TECHNOLOGIES LTD.	SERAMPORE
1552.	HCL TECHNOLOGIES LTD.	TENKASI
1553.	HCL TECHNOLOGIES LTD.	THANJAVUR
1554.	HCL TECHNOLOGIES LTD.	THELLAR
1555.	HCL TECHNOLOGIES LTD.	THENI
1556.	HCL TECHNOLOGIES LTD.	TIRUCHENGODE
1557.	HCL TECHNOLOGIES LTD.	TRICHIRAPPALLI
1558.	HCL TECHNOLOGIES LTD.	TRICHY
1559.	HCL TECHNOLOGIES LTD.	VELLORE
1560.	HCL TECHNOLOGIES LTD.	VIJAYAWADA
1561.	HEADSTRONG SERVICES INDIA PVT. LTD.	BANGALORE
1562.	HEADSTRONG SERVICES INDIA PVT. LTD.	DELHI
1563.	HEADSTRONG SERVICES INDIA PVT. LTD.	FARIDABAD
1564.	HEADSTRONG SERVICES INDIA PVT. LTD.	GHAZIABAD
1565.	HEADSTRONG SERVICES INDIA PVT. LTD.	HALDWANI
1566.	HEADSTRONG SERVICES INDIA PVT. LTD.	NEW DELHI
1567.	HEALTHASYST PVT. LTD.	MYSORE
1568.	HEAT EXCHANGES SPECIALISTS (S) PTE LTD.	MAMALLAPURAM
1569.	HEAVY ENGINEERING IND. & SHIPBUILDING CO	SHUWAIKH
1570.	HEAVY ENGINEERING INDUSTRIES & SHIP BUIL	KUWAIT
1571.	HEAVY ENGINEERING INDUSTRIES & SHIP BUIL	SHUAIBA
1572.	HEINZ INDIA PVT. LTD.	SITARGANJ
1573.	HELLA ELECTRONICS DEVELOPMENT CENTER IND LTD.	DHARWAD
1574.	HELLA ELECTRONICS PVT. LTD.	DHARWAD
1575.	HELLA ENGINEERING PVT. LTD.	CHENNAI
1576.	HELLA ENGINEERING PVT. LTD.	THRISSUR
1577.	HELLA INDIA AUTOMOTIVE PVT. LTD.	CHENNAI
1578.	HELLA INDIA AUTOMOTIVE PVT. LTD.	GURGAON
1579.	HELLA INDIA AUTOMOTIVE PVT. LTD.	PUNE
1580.	HELLA INDIA AUTOMOTIVE PVT. LTD.	SHAMLI
1581.	HELOVOET PHARMA INDIA OPERATIONS PVT. LTD.	PUNE
1582.	HENKEL CAC PVT. LTD.	DOMBIVILI
1583.	HEPATIC TECHNOLOGIES PVT. LTD.	ANANTAPUR
1584.	HERALD SOLUTIONS	AHMEDABAD
1585.	HERBALIFE INTERNATIONAL INDIA PVT. LTD.	KASARGOD
1586.	HERO GLOBAL DESIGN LTD.	GHAZIABAD
1587.	HERO HONDA MOTORS LTD.	BHUBANESWAR
1588.	HERO HONDA MOTORS LTD.	HARIDWAR

1589.	HERO HONDA MOTORS LTD.	HYDERABAD
1590.	HERO MOTO CORP LTD.	CUDDALORE
1591.	HERO MOTOCORP LTD.	GURGAON
1592.	HERRENKNECHT INDIA PVT. LTD.	RAMANATHAPURAM
1593.	HEWIIT ASSOCIATES INDIA PVT. LTD.	NOIDA
1594.	HEWITT ASSOCIATES INDIA PVT. LTD.	CHENNAI
1595.	HEWLETT PACKARD GOLBALSOFT PVT. LTD.	BANGALORE
1596.	HEWLETT PACKARD GOLBALSOFT PVT. LTD.	CHENNAI
1597.	HEWLETT PACKARD GOLBALSOFT PVT. LTD.	COIMBATORE
1598.	HEWLETT PACKARD GOLBALSOFT PVT. LTD.	KANNUR
1599.	HEWLETT PACKARD GOLBALSOFT PVT. LTD.	KOLAR
1600.	HEWLETT PACKARD GOLBALSOFT PVT. LTD.	KOLKATA
1601.	HEWLETT PACKARD GOLBALSOFT PVT. LTD.	MADURAI
1602.	HEWLETT PACKARD GOLBALSOFT PVT. LTD.	MUMBAI
1603.	HEWLETT PACKARD GOLBALSOFT PVT. LTD.	SECUNDERABAD
1604.	HEWLETT PACKARD GOLBALSOFT PVT. LTD.	THANE
1605.	HEWLETT PACKARD GOLBALSOFT PVT. LTD.	THRISSUR
1606.	HEXAWARE TECHNOLOGIES LTD.	BANGALORE
1607.	HEXAWARE TECHNOLOGIES LTD.	CHENNAI
1608.	HEXAWARE TECHNOLOGIES LTD.	COIMBATORE
1609.	HEXAWARE TECHNOLOGIES LTD.	KRISHNAGIRI
1610.	HEXAWARE TECHNOLOGIES LTD.	NAVI MUMBAI
1611.	HEXAWARE TECHNOLOGIES LTD.	TRICHY
1612.	HICAL TECHNOLOGIES PVT. LTD.	BANGALORE
1613.	HIGGS & HILL LLC	DUBAI
1614.	HIGHBAR TECHNOLOGIES LTD.	MUMBAI
1615.	HIGHTEMP FURNACES LTD.	BANGALORE
1616.	HIHT UNIVERSITY	LUCKNOW
1617.	HINDALCO INDUSTRIES LTD.	DAHEJ
1618.	HINDALCO INDUSTRIES LTD.	RANCHI
1619.	HINDALCO INDUSTRIES LTD.	RENUKOOT
1620.	HINDALCO INDUSTRIES LTD.	SILVASSA
1621.	HINDUJA FOUNDRIES LTD.	CHENNAI
1622.	HINDUSTAN AERONAUTICS LTD.	AMETHI
1623.	HINDUSTAN AERONAUTICS LTD.	BANGALORE
1624.	HINDUSTAN AERONAUTICS LTD.	HYDERABAD
1625.	HINDUSTAN AERONAUTICS LTD.	NASIK
1626.	HINDUSTAN AERONAUTICS LTD.	SULTANPUR
1627.	HINDUSTAN COPPER LTD.	MALANJKHAND
1628.	HINDUSTAN DORR OLIVER TECHNOLOGIES	CHENNAI
1629.	HINDUSTAN MOTORS LTD.	FARIDABAD
1630.	HINDUSTAN PETROLEUM CORPORATION	VISAKHAPATNAM
1631.	HINDUSTAN PETROLEUM CORPORATION LTD.	NAVI MUMBAI
1632.	HINDUSTAN TURBOMACHINERY LTD.	PUDUKKOTTAI
1633.	HINDUSTAN UNILEVER LTD.	MUMBAI
1634.	HINDUSTAN UNILEVER LTD.	NALAGARH
1635.	HIRA INDUSTRIES LLC	DUBAI
1636.	HITECH CARBON	SONEBHADRA
1637.	HLL LIFECARE LTD.	THIRUVANANTHAPURAM
1638.	HMRI(HOSPITAL & HEALTH SYSTEM MANEGMENT)	SIKAR
1639.	HOERBIGER INDIA PVT. LTD.	PUNE
1640.	HOFINCONS INFOTECH & INDUSTRIAL SERVICES	CHENNAI
1641.	HONDA CARS INDIA LTD.	AJMER
1642.	HONDA CARS INDIA LTD.	ALWAR
1643.	HONDA CARS INDIA LTD.	BHOPAL

1644.	HONDA MOTERCYCLE & SCOOTER (I) PVT. LTD.	NEW DELHI
1645.	HONDA MOTERCYCLE & SCOOTER (I) PVT. LTD.	SASARAM
1646.	HONDA MOTERCYCLE & SCOOTER (I) PVT. LTD.	SONEBHADAR
1647.	HONDA SIEL CARS INDIA LTD.	GREATER NOIDA
1648.	HONDA SIEL CARS INDIA LTD.	NEW DELHI
1649.	HONEYWELL AUTOMATION INDIA LTD.	PUNE
1650.	HONEYWELL PROCESS SOLUTIONS	ABU DHABI
1651.	HONEYWELL TECHNOLOGY SOLUTIONS PVT. LTD.	BANGALORE
1652.	HONEYWELL TECHNOLOGY SOLUTIONS PVT. LTD.	CHENNAI
1653.	HONEYWELL TECHNOLOGY SOLUTIONS PVT. LTD.	HYDERABAD
1654.	HONEYWELL TECHNOLOGY SOLUTIONS PVT. LTD.	MADURAI
1655.	HONEYWELL TECHNOLOGY SOLUTIONS PVT. LTD.	PUDUCHERRY
1656.	HONEYWELL TECHNOLOGY SOLUTIONS PVT. LTD.	PUNE
1657.	HONEYWELL TECHNOLOGY SOLUTIONS PVT. LTD.	THANE
1658.	HONEYWELL TECHNOLOGY SOLUTIONS PVT. LTD.	TRIVANDRUM
1659.	HOWARD FINLEY AL KHALEEJ	ABU DHABI
1660.	HP INDIA SALES PVT. LTD.	CHENNAI
1661.	HP INDIA SOFTWARE OPERATION PVT. LTD.	BANGALORE
1662.	HP INDIA SOFTWARE OPERATION PVT. LTD.	CHENNAI
1663.	HSBC EDPI PVT. LTD.	BANGALORE
1664.	HSBC GLOBAL TECHNOLOGY	KISHANGARH
1665.	HSBC SOFTWARE DEVELOPMENT INDIA PVT. LTD.	HYDERABAD
1666.	HSBC SOFTWARE DEVELOPMENT INDIA PVT. LTD.	KOLKATA
1667.	HSBC SOFTWARE DEVELOPMENT INDIA PVT. LTD.	NELLORE
1668.	HSBC SOFTWARE DEVELOPMENT INDIA PVT. LTD.	PUNE
1669.	HSBC SOFTWARE DEVELOPMENT INDIA PVT. LTD.	THANE
1670.	HT BURDA MEDIA LTD.	BAGHPAT
1671.	HTC GLOBAL SERVICES (INDIA) PVT. LTD.	HYDERABAD
1672.	HTC GLOBAL SERVICES (INDIA) PVT. LTD.	KANYAKUMARI
1673.	HUAWEI TECHNOLOGIES INDIA PVT. LTD.	AFZALGARH
1674.	HUAWEI TECHNOLOGIES INDIA PVT. LTD.	BANGALORE
1675.	HUAWEI TECHNOLOGIES INDIA PVT. LTD.	JAMMALAMADUGU
1676.	HUAWEI TECHNOLOGIES INDIA PVT. LTD.	KAVOOR
1677.	HUAWEI TECHNOLOGIES INDIA PVT. LTD.	KURNOOL
1678.	HUAWEI TECHNOLOGIES INDIA PVT. LTD.	MYSORE
1679.	HUAWEI TECHNOLOGIES INDIA PVT. LTD.	PALAKKAD
1680.	HUAWEI TECHNOLOGIES INDIA PVT. LTD.	VELLORE
1681.	HUGHES COMMUNICATION INDIA LTD.	HYDERABAD
1682.	HUGHES SYSTIQUE INDIA PVT. LTD.	GURGAON
1683.	HURCO INDIA PVT. LTD.	TRICHY
1684.	HURIX SYSTEMS PVT. LTD.	MATHURA
1685.	HUSCO HYDRAULICS PVT. LTD.	PUNE
1686.	HUSKY INJECTION MOLDING SYSTEMS	TIRUVANNAMALAI
1687.	HYDAC (INDIA) PVT. LTD.	COIMBATORE
1688.	HYDROLINK TRADING CO LLC	ALKHOBAR
1689.	HYUNDAI CONSTRUCTION EQUIPMENT INDIA PVT. LTD.	PUNE
1690.	HYUNDAI MOTOR INDIA LTD.	CHENNAI
1691.	HYUNDAI MOTOR INDIA LTD.	DINDUGUL
1692.	HYUNDAI MOTOR INDIA LTD.	KANCHIPURAM
1693.	HYUNDAI MOTOR INDIA LTD.	PUDUCHERRY
1694.	HYUNDAI MOTOR INDIA LTD.	THANJAVUR
1695.	HYUNDAI MOTOR INDIA LTD.	TIRUNELVELI
1696.	HYUNDAI MOTOR INDIA LTD.	TIRUVANNAMALAI
1697.	HYUNDAI MOTOR INDIA LTD.	VILLUPURAM
1698.	I SOFT R &D PVT. LTD.	CHENNAI

1699.	I NAUTIX TECHNOLOGIES INDIA PVT. LTD.	CHENNAI
1700.	IAG AUTOMATION PVT. LTD.	AMBALA
1701.	IAV INDIA PVT. LTD.	PASHAN
1702.	IBI CONSULTANCY PVT. INDIA LTD.	GURGAON
1703.	IBM INDIA PVT. LTD.	AHMEDNAGAR
1704.	IBM INDIA PVT. LTD.	BANGALORE
1705.	IBM INDIA PVT. LTD.	CHENNAI
1706.	IBM INDIA PVT. LTD.	COIMBATORE
1707.	IBM INDIA PVT. LTD.	DEHRADUN
1708.	IBM INDIA PVT. LTD.	DHARWAD
1709.	IBM INDIA PVT. LTD.	FARIDABAD
1710.	IBM INDIA PVT. LTD.	GHAZIABAD
1711.	IBM INDIA PVT. LTD.	GUNTUR
1712.	IBM INDIA PVT. LTD.	GURGAON
1713.	IBM INDIA PVT. LTD.	HINJEWADI
1714.	IBM INDIA PVT. LTD.	HYDERABAD
1715.	IBM INDIA PVT. LTD.	JALANDHAR
1716.	IBM INDIA PVT. LTD.	JANGAON
1717.	IBM INDIA PVT. LTD.	KADAPA
1718.	IBM INDIA PVT. LTD.	KANNUR
1719.	IBM INDIA PVT. LTD.	KARNAL
1720.	IBM INDIA PVT. LTD.	KOLAR
1721.	IBM INDIA PVT. LTD.	KOLKATA
1722.	IBM INDIA PVT. LTD.	LATUR
1723.	IBM INDIA PVT. LTD.	LONDON
1724.	IBM INDIA PVT. LTD.	MUMBAI
1725.	IBM INDIA PVT. LTD.	MUZAFFAR NAGAR
1726.	IBM INDIA PVT. LTD.	MYSORE
1727.	IBM INDIA PVT. LTD.	NELLORE
1728.	IBM INDIA PVT. LTD.	NEW DELHI
1729.	IBM INDIA PVT. LTD.	PUNE
1730.	IBM INDIA PVT. LTD.	RAJAPALAYAM
1731.	IBM INDIA PVT. LTD.	RAJGANGPUR
1732.	IBM INDIA PVT. LTD.	REWARI
1733.	IBM INDIA PVT. LTD.	SALEM
1734.	IBM INDIA PVT. LTD.	SHIMOGA
1735.	IBM INDIA PVT. LTD.	SRIKALAHASTI
1736.	IBM INDIA PVT. LTD.	THANE
1737.	IBM INDIA PVT. LTD.	TIRUPATI
1738.	IBM INDIA PVT. LTD.	TIRUVANNAMALAI
1739.	IBM INDIA PVT. LTD.	TRICHY
1740.	IBM INDIA PVT. LTD.	VELLORE
1741.	IBS GULF DESIGN PVT. LTD.	CHENNAI
1742.	IBS SOFTWARE SERVICES PVT. LTD.	BANGALORE
1743.	IBS SOFTWARE SERVICES PVT. LTD.	ERNAKULAM
1744.	IBS SOFTWARE SERVICES PVT. LTD.	KOCHI
1745.	IBS SOFTWARE SERVICES PVT. LTD.	SALEM
1746.	IBS SOFTWARE SERVICES PVT. LTD.	THRISSUR
1747.	IBS SOFTWARE SERVICES PVT. LTD.	TRIVANDRUM
1748.	ICERTIS SOLUTIONS PVT. LTD.	PUNE
1749.	ICICI BANK	HYDERABAD
1750.	IDEA CELLULAR LTD.	CALICUT
1751.	IDEA CELLULAR LTD.	CHENNAI
1752.	IDEA CELLULAR LTD.	COCHIN
1753.	IDEA CELLULAR LTD.	COIMBATORE

1754.	IDEA CELLULAR LTD.	ERNAKULAM
1755.	IDEA CELLULAR LTD.	KANNUR
1756.	IDEA CELLULAR LTD.	KOLKATA
1757.	IDEA CELLULAR LTD.	MALAPPURAM
1758.	IDEA CELLULAR LTD.	PALAKKAD
1759.	IDEA CELLULAR LTD.	PATHANAMTHITTA
1760.	IDEA CELLULAR LTD.	RAJKOT
1761.	IDEA CELLULAR LTD.	THRISSUR
1762.	IDEAL INFOSYSTEMS	KOLLAM
1763.	IDEAS INDIA PVT. LTD.	PUNE
1764.	IDEAS SOFTWARE & CONSULTING PVT. LTD.	BANGALORE
1765.	IDEAS2IT TECHNOLOGIES	CHENNAI
1766.	IDEAVATE SOLUTIONS PVT. LTD.	INDORE
1767.	IDEX INDIA PVT. LTD.	MUMBAI
1768.	IFB AUTOMOTIVE PVT. LTD.	BANGALORE
1769.	IFB AUTOMOTIVE PVT. LTD.	COIMBATORE
1770.	IFB AUTOMOTIVE PVT. LTD.	KRISHNAGIRI
1771.	IG INFOTECH INDIA PVT. LTD.	BANGALORE
1772.	IGARASHI MOTORS INDIA LTD.	CHENNAI
1773.	IGATE GLOBAL SOLUTIONS LTD.	BANGALORE
1774.	IGATE GLOBAL SOLUTIONS LTD.	CHENNAI
1775.	IGATE GLOBAL SOLUTIONS LTD.	HYDERABAD
1776.	IGATE GLOBAL SOLUTIONS LTD.	KOLHAPUR
1777.	IGATE GLOBAL SOLUTIONS LTD.	MUMBAI
1778.	IGATE GLOBAL SOLUTIONS LTD.	PRAKASAM
1779.	IGATE GLOBAL SOLUTIONS LTD.	TIRUCHIRAPPALLI
1780.	IGATE PATNI SYSTEM	HOSUR
1781.	IGATE PATNI SYSTEM	PUNE
1782.	IGEN INFOCOM PVT. LTD.	DHOLPUR
1783.	IGENIESES TECHNOLOGY SOLUTIONS	PUDUKKOTTAI
1784.	IHC MERWEDE	DUBAI
1785.	IIT INDORE	KOLKATA
1786.	IKA INDIA PVT. LTD.	BANGALORE
1787.	IKA INDIA PVT. LTD.	GULBARGA
1788.	I-LOGICON CONTROL AUTOMATION PVT. LTD.	BANGALORE
1789.	IM FLASH - SINGAPORE	SINGAPORE
1790.	IMAGEGRAFIX SOFTWARE FZCO	CHENNAI
1791.	IMAGINATION TECHNOLOGIES	JAMNAGAR
1792.	IMAGINATION TECHNOLOGIES	PUNE
1793.	IMDDAD LLC	DEIRA
1794.	IMPERIAL AUTO INDUSTRIES LTD.	FARIDABAD
1795.	IMPETUS INFOTECH INDIA PVT. LTD.	BANGALORE
1796.	IMPETUS INFOTECH INDIA PVT. LTD.	NOIDA
1797.	IMPLANTAIRE TECHNOLOGIES (I) PVT. LTD.	MYSORE
1798.	IMPLANTAIRE TECHNOLOGIES INDIA PVT.LTD.	BANGALORE
1799.	IMPULSE INDIA PVT. LTD.	GURGAON
1800.	IMS HEALTH INDIA PVT. LTD.	BANGALORE
1801.	INA BEARINGS INDIA PVT. LTD.	PUNE
1802.	INANSHU TECHNOLOGIES PVT. LTD.	VIJAYAWADA
1803.	INAUTIX TECHNOLOGIES INDIA PVT. LTD.	ATTUR/SALEM
1804.	INAUTIX TECHNOLOGIES INDIA PVT. LTD.	CHENNAI
1805.	INAUTIX TECHNOLOGIES INDIA PVT. LTD.	KANCHIPURAM
1806.	INAUTIX TECHNOLOGIES INDIA PVT. LTD.	MADURAI
1807.	INAUTIX TECHNOLOGIES INDIA PVT. LTD.	SIVAKASI
1808.	INAUTIX TECHNOLOGIES INDIA PVT. LTD.	TARAMANI

1809.	INCADEA INDIA PVT. LTD.	BANGALORE
1810.	INCAP CONTRACT MANUFACTURING SERVICES PVT. LTD.	TUMKUR
1811.	INCUBE SOLUTIONS PVT. LTD.	HYDERABAD
1812.	INDECOMM GLOBAL SERVICES (I) LTD.	BANGALORE
1813.	INDECOMM GLOBAL SERVICES (I) LTD.	TIRUVALLUR
1814.	INDEPENDENT TECHNOLOGY SYSTEMS (INDIA) PVT. LTD.	HYDERABAD
1815.	INDIA EURO TRAVELS	PONDICHERRY
1816.	INDIA HABITAT CENTRE	GURGAON
1817.	INDIA PISTONS LTD.	CHENNAI
1818.	INDIA STEEL SUMMIT PVT. LTD.	JAIPUR
1819.	INDIA YAMAHA MOTOR PVT. LTD.	BURARI
1820.	INDIAN AIR FORCE	AGRA
1821.	INDIAN AIR FORCE	BANGALORE
1822.	INDIAN AIR FORCE	BETUL
1823.	INDIAN AIR FORCE	BIKANER
1824.	INDIAN AIR FORCE	CHANDIGARH
1825.	INDIAN AIR FORCE	GHAZIABAD
1826.	INDIAN AIR FORCE	GORAKHPUR
1827.	INDIAN AIR FORCE	JAMMU
1828.	INDIAN AIR FORCE	KANPUR
1829.	INDIAN AIR FORCE	LUDHIANA
1830.	INDIAN AIR FORCE	MUMBAI
1831.	INDIAN AIR FORCE	NALIYA
1832.	INDIAN AIR FORCE	NASIK
1833.	INDIAN AIR FORCE	NEW DELHI
1834.	INDIAN AIR FORCE	PUNE
1835.	INDIAN AIR FORCE	PURNEA
1836.	INDIAN AIR FORCE	SILIGURI
1837.	INDIAN AIR FORCE	THANE
1838.	INDIAN ARMY	BANGALORE
1839.	INDIAN ARMY	DIMAPUR
1840.	INDIAN ARMY	GOA
1841.	INDIAN ARMY	KOLKATA
1842.	INDIAN ARMY	LUCKNOW
1843.	INDIAN ARMY	MISSAMARI
1844.	INDIAN COAST GUARD	NAVI MUMBAI
1845.	INDIAN FURNITURE PRODUCTS LTD.	CHENNAI
1846.	INDIAN INSTITUTE FOR PRODUCTION MANAGEMENT	ROURKELA
1847.	INDIAN INSTITUTE OF FOREIGN TRADE	GHAZIABAD
1848.	INDIAN INSTITUTE OF PACKAGING	HYDERABAD
1849.	INDIAN INSTITUTE OF SCIENCE	BANGALORE
1850.	INDIAN INSTITUTE OF TECHNOLOGY MADRAS	CHENNAI
1851.	INDIAN NAVY	JABALPUR
1852.	INDIAN NAVY	KOCHI
1853.	INDIAN NAVY	MUMBAI
1854.	INDIAN NAVY	NEW DELHI
1855.	INDIAN NAVY	PATIALA
1856.	INDIAN NAVY	RAHATA
1857.	INDIAN NAVY	VISAKHAPATNAM
1858.	INDIAN OIL CORPORATION	FARIDABAD
1859.	INDIAN OIL CORPORATION LTD.	DIGBOI
1860.	INDIAN RAILWAYS	LUCKNOW
1861.	INDIAN RAILWAYS	NAJIBABAD
1862.	INDIAN REGISTER OF SHIPPING	PHALTAN
1863.	INDIAN REGISTER OF SHIPPING	THANE

1864.	INDIAN SEAMLESS METAL TUBES LTD.	BARAMATI
1865.	INDIAN SPACE RESEARCH ORGANISATION	CHENNAI
1866.	INDIAN SPACE RESEARCH ORGANIZATION	BANGALORE
1867.	INDIAN SPACE RESEARCH ORGANIZATION	BHOPAL
1868.	INDIAN STEELS CORPORATION LTD.	GANDHIDAM
1869.	INDIEON TECHNOLOGIES PVT. LTD.	CHITTORGARH
1870.	INDO CHINA INTERNATIONAL PVT. LTD.	DELHI
1871.	INDODUTCH ALLOYS & CASTINGS	COIMBATORE
1872.	INDO-US MIM TEC PVT. LTD.	BANGALORE
1873.	INDO-US MIM TEC PVT. LTD.	PUDUKKOTTAI
1874.	INDUCTIS INDIA PVT. LTD.	MORADABAD
1875.	INDUS TOWERS LTD.	CHENNAI
1876.	INDUSTRIAL CABLE MANAGEMENT SYSTEMS CO.	DOHA
1877.	INEL POWER ELECTROMECHANICAL LLC	DUBAI
1878.	INEL POWER ELECTROMECHANICAL LLC	THIRUVALLUR
1879.	INEL POWER ELECTROMECHANICAL LLC	VELLORE
1880.	INEXEL INFOMATICS PVT. LTD.	THIRUPPUR
1881.	INFINEON TECHNOLOGIES INDIA PVT. LTD.	BANGALORE
1882.	INFINERA INDIA PVT. LTD.	BANGALORE
1883.	INFINITE COMPUTER SOLUTIONS	BANGALORE
1884.	INFINITE COMPUTER SOLUTIONS	CHENNAI
1885.	INFO EDGE INDIA LTD.	DELHI
1886.	INFOBAHN SOFTWORLD INC	NEW DELHI
1887.	INFO-DRIVE SYSTEMS SDN BHD	KUALA LUMPUR
1888.	INFOPRINT SOLUTIONS COMPANY	PUNE
1889.	INFOR GLOBAL SOLUTIONS	HYDERABAD
1890.	INFOR GLOBAL SOLUTIONS	SECUNDERABAD
1891.	INFORMATICA BUSINESS SOLUTIONS PVT. LTD.	BANGALORE
1892.	INFORMATICA BUSINESS SOLUTIONS PVT. LTD.	CHITTOOR
1893.	INFORMATICA BUSINESS SOLUTIONS PVT. LTD.	TIRUPUR
1894.	INFORMATION DYNAMICS LLC	DUBAI
1895.	INFORMATION MOSAIC SOFTWARE PVT. LTD.	GURGAON
1896.	INFORMATION SYSTEMS RESOURCE CENTER PVT. LTD.	PUNE
1897.	INFOSUVIDHA & SERVICES PVT. LTD.	THIRUVALLUR
1898.	INFOSYS LTD.	ALAPPUZHA
1899.	INFOSYS LTD.	AMARAVATI
1900.	INFOSYS LTD.	BIJNOR
1901.	INFOSYS LTD.	CHALISGAON
1902.	INFOSYS LTD.	CHENGALPET
1903.	INFOSYS LTD.	COIMBATORE
1904.	INFOSYS LTD.	DELHI
1905.	INFOSYS LTD.	DHALGAON
1906.	INFOSYS LTD.	DHULE
1907.	INFOSYS LTD.	DINDIGUL
1908.	INFOSYS LTD.	ERNAKULAM
1909.	INFOSYS LTD.	ERODE
1910.	INFOSYS LTD.	HAMIRPUR
1911.	INFOSYS LTD.	HOSHIARPUR
1912.	INFOSYS LTD.	HOSUR
1913.	INFOSYS LTD.	JAIPUR
1914.	INFOSYS LTD.	JUNAGADH
1915.	INFOSYS LTD.	KANCHIPURAM
1916.	INFOSYS LTD.	KARAIKUDI
1917.	INFOSYS LTD.	KARIMNAGAR
1918.	INFOSYS LTD.	KARNAL

1919.	INFOSYS LTD.	KOCHI
1920.	INFOSYS LTD.	KOTA
1921.	INFOSYS LTD.	KURNOOL
1922.	INFOSYS LTD.	MARTUR
1923.	INFOSYS LTD.	MEERUT
1924.	INFOSYS LTD.	MUMBAI
1925.	INFOSYS LTD.	MUVATTUPUZHA
1926.	INFOSYS LTD.	NADIAD
1927.	INFOSYS LTD.	NAVI MUMBAI
1928.	INFOSYS LTD.	NAWAN SHAHAR
1929.	INFOSYS LTD.	NEW DELHI
1930.	INFOSYS LTD.	PALAKKAD
1931.	INFOSYS LTD.	PANIPAT
1932.	INFOSYS LTD.	PILANI
1933.	INFOSYS LTD.	PINJORE
1934.	INFOSYS LTD.	PONDICHERRY
1935.	INFOSYS LTD.	PRODDATUR
1936.	INFOSYS LTD.	PURI
1937.	INFOSYS LTD.	SAHARANPUR
1938.	INFOSYS LTD.	SALEM
1939.	INFOSYS LTD.	SHIMLA
1940.	INFOSYS LTD.	TUTICORIN
1941.	INFOSYS LTD.	UDUPI
1942.	INFOSYS LTD.	VADAKKENCHERY
1943.	INFOSYS LTD.	VELLORE
1944.	INFOSYS LTD.	VIJAYAWADA
1945.	INFOSYS LTD.	VILLUPURAM
1946.	INFOSYS LTD.	YAMUNANAGAR
1947.	INFOSYS TECHNOLOGIES LTD.	ALAPPUZHA
1948.	INFOSYS TECHNOLOGIES LTD.	BALASORE
1949.	INFOSYS TECHNOLOGIES LTD.	BANAGLORE
1950.	INFOSYS TECHNOLOGIES LTD.	BHUBANESWAR
1951.	INFOSYS TECHNOLOGIES LTD.	CHANDIGARH
1952.	INFOSYS TECHNOLOGIES LTD.	CHENGALPATTU
1953.	INFOSYS TECHNOLOGIES LTD.	CHENNAI
1954.	INFOSYS TECHNOLOGIES LTD.	COCHIN
1955.	INFOSYS TECHNOLOGIES LTD.	GHAZIABAD
1956.	INFOSYS TECHNOLOGIES LTD.	HYDERABAD
1957.	INFOSYS TECHNOLOGIES LTD.	JAIPUR
1958.	INFOSYS TECHNOLOGIES LTD.	JALANDHAR
1959.	INFOSYS TECHNOLOGIES LTD.	JAMMU
1960.	INFOSYS TECHNOLOGIES LTD.	KANPUR
1961.	INFOSYS TECHNOLOGIES LTD.	KANYAKUMARI
1962.	INFOSYS TECHNOLOGIES LTD.	KOLKATA
1963.	INFOSYS TECHNOLOGIES LTD.	KOTTAYAM
1964.	INFOSYS TECHNOLOGIES LTD.	MADURAI
1965.	INFOSYS TECHNOLOGIES LTD.	MANGALORE
1966.	INFOSYS TECHNOLOGIES LTD.	MANIPAL
1967.	INFOSYS TECHNOLOGIES LTD.	MOHALI
1968.	INFOSYS TECHNOLOGIES LTD.	MOODBIDRI
1969.	INFOSYS TECHNOLOGIES LTD.	MORENA
1970.	INFOSYS TECHNOLOGIES LTD.	MYSORE
1971.	INFOSYS TECHNOLOGIES LTD.	NAGPUR
1972.	INFOSYS TECHNOLOGIES LTD.	NAMAKKAL
1973.	INFOSYS TECHNOLOGIES LTD.	NOIDA

1974.	INFOSYS TECHNOLOGIES LTD.	NORRISTOWN
1975.	INFOSYS TECHNOLOGIES LTD.	PANCHKULA
1976.	INFOSYS TECHNOLOGIES LTD.	POLLACHI
1977.	INFOSYS TECHNOLOGIES LTD.	PUNE
1978.	INFOSYS TECHNOLOGIES LTD.	RANEBENNUR
1979.	INFOSYS TECHNOLOGIES LTD.	RAZOLE
1980.	INFOSYS TECHNOLOGIES LTD.	SANGLI
1981.	INFOSYS TECHNOLOGIES LTD.	SECUNDERABAD
1982.	INFOSYS TECHNOLOGIES LTD.	SINGAPORE
1983.	INFOSYS TECHNOLOGIES LTD.	THENI
1984.	INFOSYS TECHNOLOGIES LTD.	THIRUVANANTHAPURAM
1985.	INFOSYS TECHNOLOGIES LTD.	THIRUVARUR
1986.	INFOSYS TECHNOLOGIES LTD.	THRISSUR
1987.	INFOSYS TECHNOLOGIES LTD.	TIRUPUR
1988.	INFOSYS TECHNOLOGIES LTD.	TRICHUR
1989.	INFOSYS TECHNOLOGIES LTD.	TRIVANDRUM
1990.	INFOSYS TECHNOLOGIES LTD.	TUMKUR
1991.	INFOSYS TECHNOLOGIES LTD.	UTTARPARA
1992.	INFOTECH ENTERPRISES LTD.	BANGALORE
1993.	INFOTECH ENTERPRISES LTD.	HINDUPUR
1994.	INFOTECH ENTERPRISES LTD.	HYDERABAD
1995.	INFOTECH ENTERPRISES LTD.	JAGITIAL
1996.	INFOTECH ENTERPRISES LTD.	KAKINADA
1997.	INFOTECH ENTERPRISES LTD.	KOTTAYAM
1998.	INFOTECH ENTERPRISES LTD.	NOIDA
1999.	INFOTECH ENTERPRISES LTD.	SALEM
2000.	INFOTECH ENTERPRISES LTD.	TIRUNELVELI
2001.	INFOTECH ENTERPRISES LTD.	VISAKHAPATNAM
2002.	INFOTEL BROADBAND SERVICES LTD.	NAVI MUMBAI
2003.	INFOWAVES SYSTEMS PVT. LTD.	PENNADAM
2004.	INFRASOFT TECHNOLOGIES LTD.	MUMBAI
2005.	INGENIOUS NETWORK	SHARJAH
2006.	INGERSOLL RAND INTERNATIONAL LTD.	BANGALORE
2007.	INHERITX SOLUTIONS PVT. LTD.	AHMEDABAD
2008.	INNOMINDS SOFTWARE PVT. LTD.	HYDERABAD
2009.	INOX AIR PRODUCTS LTD.	PUNE
2010.	INOX INDIA LTD.	VADODARA
2011.	INPROCS ENGINEERS INDIA PVT. LTD.	UDUPI
2012.	INSPACE TECHNOLOGIES PVT. LTD.	CHENNAI
2013.	INSTITUTE FOR PLASMA RESEARCH	AHMEDABAD
2014.	INSTRUMENTATION LTD. KOTA RAJASTHAN	KOTA
2015.	INTEGRAL COMPONENT MANUFACTURES PVT. LTD.	CHENNAI
2016.	INTEGRAL RAPIDTRANZ SYSTEMS PVT. LTD.	TRICHY
2017.	INTEGRATED SPECIALIZED GEN. CONTRACTING	ABU DHABI
2018.	INTEL INDIA TECHNOLOGIES	BANGALORE
2019.	INTEL MICRON FLASH SINGAPORE	RAJAPALAYAM
2020.	INTEL MICRON FLASH SUPPORT	CHENNAI
2021.	INTEL MOBILE COMMUNICATIONS INDIA PVT.LTD.	BANGALORE
2022.	INTEL MOBILE COMMUNICATIONS INDIA PVT.LTD.	NOIDA
2023.	INTEL MOBILE COMMUNICATIONS INDIA PVT.LTD.	PALGHAT
2024.	INTEL TECHNOLOGIES INDIA PVT. LTD.	BANGALORE
2025.	INTEL TECHNOLOGIES INDIA PVT. LTD.	NAGERCOIL
2026.	INTELENET (SERCO) GLOBAL SERVICES	CHENNAI
2027.	INTELIZIGN ENGINEERING SERVICES	CHENNAI
2028.	INTELIZIGN ENGINEERING SERVICES	PUNE

2029.	INTELLIGENT SYSTEMS INTEGRATOR	CHAKULIA
2030.	INTERACTIVE REALITIES INTERNATIONAL PRIV	BANGALORE
2031.	INTERGARDEN (INDIA) PVT. LTD.	BANGALORE
2032.	INTERGLOBE TECHNOLOGIES	CHENNAI
2033.	INTERGLOBE TECHNOLOGIES SOLUTIONS PVT. LTD.	FARIDABAD
2034.	INTERGRAPH CONSULTING PVT. LTD.	HYDERABAD
2035.	INTERGRAPH CONSULTING PVT. LTD.	RANGA REDDY
2036.	INTERGRAPH CONSULTING PVT. LTD.	SECUNDERABAD
2037.	INTERMEDIA SOFTECH PVT. LTD.	BANGALORE
2038.	INTERNATIONAL AEROSPACE MANUFACTURING PR	KUMBAKONAM
2039.	INTERNATIONAL INSPECTION CENTRE WLL	KUWAIT
2040.	INTERNATIONAL TRACTOR LTD.	HOSHIARPUR
2041.	INTERNATIONAL TRACTORS LTD.	MALOUT
2042.	INTERNATIONAL TRACTORS LTD.	SHAHADARA
2043.	INTERNET DATA SERVICES (I) PVT. LTD.	BANGALORE
2044.	INTERPLEX INDIA PVT. LTD.	VADODARA
2045.	INTERTEC SYSTEMS LLC	DUBAI
2046.	INTERVET INDIA PVT.LTD.	PUNE
2047.	INTRAACTION SOFTWARE	AHMEDABAD
2048.	INTREX INTERNATIONAL INSPECTION CENTRE W	KUWAIT
2049.	INTUIT TECHNOLOGY SERVICES PVT. LTD.	BANGALORE
2050.	INVENGER TECHNOLOGIES	MANGALORE
2051.	INVENGER TECHNOLOGIES PVT. LTD.	MANGALORE
2052.	INVENTIV INTERNATIONAL PHARMA SERVICES	PUNE
2053.	INVENTIVE SOFTWARE SOLUTIONS LTD.	DHANBAD
2054.	INVISTA SINGAPORE FIBRES PTE LTD.	SINGAPORE
2055.	INVISTA SINGAPORE PTE LTD.	CHOA CHU KANG
2056.	IOT ENGINEERING PROJECTS LTD.	PALAKKAD
2057.	IP CORE SOLUTIONS (INDIA) PVT. LTD.	HYDERABAD
2058.	IP INFUSION SOFTWARE INDIA PVT. LTD.	BANGALORE
2059.	IPASS INDIA PVT. LTD.	BANGALORE
2060.	IPE PVT. LTD.	GURGAON
2061.	IPRAGMATECH SOLUTIONS PVT. LTD.	GHAZIABAD
2062.	IRON MOUNTAIN	BANGALORE
2063.	ISENSE PROWARENESS	BANGALORE
2064.	ISK SINGAPORE PTE LTD.	SANKARANKOVIL
2065.	ISMT LTD.	PUNE
2066.	ISOFT R & D PVT. LTD.	CHENNAI
2067.	ISPACE GLOBAL SOLUTIONS PVT. LT.	SECUNDERABAD
2068.	ISPAT INDUSTRIES LTD.	ALIBAGH
2069.	ISPAT INDUSTRIES LTD.	NAVI MUMBAI
2070.	ISRO SATELLITE CENTRE	BANGALORE
2071.	ISS (INDIA) CONSULTANCY SERVICES PVT. LT	BHARUCH
2072.	ITAAS INDIA PVT. LTD.	NAGERCOIL
2073.	ITC INFOTECH INDIA LTD.	BANGALORE
2074.	ITC INFOTECH INDIA LTD.	GURGAON
2075.	ITC LTD.	CHANDIGARH
2076.	ITC LTD.	DELHI
2077.	ITC LTD.	HOSUR
2078.	ITC LTD.	PUNE
2079.	ITC LTD.	SAHARANPUR
2080.	ITM O&M COMPANY LTD.	ABU DHABI
2081.	ITS DIGITECH PVT. LTD.	PUNE
2082.	ITTIAM SYSTEMS PVT. LTD.	BANGALORE
2083.	ITW INDIA LTD.	NEW DELHI

2084.	IVIZ TECHNO SOLUTIONS PVT. LTD.	PATHANAMTHITTA
2085.	IVY COMPTECH	HYDERABAD
2086.	IVY MOBILITY SOLUTIONS	CHENNAI
2087.	IWAVE SYSTEMS TECHNOLOGIES PVT. LTD.	BANGALORE
2088.	IXIA TECHNOLOGIES	BANGALORE
2089.	IXIA TECHNOLOGIES PVT. LTD.	KOLKATA
2090.	IXIA TECHNOLOGY PVT. LTD.	SALT LAKE
2091.	IZEL TECHNOLOGIES PVT. LTD.	PUNE
2092.	J PVT. MORGAN SERVICES INDIA PVT. LTD.	MUMBAI
2093.	J PVT. MORGAN SERVICES INDIA PVT. LTD.	THANE
2094.	J&K BANK	SRINAGAR
2095.	J.L.N.MEDICAL COLLEGE	AJMER
2096.	J.P. MORGAN INDIA SERVICES PVT. LTD.	KANDIVALI
2097.	J.RAY MCDERMOTT ENGINEERING SERVICES PVT.	CHENNAI
2098.	J.RAY MCDERMOTT MIDDLE EAST INC	DUBAI
2099.	JACOBS ENGINEERING	THANE
2100.	JACOBS ENGINEERING INDIA PVT. LTD.	MUMBAI
2101.	JACOBS ENGINEERING INDIA PVT. LTD.	NEW DELHI
2102.	JACOBS ENGINEERING INDIA PVT. LTD.	PUNE
2103.	JADHAO LAYLAND PVT. LTD.	AMRAVATI
2104.	JAGANNATH INSTITUTE OF MANAGEMENT SCIENCE	NEW DELHI
2105.	JAIPRAKASH ASSOCIATES LTD.	BHUJ
2106.	JAITECH PROJECT SERVICES	CHENNAI
2107.	JAPPAUL GULF ELECTROMECHANICAL LLC	DUBAI
2108.	JASHANMAL & PARTNERS LTD.	HAWALLY
2109.	JASPER INFOTECH PVT. LTD.	NOIDA
2110.	JASPER INFOTECH PVT. LTD.	UDAIPUR
2111.	JAVI SYSTEMS INDIA PVT. LTD.	BANGALORE
2112.	JAYASHREE POLYMERS PVT. LTD.	CHENNAI
2113.	JAYASHREE POLYMERS PVT. LTD.	TIRUPUR
2114.	JAYPEE GUJARAT CEMENT PLANT	BHUJ
2115.	JCB INDIA LTD.	AGRA
2116.	JCB INDIA LTD.	DELHI
2117.	JCB INDIA LTD.	FARIDABAD
2118.	JCB INDIA LTD.	GHAZIABAD
2119.	JCB INDIA LTD.	NEW DELHI
2120.	JCB INDIA LTD.	TUNDLA
2121.	JCB MANUFACTURING LTD.	PUNE
2122.	JCF FLUID FLOW FZE	HAMRIYAH
2123.	JDA SOFTWARE INDIA PVT. LTD.	BANGALORE
2124.	JDA SOFTWARE INDIA PVT. LTD.	KARIMNAGAR
2125.	JETAVI ENGINEERING PVT. LTD.	BANGALORE
2126.	JINDAL STAINLESS LTD.	HISAR
2127.	JINDAL STEEL & POWER LTD.	RAIGARH
2128.	JK WHITE CEMENT WORKS	GOTAN
2129.	JNS INSTRUMENTS LTD.	NEW DELHI
2130.	JOHN CRANE MIDDLE EAST & AFRICA	DUBAI
2131.	JOHN CRANE SINGAPORE PTE LTD.	SINGAPORE
2132.	JOHN DEERE EQUIPMENT PVT. LTD.	PIMPRI
2133.	JOHN DEERE EQUIPMENT PVT. LTD.	PUNE
2134.	JOHN DEERE INDIA PVT. LTD.	BIJAPUR
2135.	JOHN DEERE INDIA PVT. LTD.	NAGAPATTINAM
2136.	JOHN DEERE INDIA PVT. LTD.	PUNE
2137.	JOHN DEERE INDIA PVT. LTD.	SECUNDERABAD
2138.	JOHNSON & JOHNSON LTD.	MUMBAI

2139.	JOHNSON CONTROLS INDIA PVT. LTD.	PUNE
2140.	JOHNSON ELECTRIC INTERNATIONAL LTD.	TIN SHUI WAI
2141.	JOHNSON ELECTRIC PVT. LTD.	CHENNAI
2142.	JONES LANG LASALLE MEGHRAJ	TIRUNELVELI
2143.	JOSEPH EYE HOSPITAL	TRICHY
2144.	JP MORGAN CHASE INDIA PVT. LTD.	HYDERABAD
2145.	JP MORGAN CHASE INDIA PVT. LTD.	MUMBAI
2146.	JP MORGAN CHASE INDIA PVT. LTD.	NEW DELHI
2147.	JP MORGAN CHASE INDIA PVT. LTD.	SECUNDERABAD
2148.	JP MORGAN CHASE INDIA PVT. LTD.	TANUKU
2149.	JP MORGAN SERVICES INDIA PVT. LTD.	BANGALORE
2150.	JP MORGAN SERVICES INDIA PVT. LTD.	BHUBANESWAR
2151.	JP MORGAN SERVICES INDIA PVT. LTD.	HYDERABAD
2152.	JS AUTOCAST FOUNDRY INDIA PVT.LTD.	COIMBATORE
2153.	JSL LTD.	HISAR
2154.	JSOFT SOLUTIONS LTD.	BANGALORE
2155.	JSOFT SOLUTIONS LTD.	PILANI
2156.	JSW ENERGY LTD.	BELLARY
2157.	JSW ISPAT STEELS LTD.	NAVI MUMBAI
2158.	JSW STEEL LTD.	BELLARY
2159.	JSW STEEL LTD.	SALEM
2160.	JSW STEEL LTD.	TORANAGALLU
2161.	JTEKT SONA AUTOMOTIVE INDIA LTD.	REWARI
2162.	JUMA AL MAJID EST	TRICHY
2163.	JUNIPER NETWORKS INDIA PVT. LTD.	BANGALORE
2164.	JUNIPER NETWORKS INDIA PVT. LTD.	BODINAYAKANUR
2165.	JUNIPER NETWORKS INDIA PVT. LTD.	CHIDAMBARAM
2166.	JUNIPER NETWORKS INDIA PVT. LTD.	KRISHNAGIRI
2167.	JURONG ENGINEERING LTD.	SINGAPORE
2168.	JURONG SHIPYARD PTE LTD.	SINGAPORE
2169.	K.A.PRECISION ENGINEERING	COIMBATORE
2170.	KABRA EXTRUSIONTECHNIK LTD.	VAPI
2171.	KALIDO INTERNATIONAL LLC	BANGALORE
2172.	KALYANI GERDAU STEELS LTD.	BELLARY
2173.	KALYANI TECHNOLOGIES LTD.	PUNE
2174.	KALYANI THERMAL SYSTEMS LTD.	PUNE
2175.	KAMAZ VECTRA MOTORS LTD.	HOSUR
2176.	KAMRANS PROCESS CONTROL	CHENNAI
2177.	KAMRANS PROCESS CONTROL	TIRUVALLUR
2178.	KAR MOBILES LTD.	COIMBATURE
2179.	KAR MOBILES LTD.(RANE GROUP)	TUMKUR
2180.	KASEYA SOFTWARE INDIA PVT. LTD.	BANGALORE
2181.	KASTURI & SONS - THE HINDU	CHENNAI
2182.	KATURI MEDICAL COLLEGE & HOSPITAL	GUNTUR
2183.	KAVVERI TELECOM PRODUCTS LTD.	BANGALORE
2184.	KAVVERI TELECOM PRODUCTS LTD.	HOSUR
2185.	KAYS TECHNOLOGIES	ZIRAKPUR
2186.	KCC ENGINEERING & CONTRACTING CO WLL	CHENNAI
2187.	KEANE INDIA PVT. LTD.	BANGALORE
2188.	KEANE INDIA PVT. LTD.	CHENNAI
2189.	KEANE INDIA PVT. LTD.	GURGAON
2190.	KEANE INDIA PVT. LTD.	MIYAPUR
2191.	KEANE INDIA PVT. LTD.	TIRUNELVELI
2192.	KEC INTERNATIONAL	ABU DHABI
2193.	KENEXA TECHNOLOGIES PVT. LTD.	VISAKHAPATNAM

2194.	KENNAMETAL INDIA LTD.	BANGALORE
2195.	KENTZ OVERSEAS LTD.	MANGAF
2196.	KERN LEARNING SOLUTIONS	SECUNDERABAD
2197.	KG DESIGN SERVICES PVT. LTD.	COIMBATORE
2198.	KGHIROTEC ENGINEERING SERVICES PVT. LTD.	COIMBATORE
2199.	KING ABDULLAH UNIVERSITY OF SCIENCE &	JEDDAH
2200.	KIRLOSKAR BROTHERS LTD.	NAVI MUMBAI
2201.	KIRLOSKAR BROTHERS LTD.	PUNE
2202.	KIRLOSKAR OIL ENGINES LTD.	BELGAUM
2203.	KIRLOSKAR OIL ENGINES LTD.	GOKAK
2204.	KIRLOSKAR OIL ENGINES LTD.	KOLHAPUR
2205.	KLA TENCOR SOFTWARE INDIA PVT. LTD.	CHENNAI
2206.	KLA TENCOR SOFTWARE INDIA PVT. LTD.	KANNUR
2207.	KNEXIR CONSULTANT PVT. LTD.	NAVI MUMBAI
2208.	KNOWLEDGE WORKS IT CONSULTING PVT. LTD.	BANGALORE
2209.	KODIAK NETWORKS INDIA PVT. LTD.	BANGALORE
2210.	KOMATSU INDIA PVT. LTD.	NAGAPATTINAM
2211.	KOMOS AUTOMOTIVE INDIA PVT. LTD.	CHENNAI
2212.	KONE ELEVATOR INDIA PVT. LTD.	CHENNAI
2213.	KONE ELEVATOR INDIA PVT. LTD.	THIRUVALLUR
2214.	KONG HWEE IRON WORKS & CONST. PTE LTD.	CHENNAI
2215.	KOREA PLANT SERVICE & ENGINEERING	UDAIPUR
2216.	KOREA PLANT SERVICE & ENGINEERING	WARAORA
2217.	KORES INDIA LTD.	PUNE
2218.	KOSTAL NTTF AUTOMOTIVE INDIA PVT.LTD.	VELLORE
2219.	KOTAK LIFE INSURANCE	MUMBAI
2220.	KPIT CUMMINS INFOSYSTEMS LTD.	BANGALORE
2221.	KPIT CUMMINS INFOSYSTEMS LTD.	KARKALA
2222.	KPIT CUMMINS INFOSYSTEMS LTD.	KOTTAYAM
2223.	KPIT CUMMINS INFOSYSTEMS LTD.	LONAVLA
2224.	KPIT CUMMINS INFOSYSTEMS LTD.	NAGPUR
2225.	KPIT CUMMINS INFOSYSTEMS LTD.	NELLORE
2226.	KPIT CUMMINS INFOSYSTEMS LTD.	PALANI
2227.	KPIT CUMMINS INFOSYSTEMS LTD.	PUNE
2228.	KPIT CUMMINS INFOSYSTEMS LTD.	RAMANATHAPURAM
2229.	KRAFTWERK ENGINEERS PVT. LTD.	CHENNAI
2230.	KRITI INDUSTRIES (I) LTD.	INDORE
2231.	KROHNE MARSHALL PVT.LTD.	PUNE
2232.	KRONOS SOLUTIONS INDIA PVT. LTD.	GHAZIABAD
2233.	KRONOS SOLUTIONS INDIA PVT. LTD.	LUCKNOW
2234.	KSB MIDDLE EAST FZE	DUBAI
2235.	KSK ENERGY VENTURES	HYDERABAD
2236.	KSPG AUTOMOTIVE INDIA PVT. LTD.	AURANGABAD
2237.	KULIZA TECHNOLOGIES PVT. LTD.	AHORE
2238.	KUMAR PROCESS CONSULTANTS & CHEMICALS PVT. LTD.	MUMBAI
2239.	KYUNGSHIN INDUSTRIAL MOTHERSON LTD.	CHENNAI
2240.	L&T INFOTECH LTD.	BARODA
2241.	L&T INFOTECH LTD.	CHENNAI
2242.	L&T INFOTECH LTD.	CHENNAI
2243.	L&T INFOTECH LTD.	KUSHALNAGAR
2244.	L&T INFOTECH LTD.	NANDIGAMA
2245.	L&T INFOTECH LTD.	PUNE
2246.	L&T INFOTECH LTD.	TAMLUK
2247.	L&T INFOTECH LTD.	TENALI
2248.	L&T INFOTECH LTD.	TRICHY
		VILLUPURAM

2249.	L&T INTEGRATED ENGINEERING SERVICES	KANNUR
2250.	L&T INTEGRATED ENGINEERING SERVICES	VADODARA
2251.	L&T KOMATSU	COIMBATORE
2252.	L&T MHI BOILERS PVT. LTD.	CHENNAI
2253.	L&T MHI BOILERS PVT. LTD.	SURAT
2254.	L&T MHI BOILERS PVT. LTD.	TRICHY
2255.	L&T MODULAR FABRICATION YARD LLC	SOHAR
2256.	L&T VALDEL ENGINEERING LTD.	CHENNAI
2257.	L&T-MHI BOILERS PVT. LTD.	MUMBAI
2258.	L.V. PRASAD EYE INSTITUTE	HYDERABAD
2259.	LAFARGE INDIA PVT. LTD.	VRIDDHACHALAM
2260.	LAKHOZ BETTER LIVING	BAREILLY
2261.	LAKSHMI CARD CLOTHING MFG CO. PVT. LTD.	COIMBATORE
2262.	LAKSHMI MACHINE WORKS LTD.	DHARMAPURI
2263.	LAKSHMI PRECISION SCREWS LTD.	FARIDABAD
2264.	LAMPRELL ENERGY LTD.	DUBAI
2265.	LAMPRELL ENERGY LTD.	JEBEL ALI
2266.	LANCO ANPARA POWER LTD.	KANPUR
2267.	LANCO INFRATECH LTD.	ALLAHABAD
2268.	LANCO INFRATECH LTD.	DELHI
2269.	LANCO INFRATECH LTD.	GURGAON
2270.	LANCO INFRATECH LTD.	HYDERABAD
2271.	LANXESS BUTYL PTE LTD.	SINGAPORE
2272.	LAROSA HARDWARE & EQUIPMENT CO. LTD.	SHARJAH
2273.	LARSEN & TOUBRO (OMAN) LLC	MUSCAT
2274.	LARSEN & TOUBRO ATCO SAUDI	DAMMAM
2275.	LARSEN & TOUBRO ELECTROMECH LLC	RUWI
2276.	LARSEN & TOUBRO INFOTECH LTD.	BANGALORE
2277.	LARSEN & TOUBRO INFOTECH LTD.	MUMBAI
2278.	LARSEN & TOUBRO INFOTECH LTD.	NAVI MUMBAI
2279.	LARSEN & TOUBRO INFOTECH LTD.	SALEM
2280.	LARSEN & TOUBRO LTD.	AHMEDABAD
2281.	LARSEN & TOUBRO LTD.	AHMEDNAGAR
2282.	LARSEN & TOUBRO LTD.	AKOLA
2283.	LARSEN & TOUBRO LTD.	AMRAVATI
2284.	LARSEN & TOUBRO LTD.	ANGUL
2285.	LARSEN & TOUBRO LTD.	ANPARA
2286.	LARSEN & TOUBRO LTD.	ASANSOL
2287.	LARSEN & TOUBRO LTD.	BALLIA
2288.	LARSEN & TOUBRO LTD.	BALLY
2289.	LARSEN & TOUBRO LTD.	BAREILLY
2290.	LARSEN & TOUBRO LTD.	BARODA
2291.	LARSEN & TOUBRO LTD.	BELLARY
2292.	LARSEN & TOUBRO LTD.	BHAGALPUR
2293.	LARSEN & TOUBRO LTD.	BHUBANESWAR
2294.	LARSEN & TOUBRO LTD.	BILASPUR
2295.	LARSEN & TOUBRO LTD.	BURDWAN
2296.	LARSEN & TOUBRO LTD.	CHAKDAHA
2297.	LARSEN & TOUBRO LTD.	CHANDAULI
2298.	LARSEN & TOUBRO LTD.	CHANDRAPUR
2299.	LARSEN & TOUBRO LTD.	CHIRALA
2300.	LARSEN & TOUBRO LTD.	CHITTORGARH
2301.	LARSEN & TOUBRO LTD.	COIMBATORE
2302.	LARSEN & TOUBRO LTD.	DAWAKA
2303.	LARSEN & TOUBRO LTD.	DELHI

2304.	LARSEN & TOUBRO LTD.	DURG
2305.	LARSEN & TOUBRO LTD.	ERODE
2306.	LARSEN & TOUBRO LTD.	GANDHINAGAR
2307.	LARSEN & TOUBRO LTD.	GHAZIABAD
2308.	LARSEN & TOUBRO LTD.	GORAKHPUR
2309.	LARSEN & TOUBRO LTD.	GUDIVADA
2310.	LARSEN & TOUBRO LTD.	GWALIOR
2311.	LARSEN & TOUBRO LTD.	HYDERABAD
2312.	LARSEN & TOUBRO LTD.	JAMSHEDPUR
2313.	LARSEN & TOUBRO LTD.	KANCHIPURAM
2314.	LARSEN & TOUBRO LTD.	KOLKATA
2315.	LARSEN & TOUBRO LTD.	KORBA
2316.	LARSEN & TOUBRO LTD.	LUCKNOW
2317.	LARSEN & TOUBRO LTD.	MADURAI
2318.	LARSEN & TOUBRO LTD.	MAHISHADAL
2319.	LARSEN & TOUBRO LTD.	MANGALORE
2320.	LARSEN & TOUBRO LTD.	MANKUNDU
2321.	LARSEN & TOUBRO LTD.	MYSORE
2322.	LARSEN & TOUBRO LTD.	NAGERCOIL
2323.	LARSEN & TOUBRO LTD.	NAGPUR
2324.	LARSEN & TOUBRO LTD.	NAMAKKAL
2325.	LARSEN & TOUBRO LTD.	NEW DELHI
2326.	LARSEN & TOUBRO LTD.	NEW MUMBAI
2327.	LARSEN & TOUBRO LTD.	PALAKKAD
2328.	LARSEN & TOUBRO LTD.	PANCHKULA
2329.	LARSEN & TOUBRO LTD.	PATNA
2330.	LARSEN & TOUBRO LTD.	PIMPRI
2331.	LARSEN & TOUBRO LTD.	PONDICHERRY
2332.	LARSEN & TOUBRO LTD.	RAJPURA
2333.	LARSEN & TOUBRO LTD.	ROURKELA
2334.	LARSEN & TOUBRO LTD.	SHARJAH
2335.	LARSEN & TOUBRO LTD.	SINGRAULI
2336.	LARSEN & TOUBRO LTD.	SONEBHADRA
2337.	LARSEN & TOUBRO LTD.	THANE
2338.	LARSEN & TOUBRO LTD.	THANJAVUR
2339.	LARSEN & TOUBRO LTD.	THENI
2340.	LARSEN & TOUBRO LTD.	THIRUMANGALAM
2341.	LARSEN & TOUBRO LTD.	THIRUTHANGAL
2342.	LARSEN & TOUBRO LTD.	TIRUNELVELLI
2343.	LARSEN & TOUBRO LTD.	TIRUPATHI
2344.	LARSEN & TOUBRO LTD.	TIRUVANNAMALAI
2345.	LARSEN & TOUBRO LTD.	TRICHIRAPPALLI
2346.	LARSEN & TOUBRO LTD.	TRICHY
2347.	LARSEN & TOUBRO LTD.	UTTARPARA
2348.	LARSEN & TOUBRO LTD.	VASCO
2349.	LARSEN & TOUBRO LTD.	VELLORE
2350.	LARSEN & TOUBRO LTD.	VISAKHAPATNAM
2351.	LARSEN & TOUBRO LTD.	VYARA
2352.	LASER SHAVING INDIA PVT. LTD.	CHENNAI
2353.	LASHRON TECHNOLOGIES	CHENNAI
2354.	LATA POWER CONTROL ENGINEERS P. LTD.	NASIK
2355.	LATHA HOSPITAL	KOVILPATTI
2356.	LAVA INTERNATIONAL LTD.	NOIDA
2357.	LAVA INTERNATIONAL LTD.	SAHIBABAD
2358.	LAVASA CORPORATION LTD.	PUNE

2359.	LEAP NETWORKS PTE LTD.	SINGAPORE
2360.	LEAR AUTOMOTIVE INDIA PVT. LTD.	PUNE
2361.	LEEBOY INDIA CONSTRUCTION EQUIP PVT. LTD.	BANGALORE
2362.	LEFEBVRE ENGINEERING	SHARJAH
2363.	LEXMARK INDIA PVT. LTD.	KOLKATA
2364.	LG ELECTRONICS INDIA PVT. LTD.	CHENNAI
2365.	LG ELECTRONICS INDIA PVT. LTD.	DELHI
2366.	LG ELECTRONICS INDIA PVT. LTD.	GHAZIABAD
2367.	LG ELECTRONICS INDIA PVT. LTD.	GREATER NOIDA
2368.	LG ELECTRONICS INDIA PVT. LTD.	SHIRUR
2369.	LG SOFT INDIA PVT. LTD.	BANGALORE
2370.	LG SOFT INDIA PVT. LTD.	MOHALI
2371.	LG SOFT INDIA PVT. LTD.	SHIMOGA
2372.	LG SOFT INDIA PVT. LTD.	TRICHY
2373.	LIFECCELL INTERNATIONAL PVT. LTD.	CHENNAI
2374.	LINDE ENGINEERING INDIA PVT. LTD.	VADODARA
2375.	LINGUANEXT TECHNOLOGIES PVT. LTD.	PUNE
2376.	LINKEDIN	NEW DELHI
2377.	LIONBRIDGE TECHNOLOGIES PVT. LTD.	CHENNAI
2378.	LIONBRIDGE TECHNOLOGIES PVT. LTD.	MUMBAI
2379.	LIQUIDHUB INDIA PVT.LTD.	HYDERABAD
2380.	LISTER TECHNOLOGIES PVT. LTD.	CHENNAI
2381.	LIVEWIRE MOBILE (NMS COMMUNICATIONS)	BANGALORE
2382.	LLOYD'S REGISTER ASIA	NAVI MUMBAI
2383.	LM WIND POWER TECHNOLOGIES IND. PVT. LTD.	BANGALORE
2384.	LM WIND POWER TECHNOLOGIES INDIA PVT. LTD.	HASSAN
2385.	LMS INDIA ENGINEERING SOLUTIONS PVT. LTD.	CHENNAI
2386.	LMT (INDIA) PVT. LTD.	CHENNAI
2387.	LNK TECHNOLOGY PVT. LTD.	CHENNAI
2388.	LNK TECHNOLOGY PVT. LTD.	VIRUDHUNAGAR
2389.	LOCUZ ENTERPRISE SOLUTIONS	CHENNAI
2390.	LODESTONE SOFTWARE SERVICES PVT. LTD.	AHMEDABAD
2391.	LODESTONE SOFTWARE SERVICES PVT. LTD.	BANGALORE
2392.	LODESTONE SOFTWARE SERVICES PVT. LTD.	CHENNAI
2393.	LODESTONE SOFTWARE SERVICES PVT. LTD.	MYSORE
2394.	LODESTONE SOFTWARE SERVICES PVT. LTD.	VILLUPURAM
2395.	LOGITECH ENGINEERING & DESIGNS INDIA LTD.	BANGALORE
2396.	LOGITECH ENGINEERING & DESIGNS INDIA LTD.	CHENNAI
2397.	LOKESH MACHINES LTD.	HYDERABAD
2398.	LOYLOGIC TECHNOLOGIES INDIA PVT. LTD.	PUNE
2399.	LSI INDIA RESEARCH & DEVELOPMENT PVT. LTD.	BANGALORE
2400.	LUCAS TVS LTD.	DHARMAPURI
2401.	LUCAS TVS LTD.	PONDICHERRY
2402.	LUCAS TVS LTD.	REWARI
2403.	LUCAS TVS LTD.	TRICHY
2404.	LUCAS TVS LTD.	VILLUPURAM
2405.	LUCAS-TVS LTD.	CHENNAI
2406.	LUCENT TECHNOLOGIES INDIA LTD.	BANGALORE
2407.	LUCID IMAGING PVT. LTD.	BANGALORE
2408.	LUK INDIA PVT. LTD.	DHARMAPURI
2409.	LUK INDIA PVT. LTD.	HOSUR
2410.	LUK INDIA PVT. LTD.	PENNADAM
2411.	LUK INDIA PVT. LTD.	VETTAVALAM
2412.	LUMEDX HEALTHCARE TECHNOLOGIES (INDIA) PVT. LTD.	PUNE
2413.	LYCA TECHNOLOGIES SOLUTIONS PVT. LTD.	CHENNAI

2414.	MACAWBER BEEKAY PVT. LTD.	JAIPUR
2415.	MACNET ENGINEERING PVT. LTD.	CHENNAI
2416.	MACROSOFT IT SOLUTIONS INDIA PVT. LTD.	LUCKNOW
2417.	MADOX TECHNOLOGIES	BANGALORE
2418.	MADRAS CEMENTS LTD.	ALATHIYUR
2419.	MADRAS CEMENTS LTD.	ARIYALUR
2420.	MADRAS CEMENTS LTD.	CHENNAI
2421.	MADRAS CEMENTS LTD.	MADURAI
2422.	MADRAS CEMENTS LTD.	PANDALGUDI
2423.	MADRAS ENGINEERING INDUSTRIES PVT. LTD.	CHENNAI
2424.	MADRAS MEDICAL MISSION	CHENNAI
2425.	MADRAS SAF HOLLAND	MADURAI
2426.	MAERSK GLOBAL SERVICE CENTRES	CHENNAI
2427.	MAERSK GLOBAL SERVICE CENTRES	MUMBAI
2428.	MAFFEI PROJECTS INDIA PVT. LTD.	BANGALORE
2429.	MAGAL ENGG. TECH PVT. LTD.	CHENNAI
2430.	MAGMA DESIGN AUTOMATION INDIA PVT. LTD.	BANGALORE
2431.	MAGNA CLOSURES AUTOMOTIVE PVT. LTD.	CHENNAI
2432.	MAGNA INFOTECH PVT. LTD.	BANGALORE
2433.	MAGNA STEYR INDIA PVT. LTD.	PUNE
2434.	MAGNAQUEST TECHNOLOGIES LTD.	HYDERABAD
2435.	MAGNASOFT CONSULTING INDIA PVT. LTD.	THANE
2436.	MAGNETI MARELLI SKH EXHAUST SYSTEMS PVT.	CHENNAI
2437.	MAGNETI MARELLI UM ELECTRONIC SYSTEMS PVT. LTD.	GURGAON
2438.	MAHALAKSHMI INDUSTRIES	HOSUR
2439.	MAHARASHTRA NATURAL GAS LTD.	PUNE
2440.	MAHAVIR DIE CASTERS	DELHI
2441.	MAHIANDRAREVA ELECTRICALS VEHICLES PVT. LTD.	WARANGAL
2442.	MAHIDHARA PROJECTS PVT. LTD.	HYDERABAD
2443.	MAHINDRA & MAHINDRA LTD.	CHENGALPATTU
2444.	MAHINDRA & MAHINDRA LTD.	CHENNAI
2445.	MAHINDRA & MAHINDRA LTD.	COIMBATORE
2446.	MAHINDRA & MAHINDRA LTD.	DHAMPUR
2447.	MAHINDRA & MAHINDRA LTD.	HYDERABAD
2448.	MAHINDRA & MAHINDRA LTD.	KASARE
2449.	MAHINDRA & MAHINDRA LTD.	MADURAI
2450.	MAHINDRA & MAHINDRA LTD.	MEDAK
2451.	MAHINDRA & MAHINDRA LTD.	MOHALI
2452.	MAHINDRA & MAHINDRA LTD.	MUMBAI
2453.	MAHINDRA & MAHINDRA LTD.	NAGPUR
2454.	MAHINDRA & MAHINDRA LTD.	NASIK
2455.	MAHINDRA & MAHINDRA LTD.	PUNE
2456.	MAHINDRA & MAHINDRA LTD.	RAMPUR
2457.	MAHINDRA & MAHINDRA LTD.	RUDRAPUR
2458.	MAHINDRA & MAHINDRA LTD.	THANE
2459.	MAHINDRA & MAHINDRA LTD.	THENI
2460.	MAHINDRA & MAHINDRA LTD.	THIRUVALLUR
2461.	MAHINDRA & MAHINDRA LTD.	TIRUPATI
2462.	MAHINDRA & MAHINDRA LTD.	VIZIANAGARAM
2463.	MAHINDRA & MAHINDRA LTD.	ZAHEERABAD
2464.	MAHINDRA ENGINEERING SERVICES LTD.	CHENNAI
2465.	MAHINDRA ENGINEERING SERVICES LTD.	INDORE
2466.	MAHINDRA INTERNATIONAL LTD.	PUNE
2467.	MAHINDRA NAVISTAR AUTOMOTIVE LTD.	BANGALORE
2468.	MAHINDRA NAVISTAR AUTOMOTIVES LTD.	PUNE

2469.	MAHINDRA REVA ELECTRIC VEHICLES PVT. LTD.	BANGALORE
2470.	MAHINDRA REVA ELECTRIC VEHICLES PVT. LTD.	HOSUR
2471.	MAHINDRA SATYAM COMPUTER SERVICES LTD.	BANGALORE
2472.	MAHINDRA SATYAM COMPUTER SERVICES LTD.	BULANDSHAHR
2473.	MAHINDRA SATYAM COMPUTER SERVICES LTD.	CHENNAI
2474.	MAHINDRA SATYAM COMPUTER SERVICES LTD.	CHICKMAGALUR
2475.	MAHINDRA SATYAM COMPUTER SERVICES LTD.	GHAZIABAD
2476.	MAHINDRA SATYAM COMPUTER SERVICES LTD.	GUNTUR
2477.	MAHINDRA SATYAM COMPUTER SERVICES LTD.	HYDERABAD
2478.	MAHINDRA SATYAM COMPUTER SERVICES LTD.	KAKINADA
2479.	MAHINDRA SATYAM COMPUTER SERVICES LTD.	KARIMNAGAR
2480.	MAHINDRA SATYAM COMPUTER SERVICES LTD.	MADURAI
2481.	MAHINDRA SATYAM COMPUTER SERVICES LTD.	PATNA
2482.	MAHINDRA SATYAM COMPUTER SERVICES LTD.	PUNE
2483.	MAHINDRA SATYAM COMPUTER SERVICES LTD.	SECUNDERABAD
2484.	MAHINDRA TWO WHEELERS LTD.	PUNE
2485.	MAHINDRA VEHICLE MANUFACTURERS LTD.	DHULE
2486.	MAHINDRA VEHICLE MANUFACTURERS LTD.	PUNE
2487.	MAHINDRA&MAHINDRA LTD.	KANCHIPURAM
2488.	MAJESTIC PEOPLE INFOTECH	COIMBATORE
2489.	MAKEMYTRIP (INDIA) PVT. LTD.	GURGAON
2490.	MAKINO INDIA PVT. LTD.	BANGALORE
2491.	MANATEC ELECTRONICS PVT. LTD.	KANCHIPURAM
2492.	MANDO INDIA LTD.	CHENNAI
2493.	MANDO SOFTTECH INDIA PVT. LTD.	GURGAON
2494.	MANHATTAN ASSOCIATES	CHENNAI
2495.	MANHATTAN ASSOCIATES(INDIA) PVT. LTD.	BANGALORE
2496.	MAPCO LLC	ABU DHABI
2497.	MAPLES ESM TECHNOLOGIES	CHENNAI
2498.	MAPUNITY INFORMATION SERVICES PVT. LTD.	BANGALORE
2499.	MARICO LTD.	GORIMEDU
2500.	MARICO LTD.	PONDICHERRY
2501.	MARITIME INDUSTRIAL SERVICES	SHARJAH
2502.	MARLABS SOFTWARE PVT. LTD.	BANGALORE
2503.	MARS TELECOM SYSTEMS PVT. LTD.	HYDERABAD
2504.	MARUTI SUZUKI INDIA LTD.	GURGAON
2505.	MARUTI SUZUKI INDIA LTD.	KOLHAPUR
2506.	MARVELL INDIA PVT. LTD.	PUNE
2507.	MAS CALLNET INDIA PVT. LTD.	NEW DELHI
2508.	MASTEK LTD.	MUMBAI
2509.	MASTER SYS TECH PVT. LTD.	CHENNAI
2510.	MASTERS MANAGEMENT CONSULTANTS INDIA	THRISSUR
2511.	MASTERSYS TECH PVT. LTD.	PUDUCHERRY
2512.	MATRIX LABORATORIES LTD.	HYDERABAD
2513.	MATRIX LABORATORIES LTD.	SECUNDERABAD
2514.	MAVERIK VENTURES	NEW DELHI
2515.	MAXIM INDIA INTEGRATED CIRCUIT DESIGN PVT. LTD.	COIMBATORE
2516.	MAXIM INDIA INTEGRATED CIRCUITS PVT. LTD.	BANGALORE
2517.	MAYUR HOSPITAL & RESEARCH CENTRE	INDORE
2518.	MAZAGON DOCK LTD.	MUMBAI
2519.	MAZAGON DOCK LTD. MUMBAI	JABALPUR
2520.	MCAFEE SOFTWARE INDIA PVT. LTD.	ALWAR
2521.	MCAFEE SOFTWARE INDIA PVT. LTD.	AMMACHATHIRAM
2522.	MCAFEE SOFTWARE INDIA PVT. LTD.	BANGALORE
2523.	MCAFEE SOFTWARE INDIA PVT. LTD.	HYDERABAD

2524.	MCAFFEE SOFTWARE INDIA PVT. LTD.	PUNE
2525.	MCDERMOTT MIDDLE EAST INC	DUBAI
2526.	MD SYNERGY INDIA PVT. LTD.	NEW DELHI
2527.	MECON LTD.	BANGALORE
2528.	MEDICA SUPERSPECIALTY HOSPITALS	KOLKATA
2529.	MEERA & COMPANY LTD.	BATHINDA
2530.	MEERA & COMPANY LTD.	LUDHIANA
2531.	MEGA RUBBER TECHNOLOGIES PVT. LTD.	GURGAON
2532.	MEGATECH CONTROL FZCO	CHENNAI
2533.	MEGATECH CONTROL LTD.	KADAYANALLUR
2534.	MEGHMANI FINECHEM LTD.	BHARUCH
2535.	MEHRO CONSULTANTS	NEW DELHI
2536.	MEMF ETA SWITCHGEAR MANUFACTURING COMPAN	BARMER
2537.	MEMF-ETA SWITCHGEAR MANUFACTURING CO.	RIYADH
2538.	MENTOR GRAPHICS (INDIA)PVT. LTD.	VUYYURU
2539.	MENTOR GRAPHICS INDIA PVT. LTD.	HYDERABAD
2540.	MERCEDES-BENZ R&D INDIA PVT. LTD.	BANGALORE
2541.	MERCEDES-BENZ R&D INDIA PVT. LTD.	CHENNAI
2542.	MERCEDES-BENZ R&D INDIA PVT. LTD.	ERODE
2543.	MERCEDES-BENZ R&D INDIA PVT. LTD.	KOLKATA
2544.	MERCEDES-BENZ R&D INDIA PVT. LTD.	MYSORE
2545.	MERCEDES-BENZ R&D INDIA PVT. LTD.	MYSORE
2546.	MERRILL LYNCH INDIA TECHNOLOGY SERVICES	CHENNAI
2547.	MET TRADE INDIA LTD.	KUTCH
2548.	METACUBE SOFTWARE PVT. LTD.	BANGALORE
2549.	METACUBE SOFTWARE PVT. LTD.	JAIPUR
2550.	METALSA INDIA PVT. LTD.	SARAIKELA
2551.	METAMINDS SOFTWARE SOLUTIONS LTD.	HYDERABAD
2552.	METEXIM SOURCING PVT.LTD.	KANYAKUMARI
2553.	METHODE ELECTRONICS INDIA PVT. LTD.	HASSAN
2554.	METITO (OVERSEAS) LTD.	AL MAJAZ
2555.	METITO (OVERSEAS) LTD.	SHARJAH
2556.	METITO (OVERSEAS) LTD.	TRICHY
2557.	METLIFE INDIA INSURANCE	BANGALORE
2558.	METSO AUTOMATION INDIA PVT. LTD.	CHENNAI
2559.	METSO AUTOMATION INDIA PVT. LTD.	NAVI MUMBAI
2560.	METTLER TOLEDO INDIA PVT. LTD.	NAVI MUMBAI
2561.	METTLER TOLEDO TURING SOFTWARES	DINDIGUL
2562.	MHB FILTER INDIA PVT. INDIA	BANGALORE
2563.	MHB FILTER INDIA PVT. LTD.	AKKALKOT
2564.	MICHELIN INDIA TAMILNADU TYRES PVT. LTD.	CHENNAI
2565.	MICRO LABS LTD.	BANGALORE
2566.	MICROCHIP TECHNOLOGY INC	CHENNAI
2567.	MICROLAND PVT. LTD.	BANGALORE
2568.	MICROLAND PVT. LTD.	KOLAR
2569.	MICROLAND PVT. LTD.	MUMBAI
2570.	MICROMATIC GRINDING TECH. LTD.	DHAMPUR
2571.	MICROMATIC MACHINE TOOLS PVT. LTD.	COIMBATORE
2572.	MICRON SEMICONDUCTOR ASIA LTD.	SINGAPORE
2573.	MICRON SEMICONDUCTOR ASIA PVT. LTD.	CHENNAI
2574.	MICROSOFT INDIA R&D PVT. LTD.	BANGALORE
2575.	MICROSOFT INDIA R&D PVT. LTD.	DEWAS
2576.	MICROSOFT INDIA R&D PVT. LTD.	HYDERABAD
2577.	MICROSOFT INDIA R&D PVT. LTD.	JAIPUR
2578.	MICROSOFT INDIA R&D PVT. LTD.	MUMBAI

2579.	MIDAS COMMUNICATION TECHNOLOGIES	CHENNAI
2580.	MIDDLE EAST PRESTRESSING	THRISSUR
2581.	MIDDLE EAST PRESTRESSING	TIRUNELVELI
2582.	MIDEAST DATA SYSTEM-PACC	DUBAI
2583.	MINDA CORPORATION LTD.	NOIDA
2584.	MINDA INDUSTRIES LTD.	PUNE
2585.	MINDA SILCA ENGINEERING LTD.	KARNAL
2586.	MINDA SILCA ENGINEERING LTD.	NEW DELHI
2587.	MINDA STONERIDGE INSTRUMENTS LTD.	PUNE
2588.	MINDARIKA PVT. LTD.	GURGAON
2589.	MINDFIRE SOLUTIONS	BHUBANESWAR
2590.	MINDFIRE SOLUTIONS	CUTTACK
2591.	MINDFIRE SOLUTIONS	NEW DELHI
2592.	MINDGLOW TECH	PUNE
2593.	MINDSPEED TECHNOLOGIES PVT. LTD.	HYDERABAD
2594.	MINDTECK INDIA LTD.	BANGALORE
2595.	MINDTREE LTD.	ARA
2596.	MINDTREE LTD.	BANGALORE
2597.	MINDTREE LTD.	CHENNAI
2598.	MINDTREE LTD.	CUDDALORE
2599.	MINDTREE LTD.	DHARWAD
2600.	MINDTREE LTD.	HYDERABAD
2601.	MINDTREE LTD.	PUNE
2602.	MINISTRY OF HIGHER EDUCATION	SAU
2603.	MIRC ELECTRONICS LTD.	MUMBAI
2604.	MISTRAL SOLUTIONS PVT. LTD.	BANGALORE
2605.	MISYS SOFTWARE SOLUTIONS INDIA PVT. LTD.	BANGALORE
2606.	MISYS SOFTWARE SOLUTIONS INDIA PVT. LTD.	DELHI
2607.	MITCON CONSULTANCY & ENGINEERING SERVICE	PUNE
2608.	MITSUBISHI ELECTRIC SAUDI LTD.	SIVAGANGA
2609.	MKB CAST PVT. LTD.	KALPAKKAM
2610.	MMK ENTERPRISES	CHENNAI
2611.	MN MOBICULES SYSTEMS PVT. LTD.	GURGAON
2612.	MOBILY INFOTECH INDIA PVT. LTD.	SALEM
2613.	MODEL INSTITUTE OF ENGINEERING & TECHNOL	JAMMU
2614.	MODEL N INDIA SOFTWARE PVT. LTD.	HYDERABAD
2615.	MODEL N INDIA SOFTWARE PVT. LTD.	SECUNDERABAD
2616.	MODERN GULF TECHNICAL TRADING & CONTRACT	RUWI
2617.	MODERN REFRIGERATION SERVICES	SANGLI
2618.	MODINE THERMAL SYSTEMS	CHENNAI
2619.	MOLD-MASTERS TECHNOLOGIES PVT. LTD.E	COIMBATORE
2620.	MOLEX INDIA PVT. LTD.	BANGALORE
2621.	MOLEX INDIA PVT. LTD.	CHENNAI
2622.	MOOG INDIA TECHNOLOGY CENTER PVT. LTD.	BANGALORE
2623.	MOOG INDIA TECHNOLOGY CENTER PVT. LTD.	HOSUR
2624.	MORGAN STANLEY	MUMBAI
2625.	MOSER BAER INDIA LTD.	GREATER NOIDA
2626.	MOSER BAER INDIA LTD.	NEW DELHI
2627.	MOSER BAER INDIA LTD.	NOIDA
2628.	MOSERBAER INDIA LTD.	GHAZIABAD
2629.	MOSYS INDIA PVT. LTD.	HYDERABAD
2630.	MOTHERSONSUMI INFOTECH & DESIGNS LTD.	KURNOOL
2631.	MOTHERSONSUMI INFOTECH & DESIGNS LTD.	NOIDA
2632.	MOTOROLA INDIA PVT. LTD.	BANGALORE
2633.	MOTOROLA INDIA PVT. LTD.	DHARMAPURI

2634.	MOTOROLA INDIA PVT. LTD.	HYDERABAD
2635.	MOTOROLA INDIA PVT. LTD.	MASKI
2636.	MOTOROLA MOBILITY	CHENNAI
2637.	MOTOROLA MOBILITY INDIA PVT. LTD.	BANGALORE
2638.	MOTOROLA MOBILITY INDIA PVT. LTD.	CALICUT
2639.	MOTOROLA MOBILITY INDIA PVT. LTD.	MYSORE
2640.	MOTOROLA SOLUTIONS INDIA PVT. LTD.	BANGALORE
2641.	MOTOROLA SOLUTIONS INDIA PVT. LTD.	THANJAVUR
2642.	MOTOROLA SOLUTIONS INDIA PVT. LTD.	VILLUPURAM
2643.	MOTT MACDONALD LLC	ABU DHABI
2644.	MPHASIS AN HP COMPANY	BANGALORE
2645.	MPHASIS AN HP COMPANY	CHENNAI
2646.	MPHASIS AN HP COMPANY	CUDDALORE
2647.	MPHASIS AN HP COMPANY	DHARMAPURI
2648.	MPHASIS AN HP COMPANY	KANNUR
2649.	MPHASIS AN HP COMPANY	PUNE
2650.	MRF LTD.	CHENNAI
2651.	MRF LTD.	DHARMAPURI
2652.	MRF LTD.	HYDERABAD
2653.	MS TECHNOLOGY PVT. LTD.	NEW DELHI
2654.	MSD INTERNATIONAL GMBH	SINGAPORE
2655.	MTREE SOFTWARE PVT. LTD.	NOIDA
2656.	MU SIGMA BUSINESS SOLUTIONS PVT. LTD.	BANGALORE
2657.	MUHARRAQ STP BSC.	BAHRAIN
2658.	MUKAND LTD.	NAVI MUMBAI
2659.	MURATA ELECTRONICS SINGAPORE (PTE) LTD.	SINGAPORE
2660.	MURUGAPPA MORGAN THERMAL CERAMICS LTD.	CHENNAI
2661.	MUSASHI AUTO PARTS INDIA PVT.LTD.	REWARI
2662.	MUVE MULTISPECIALITY HOSPITAL	SURAT
2663.	MWH RESOURCENET INDIA PVT. LTD.	CHENNAI
2664.	MYLAN INDIA PVT.LTD.	BANGALORE
2665.	MYLAN LABORATORIES LTD.	HYDERABAD
2666.	MYSMARTPRICE WEB TECHNOLOGY PVT. LTD.	SIDDIPET
2667.	MYSORE MEDICAL COLLEGE & RESEARCH INST	MYSORE
2668.	MZOUN MECHANICAL SERVICES LLC	DUBAI
2669.	N.C.R.CORPORATION INDIA PVT. LTD.	PUDUCHERRY
2670.	N.D.MICROSYSTEM	HISAR
2671.	NAFFCO ELECTROMECHANICAL	ABU DHABI
2672.	NAGARAJUNA OIL CORPORATION LTD.	PUDUCHERRY
2673.	NAGARAJUNA OIL CORPORATION LTD.	TRICHY
2674.	NAMA MOTT MACDONALD LLC	ABU DHABI
2675.	NAMO NARAYAN INDUSTRIES	VALANCHERY
2676.	NAPINO AUTO & ELECTRONICS LTD.	FARIDABAD
2677.	NARUS NETWORKS	THIRUVALLURE
2678.	NATIONAL AEROSPACE LABORATORIES	BANGALORE
2679.	NATIONAL AIDS CONTROL ORGANISATION	NEW DELHI
2680.	NATIONAL BANK OF KUWAIT	KUWAIT
2681.	NATIONAL CENTRAL COOLING COMPANY(TABREED	DUBAI
2682.	NATIONAL CONTRACTING COMPANY	ALMUSHRIF
2683.	NATIONAL CONTRACTING COMPANY LTD.	CHENNAI
2684.	NATIONAL COUNCIL OF SCIENCE MUSEUM	KOLKATA
2685.	NATIONAL DEFENCE ACADEMY	PUNE
2686.	NATIONAL ENGINEERING INDUSTRIES LTD.	JAIPUR
2687.	NATIONAL FERTILIZERS LTD.	PANIPAT
2688.	NATIONAL INFORMATICS CENTRE	AIZAWL

2689.	NATIONAL INFORMATICS CENTRE	BANGALORE
2690.	NATIONAL INFORMATICS CENTRE	MIZORAM
2691.	NATIONAL INFORMATICS CENTRE	PANAJI
2692.	NATIONAL INFORMATICS CENTRE	PORVORIM
2693.	NATIONAL INSTRUMENTS INDIA PVT. LTD.	GUNTUR
2694.	NATIONAL INSTU. OF OPHTHALMIC SCIENCES	SELANGOR
2695.	NATIONAL PETROLEUM CONSTRUCTION CO.	ABU DHABI
2696.	NATIONAL PETROLEUM CONSTRUCTION CO.	MUSSAFFAH
2697.	NATIONAL PHYSICAL LABORATORY	NEW DELHI
2698.	NATIONAL UNIVERSITY OF SINGAPORE	CHENNAI
2699.	NAVISTAR INTERNATIONAL PVT. LTD.	SOLAPUR
2700.	NCR CORPORATION INDIA PVT. LTD.	GURGAON
2701.	NCR CORPORATION INDIA PVT. LTD.	HYDERABAD
2702.	NCR CORPORATION INDIA PVT. LTD.	NEW DELHI
2703.	NCR CORPORATION INDIA PVT. LTD.	PONDICHERRY
2704.	NCR CORPORATION INDIA PVT. LTD.	SIRKALI
2705.	NDOT TECHNOLOGIES PVT. LTD.	COIMBATORE
2706.	NDS SERVICES PAY TV TECHNOLOGY PVT. LTD.	BANGALORE
2707.	NDS SERVICES PAY TV TECHNOLOGY PVT. LTD.	BELLANDUR
2708.	NDS SERVICES PAY TV TECHNOLOGY PVT. LTD.	COCHIN
2709.	NDS SERVICES PAY TV TECHNOLOGY PVT. LTD.	GUSHKARA
2710.	NE TECHNOLOGIES PVT. LTD.	HYDERABAD
2711.	NEC HCL SYSTEM TECHNOLOGIES	NEW DELHI
2712.	NECTER LIFE SCIENCES LTD.	HYDERABAD
2713.	NEEV INFORMATION TECHNOLOGIES PVT. LTD.	NANDED
2714.	NEEYAMO ENTERPRISE SOLUTIONS PVT. LTD.	CHENNAI
2715.	NEMAK ALUMINIUM CASTINGS INDIA PVT. LTD.	CHENNAI
2716.	NEPUNE ORIENT LINES	SINGAPORE
2717.	NESS TECHNOLOGIES INDIA PVT. LTD.	BENGALURU
2718.	NESS TECHNOLOGIES INDIA PVT. LTD.	CHENNAI
2719.	NESS TECHNOLOGIES INDIA PVT. LTD.	GONDIA
2720.	NEST PVT. LTD.	KOTTAYAM
2721.	NEST PVT. LTD.	TRIVANDRUM
2722.	NESTLE R&D CENTRE INDIA PVT. LTD.	NABHA
2723.	NETAPP INDIA PVT. LTD.	BANGALORE
2724.	NETAPP INDIA PVT. LTD.	ERNAKULAM
2725.	NETAPP INDIA PVT. LTD.	KUSHALNAGAR
2726.	NETCARROTS.COM PVT. LTD.	NEW DELHI
2727.	NETCORE SOLUTIONS	BANGALORE
2728.	NETCRACKER TECHNOLOGY SOLUTIONS	HYDERABAD
2729.	NETCRACKER TECHNOLOGY SOLUTIONS	UDAIPUR
2730.	NETENRICH TECHNOLOGIES	HYDERABAD
2731.	NETLOGIC PROCESSORS INDIA PVT.LTD.	BANGALORE
2732.	NETSCOUT SYSTEMS	BANGALORE
2733.	NETWORK SYSTEMS & TECHNOLOGIES PVT. LTD.	ALLAPUZHA
2734.	NETWORK SYSTEMS & TECHNOLOGIES PVT. LTD.	KANNUR
2735.	NETWORK SYSTEMS & TECHNOLOGIES PVT. LTD.	KANYAKUMARI
2736.	NETWORK SYSTEMS & TECHNOLOGIES PVT. LTD.	THIRUVANANTHAPURAM
2737.	NETWORK SYSTEMS & TECHNOLOGIES PVT. LTD.	TRIVANDRUM
2738.	NEUDESIC INDIA PVT. LTD.	HYDERABAD
2739.	NEURON TECHNOLABS PVT. LTD.	CHANDIGARH
2740.	NEW ALLENBERRY WORKS	BULANDSHAHAR
2741.	NEWGEN SOFTWARE TECHNOLOGIES LTD.	DELHI
2742.	NEWGEN SOFTWARE TECHNOLOGIES LTD.	NOIDA
2743.	NEWPUT INFOTECH PVT. LTD.	INDORE

2744.	NEWTRONIC EQUIPMENT COMPANY PVT. LTD.	MUMBAI
2745.	NEXTEER AUTOMOTIVE INDIA PVT. LTD.	BANGALORE
2746.	NEXXOFT INFOTEL LTD.	ELURU
2747.	NH INFOMEDIA LTD.	NAGAPATTINAM
2748.	NHPC LTD.	DELHI
2749.	NI SYSTEMS INDIA PVT. LTD.	MYSORE
2750.	NIC MIT GOI	GHAZIABAD
2751.	NIELIT (FORMERLY DOEACC) SOCIETY	AIZAWL
2752.	NIHAE COMPUTER NETWORK	VISAKHAPATNAM
2753.	NIHILENT TECHNOLOGIES PVT. LTD.	PUNE
2754.	NIHON TECHNOLOGY PVT. LTD.	CHENNAI
2755.	NIIT TECHNOLOGIES	FARIDABAD
2756.	NIIT TECHNOLOGIES	NEW DELHI
2757.	NIMBEON INTERTECHNOLOGIES PVT. LTD.	COIMBATORE
2758.	NIMBEON INTERTECHNOLOGIES PVT. LTD.	MADURAI
2759.	NIMBEON INTERTECHNOLOGIES PVT. LTD.	NAMAKKAL
2760.	NIMBLE WIRELESS (PVT.) LTD.	CHENNAI
2761.	NISUM TECHNOLOGIES	HYDERABAD
2762.	NITOR INFOTECH PVT.LTD.	PUNE
2763.	NITYO INFOTECH SERVICES PVT. LTD.	RAJAHMUNDRY
2764.	N-LITE NUTRITION & HEALTH CONSULTANCY PVT. LTD.	NEW DELHI
2765.	NMSWORKS SOFTWARE PVT. LTD.	CHENNAI
2766.	NMTRONICS INDIA PVT. LTD.	BANGALORE
2767.	NMTRONICS INDIA PVT. LTD.	DELHI
2768.	NOETIX SOFTWARE INDIA PVT. LTD.	HYDERABAD
2769.	NOKIA INDIA PVT. LTD.	BANGALORE
2770.	NOKIA INDIA PVT. LTD.	CHENNAI
2771.	NOKIA INDIA PVT. LTD.	GURGAON
2772.	NOKIA INDIA PVT. LTD.	KANCHIPURAM
2773.	NOKIA INDIA PVT. LTD.	SALEM
2774.	NOKIA INDIA PVT. LTD.	TIRUVANNAMALAI
2775.	NOKIA SIEMENS NETWORKS PVT. LTD.	BANGALORE
2776.	NOKIA SIEMENS NETWORKS PVT. LTD.	CHENNAI
2777.	NOKIA SIEMENS NETWORKS PVT. LTD.	KOZHIKODE
2778.	NOKIA SIEMENS NETWORKS PVT. LTD.	PAYYANNUR
2779.	NOKIA SIEMENS NETWORKS PVT. LTD.	RAVULAPALEM
2780.	NOKIA SIEMENS NETWORKS PVT. LTD.	SHIMOGA
2781.	NOKIA SIEMENS NETWORKS PVT. LTD.	TIRUPUR
2782.	NOKIA SIEMENS NETWORKS PVT. LTD.	TRIVANDRUM
2783.	NOMURA SERVICES INDIA PVT. LTD.	NAVI MUMBAI
2784.	NORTEL NETWORKS	BANGALORE
2785.	NOV FGS SINGAPORE (PTE.) LTD.	PUDUKKOTTAI
2786.	NOVA MEDICAL CENTERS PVT. LTD.	BANGALORE
2787.	NOVARTIS SINGAPORE PHARMACUTICAL MANUFAC	SINGAPORE
2788.	NOVELL SOFTWARE DEVELOPMENT INDIA PVT. LTD.	BANGALORE
2789.	NOVELL SOFTWARE DEVELOPMENT INDIA PVT. LTD.	PANSKURA
2790.	NOVELLUS SYSTEMS INDIA PVT. LTD.	BANGALORE
2791.	NOWON TECHNOLOGIES PVT. LTD.	BANGALORE
2792.	NSHM COLLEGE OF MANAGEMENT & TECHNOLOG	HOWRAH
2793.	NSL SEZ HYD PVT. LTD.	HYDERABAD
2794.	NTN NEI MANUFACTURING INDIA PVT. LTD.	SALEM
2795.	NTPC LTD.	BARH
2796.	NTPC LTD.	CHENNAI
2797.	NTPC LTD.	RAEBARELI
2798.	NTT DATA GLOBAL DELIVERY SERVICES LTD.	CHENNAI

2799.	NTT DATA GLOBAL DELIVERY SERVICES LTD.	GHAZIABAD
2800.	NTT DATA GLOBAL DELIVERY SERVICES LTD.	TRICHY
2801.	NTT DATA GLOBAL TECHNOLOGY SERVICES PVT. LTD.	PUNE
2802.	NUCLEAR POWER CORPORATION OF INDIA LTD.	BULANDSHAHR
2803.	NUCLEAR POWER CORPORATION OF INDIA LTD.	KARWAR
2804.	NUCLEUS SOFTWARE EXPORTS LTD.	DELHI
2805.	NUCLEUS SOFTWARE EXPORTS LTD.	HAPUR
2806.	NUCLEUS SOFTWARE EXPORTS LTD.	NEW DELHI
2807.	NUCLUES SOFTWARE EXPORTS PVT. LTD.	HISSAR
2808.	NUVENTO SYSTEMS PVT. LTD.	BANGALORE
2809.	NVIDIA GRAPHICS PVT. LTD.	BANGALORE
2810.	NVIDIA GRAPHICS PVT. LTD.	HYDERABAD
2811.	NVIDIA GRAPHICS PVT. LTD.	PUNE
2812.	NXP SEMICONDUCTORS INDIA PVT. LTD.	BANGALORE
2813.	O/E/N INDIA LTD.	ERNAKULAM
2814.	OAT SYSTEMS SIPL	BANGALORE
2815.	OBOPAY INDIA PVT. LTD.	BANGALORE
2816.	OBOPAY MOBILE TECHNOLOGY INDIA PVT. LTD.	BANGALORE
2817.	OCEAN RUBBER FACTORY LLC	SHARJAH
2818.	ODESSA TECHNOLOGIES INC.	BANGALORE
2819.	OERLIKON BALZERS COATING INDIA PVT. LTD.	CHENNAI
2820.	OIL FIELD PROJECTS DEVELOPMENT CO WLL	CHENNAI
2821.	OIL FIELDS SUPPLY CENTER	DUBAI
2822.	OILTECH ENGINEERING (INDIA) PVT. LTD.	CHENNAI
2823.	OKI EUROPE LTD.	DUBAI
2824.	OLD MITTAL HOSPITAL	AJMER
2825.	OLIVE GROUP INDIA PVT. LTD.	NEW DELHI
2826.	OMAN AIRPORT MANGEMENT CO.	MUSCAT
2827.	OMAN FIBER OPTIC CO. S.A.O.G	CHENNAI
2828.	OMAN FIBER OPTIC CO. S.A.O.G	MADURAI
2829.	OMAN FIBER OPTIC CO. S.A.O.G.	MUSCAT
2830.	OMAN LNG LLC	KOTTAYAM
2831.	OMAX AUTO LTD.	LUCKNOW
2832.	OMEGA CUBE TECH SYSTEMS	MYSORE
2833.	OMNISHE INTERNATIONAL TECHNOLOGIES PVT. LTD.	CHENNAI
2834.	OMRON AUTOMATION PVT. LTD.	CHENNAI
2835.	OMRON AUTOMATION PVT. LTD.	MADURAI
2836.	OMRON AUTOMATION PVT. LTD.	PUNE
2837.	ONE97 COMMUNICATIONS LTD.	DELHI
2838.	ONLINE PRODUCTIVITY SOLUTIONS PVT. LTD.	MARGAO
2839.	ONMOBILE GLOBAL LTD.	PUNE
2840.	OPENSOURCE SOFTWARE SOLUTIONS LLP	GAUTAM BUDHA NAGER
2841.	OPERATIONAL ENERGY GROUPS INDIA PVT. LTD.	CHENNAI
2842.	OPERATIONAL ENERGY GROUPS INDIA PVT. LTD.	CUDDLALORE
2843.	OPTIMIZORY TECHNOLOGIES PVT. LTD.	NOIDA
2844.	OPTIMUM SOLUTIONS	CHENNAI
2845.	ORACLE FINANCIAL SERVICES SOFTWARE LTD.	BANGALORE
2846.	ORACLE FINANCIAL SERVICES SOFTWARE LTD.	CHENNAI
2847.	ORACLE FINANCIAL SERVICES SOFTWARE LTD.	KOTTURU
2848.	ORACLE FINANCIAL SERVICES SOFTWARE LTD.	MALLESHWARAM
2849.	ORACLE FINANCIAL SERVICES SOFTWARE LTD.	PUTTUR
2850.	ORACLE FINANCIAL SERVICES SOFTWARE LTD.	SAGARA
2851.	ORACLE FINANCIAL SERVICES SOFTWARE LTD.	SINGAPORE
2852.	ORACLE FINANCIAL SERVICES SOFTWARE LTD.	TRIVANDRUM
2853.	ORACLE FINANCIAL SERVICES SOFTWARE LTD.	WHITEFIELD

2854.	ORACLE INDIA PVT. LTD.	BANGALORE
2855.	ORACLE INDIA PVT. LTD.	BANGARAPET
2856.	ORACLE INDIA PVT. LTD.	CHENNAI
2857.	ORACLE INDIA PVT. LTD.	DELHI
2858.	ORACLE INDIA PVT. LTD.	FARIDABAD
2859.	ORACLE INDIA PVT. LTD.	GHAZIABAD
2860.	ORACLE INDIA PVT. LTD.	GUNTUR
2861.	ORACLE INDIA PVT. LTD.	HYDERABAD
2862.	ORACLE INDIA PVT. LTD.	KALYANI
2863.	ORACLE INDIA PVT. LTD.	KARNAL
2864.	ORACLE INDIA PVT. LTD.	MADURAI
2865.	ORACLE INDIA PVT. LTD.	MYSORE
2866.	ORACLE INDIA PVT. LTD.	NAGERCOIL
2867.	ORACLE INDIA PVT. LTD.	NEW DELHI
2868.	ORACLE INDIA PVT. LTD.	SECUNDERABAD
2869.	ORACLE INDIA PVT. LTD.	SHIMOGA
2870.	ORACLE INDIA PVT. LTD.	TRIVANDRUM
2871.	ORACLE INDIA PVT. LTD.	VISAKHAPATNAM
2872.	ORACLE SOLUTION SERVICES INDIA (PVT.) LTD.	BANGALORE
2873.	ORANGE BUSINESS SERVICES	GURGAON
2874.	ORANGE BUSINESS SERVICES	MUMBAI
2875.	ORBINOX INDIA PVT. LTD.	COIMBATORE
2876.	ORBIT TECHNICAL SOLUTIONSPVT. LTD.	MOHALI
2877.	ORCA RADIO SYSTEMS PVT. LTD.	BANGALORE
2878.	ORDANANCE FACTORY BOARD	KOLKATA
2879.	ORDANANCE FACTORY BOARD	THOOTHUKUDI
2880.	ORGA SYSTEMS INDIA PVT. LTD.	COOCH BEHAR
2881.	ORION PROJECT SERVICES	KOTTAYAM
2882.	OSI TECHNOLOGIES	BANGALORE
2883.	OSPYN TECHNOLOGIES	TRIVANDRUM
2884.	OTIS ELEVATOR COMPANY(I) LTD.	BANGALORE
2885.	OTIS ELEVATOR COMPANY(I) LTD.	PUNE
2886.	OTV ENGINEERING CENTRE INDIA PVT. LTD.	CHENNAI
2887.	OUTOTEC INDIA PVT. LTD.	CHINNA KARUMBUR
2888.	OUTSOURCE PARTNERS INTERNATIONAL	BANGALORE
2889.	OUTWORKS SOLUTION PVT. LTD.	NEW DELHI
2890.	OXIENT TECHNOLOGIES PVT. LTD.	SONEPAT
2891.	P L ENGINEERING LTD.	DELHI
2892.	P.P. ROLLING MILLS MFG. CO. PVT. LTD.	GHAZIABAD
2893.	PAALANA HOSPITAL	PALAKKAD
2894.	PACE MICRO TECHNOLOGY INDIA PVT. LTD.	BANGALORE
2895.	PACKETVIDEO INDIA PVT. LTD.	JIND
2896.	PALADION NETWORKS	CHENNAI
2897.	PALLAVI POWER & MINES LTD.	CUTTACK
2898.	PANACEA MEDICAL TECHNOLOGIES PVT. LTD.	ERODE
2899.	PANALFA AUTOELEKTRIK LTD.	GURGAON
2900.	PANAMAX INFOTECH LTD.	BHUJ
2901.	PARAM CREATIVE SOLUTION	KOPPAL
2902.	PARAMETRIC TECHNOLOGY CORPORATION INDIA	PUNE
2903.	PARAMOUNT COMPUTER SYSTEMS	CHENNAI
2904.	PARENTERAL DRUGS INDIA LTD.	INDORE
2905.	PAREXEL INTERNATIONAL INDIA PVT. LTD.	HYDERABAD
2906.	PARKER HANNIFIN INDIA PVT. LTD.	NAVI MUMBAI
2907.	PARSURAM ENGINEERING PIPPING WORKS	KEERANUR
2908.	PARTNERS ONLINE FZCO	DUBAI

2909.	PATEL TRADING CO. ME LLC	SHARJAH
2910.	PATNI COMPUTER SYSTEMS LTD.	BAHADURGARH
2911.	PATNI COMPUTER SYSTEMS LTD.	MUMBAI
2912.	PATNI COMPUTER SYSTEMS LTD.	NAVI MUMBAI
2913.	PAUL WURTH (I) PVT. LTD.	GRETER NOIDA
2914.	PAYODA TECHNOLOGIES PVT. LTD.	COIMBATORE
2915.	PAYODA TECHNOLOGIES PVT. LTD.	TIRUPPPUR
2916.	PAYPAL INDIA PVT. LTD.	ARAKKONAM
2917.	PAYPAL INDIA PVT. LTD.	CHENNAI
2918.	PAYPAL INDIA PVT. LTD.	TRIVANDRUM
2919.	PEARL COAST INVESTMENTS LLC	DUBAI
2920.	PEARL INSULATION MATERIAL LLC	DUBAI
2921.	PEGASYSTEMS WORLDWIDE INDIA PVT. LTD.	HYDERABAD
2922.	PENN SCHOEN BERLAND	NEW DELHI
2923.	PENSPEN INTL LTD.	ABU DHABI
2924.	PENTAIR WATER INDIA PVT. LTD.	FARIDABAD
2925.	PENTAIR WATER INDIA PVT. LTD.	NAGAPATTINAM
2926.	PENTAIR WATER INDIA PVT. LTD.	SANKHALIM
2927.	PEOPLE TECH IT CONSULTANCY PVT. LTD.	BANGALORE
2928.	PERFOMIX TECHNOLOGIES	COCHIN
2929.	PERLOS TELECOMMUNICATION & ELECTRONIC	CHENNAI
2930.	PEROT SYSTEMS	BANGALORE
2931.	PERSISTENT SYSTEMS LTD.	NAGPUR
2932.	PERSISTENT SYSTEMS LTD.	NASIK
2933.	PERSISTENT SYSTEMS LTD.	PUNE
2934.	PERSISTENT SYSTEMS LTD.	VERNA
2935.	PETROFAC EMIRATES	ABU DHABI
2936.	PETROFAC ENGINEERING	AL KHAN
2937.	PETROFAC ENGINEERING INDIA PVT. LTD.	KANCHIPURAM
2938.	PETROFAC ENGINEERING INDIA PVT. LTD.	THANE
2939.	PETROFAC INTERNATIONAL LTD.	CHENNAI
2940.	PETROFAC INTERNATIONAL UAE LLC	SHARJAH
2941.	PETROFAC SAUDI ARABIA LTD.	RATNAGIRI
2942.	PETROLEUM DEVELOPMENT OMAN	CHENNAI
2943.	PETROLEUM DEVELOPMENT OMAN	ERODE
2944.	PETRON ENGINEERING CONSTRUCTION LTD.	BILASPUR
2945.	PETROSERV LTD.	CHENNAI
2946.	PFIZER ASIA PACIFIC	SINGAPORE
2947.	PH HYDRAULICS & ENGINEERING PTE LTD.	CHENNAI
2948.	PHA INDIA PVT. LTD.	VELLORE
2949.	PHILIPS ELECTRONICS INDIA LTD.	BANGALORE
2950.	PHILIPS ELECTRONICS INDIA LTD.	NAMAKKAL
2951.	PHILIPS HEALTHCARE	BANGALORE
2952.	PHILLIPS CARBON BLACK LTD.	THRISSUR
2953.	PHOTON INFOTECH PVT. LTD.	CHENNAI
2954.	PHYSICAL RESEARCH LABORATORY	AHMEDABAD
2955.	PIAGGIO VEHICLES PVT. LTD.	BARAMATI
2956.	PIAGGIO VEHICLES PVT. LTD.	NEW DELHI
2957.	PIAGGIO VEHICLES PVT. LTD.	PUNE
2958.	PINELABS PVT. LTD.	NOIDA
2959.	PIONEER SOLUTIONS	MADURAI
2960.	PIT SOLUTIONS PVT. LTD.	NAGERCOIL
2961.	PITNEY BOWES SOFTWARE INDIA PVT. LTD.	DEHRADUN
2962.	PITNEY BOWES SOFTWARE INDIA PVT. LTD.	DELHI
2963.	PITNEY BOWES SOFTWARE INDIA PVT. LTD.	NEW DELHI

2964.	PITNEY BOWES SOFTWARE INDIA PVT. LTD.	NOIDA
2965.	PITNEY BOWES SOFTWARE INDIA PVT. LTD.	SATNA
2966.	PK ONLINE VENTURES PVT. LTD.	FARIDABAD
2967.	PL ENGINEERING LTD.	NAVI MUMBAI
2968.	PL ENGINEERING LTD.	NEW DELHI
2969.	PLANET ONLINE PVT. LTD.	KARUR
2970.	PLANOGRAPH TECHNNIQUES	COIMBATORE
2971.	PLANQUADRAT MIDDLE EAST	DUBAI
2972.	PMC PROJECTS (INDIA) PVT. LTD.	SURAT
2973.	PME POWER SOLUTIONS(INDIA)LTD.	CHANDAULI
2974.	POCLAIN HYDRAULICS	CHENNAI
2975.	POG ENG CONSULTANTS PVT. LTD.	CHENNAI
2976.	POINTRED TELECOM LTD.	BANGALORE
2977.	POLARIS FINANCIAL TECHNOLOGY LTD.	BANGALORE
2978.	POLARIS FINANCIAL TECHNOLOGY LTD.	CHENNAI
2979.	POLARIS FINANCIAL TECHNOLOGY LTD.	MADURAI
2980.	POLARIS SOFTWARE LAB LTD.	BANGALORE
2981.	POLARIS SOFTWARE LAB LTD.	BHILWARA
2982.	POLARIS SOFTWARE LAB LTD.	CHENGALPATTU
2983.	POLARIS SOFTWARE LAB LTD.	CHENNAI
2984.	POLARIS SOFTWARE LAB LTD.	CUDDALORE
2985.	POLARIS SOFTWARE LAB LTD.	HYDERABAD
2986.	POLARIS SOFTWARE LAB LTD.	NEW DELHI
2987.	POLARIS SOFTWARE LAB LTD.	PALGHAT
2988.	POLYCOM TECHNOLOGY (R&D) CENTER PVT. LTD.	ANANTHAPUR
2989.	POLYCOM TECHNOLOGY (R&D) CENTER PVT. LTD.	CHENNAI
2990.	POLYPLEX CORPORATION LTD.	UDHAMSINGH NAGAR
2991.	PONDICHERRY INSTITUTE OF MEDICAL SCIENCE	PONDICHERRY
2992.	PONDICHERRY UNIVERSITY	PUDUCHERRY
2993.	POSEDGE TECHNOLOGIES	HYDERABAD
2994.	POSOCO(WHOLLY OWNED SUBSIDIARY OF POWERG	DELHI
2995.	POTENTIAL SEMAC CONSULTANTS PVT. LTD.	CHENNAI
2996.	POWER ADVANTAGE	DUBAI
2997.	POWER BUILD LTD.	PETLAD
2998.	POWER TRANSMISSION CORPORATION OF UTTARA	KOTDWAR
2999.	POWERGRID CORPORATION OF INDIA LTD.	GURGAON
3000.	POWERGRID CORPORATION OF INDIA LTD.	GUWAHATI
3001.	POWERGRID CORPORATION OF INDIA LTD.	JORHAT
3002.	POWERMASTER ENGINEERS PVT. LTD.	KALYAN
3003.	POWERTECH ENGINEERING LLC	MUSCAT
3004.	PP INDUSTRIES PVT. LTD.	RAMPURA
3005.	PP SIMTECH SOLUTIONS LTD.	CHENNAI
3006.	PRATHAM SOFTWARE INC.	JAIPUR
3007.	PRAXAIR INDIA PVT. LTD.	CHENNAI
3008.	PRECISION AUTOMATION & ROBOTICS INDIA LTD.	RAHATA
3009.	PRECISION ENGINEERING PVT. LTD.	CHENNAI
3010.	PRECISION EQUIPMENTS CHENNAI PVT. LTD.	ERODE
3011.	PRECISION TECHSERVE PVT. LTD.	CHENNAI
3012.	PRECITEC PRECISION MACHINERIES PVT. LTD.	BANGALORE
3013.	PREETHI KITCHEN APPLIANCES	CHENNAI
3014.	PREMIER COMPOSITE TECHONOLOGIES LLC	DUBAI
3015.	PREMIER EVOLVICS PVT. LTD.	COIMBATORE
3016.	PRICEWATERHOUSE COOPERS PVT. LTD.	NAIHATI
3017.	PRICEWATERHOUSECOOPERS PVT. LTD.	BANGALORE
3018.	PRICOL LTD.	COIMBATORE

3019.	PRIME TECHNOLOGIES GROUP OF ETA	CHENNAI
3020.	PRIME TECHNOLOGIES GROUP OF ETA	DUBAI
3021.	PRINCIPAL GLOBAL SERVICES	PUNE
3022.	PRISM SOLUTIONS	CHENNAI
3023.	PRO-ACTIVE SOLUTECH (INDIA) PVT. LTD.	CHENNAI
3024.	PROCTER & GAMBLE HOME PRODUCTS LTD.	BHOPAL
3025.	PRODESIGN ENGINEERING SERVICES PVT. LTD.	BANGALORE
3026.	PRODESIGN ENGINEERING SERVICES PVT. LTD.	CHENNAI
3027.	PROFESSIONAL ACCESS PVT. LTD.	BANGALORE
3028.	PROGRESS SOFTWARE DEVELOPMENT PVT. LTD.	HYDERABAD
3029.	PROGRESSIVE INFOTECH	NEW DELHI
3030.	PROKARMA SOFTECH SOLUTIONS PVT. LTD.	CHENNAI
3031.	PROQUEST SOLUTIONS PVT. LTD.	PUNE
3032.	PROTHIOUS ENGINEERING SERVICES PVT. LTD.	CHENNAI
3033.	PSK ENGINEERING PVT. LTD.	BANGALORE
3034.	PT. AMTEK PLASTIC BATAM	BATAM
3035.	PTC SOFTWARE INDIA PVT. LTD.	AHMEDABAD
3036.	PTC SOFTWARE INDIA PVT. LTD.	PATAN
3037.	PTC SOFTWARE INDIA PVT. LTD.	PUNE
3038.	PUBMATIC INDIA PVT. LTD.	PUNE
3039.	PUNJ LLOYD	ABU DHABI
3040.	PUNJ LLOYD LTD.	GURGAON
3041.	PUNJ LLOYD LTD.	GWALIOR
3042.	PUNL LLOYD LTD.	KANYAKUMARI
3043.	PUTZMEISTER CONCRETE MACHINES PVT. LTD.	BANGALORE
3044.	QA INFOTECH PVT. LTD.	GHAZIABAD
3045.	QA INFOTECH PVT. LTD.	NOIDA
3046.	QATAR ALUMINIUM COMPANY	DOHA
3047.	QATAR ALUMINIUM COMPANY	MESAIED
3048.	QATAR ALUMINIUM COMPANY	MESAIEED
3049.	QATAR ALUMINIUM COMPANY	MESAIYEED
3050.	QATAR CHEMICALS COMPANY	DOHA
3051.	QATAR CHEMICALS COMPANY	MESAIEED
3052.	QATAR FUEL ADDITIVES COMPANY LTD.	DOHA
3053.	QATAR FUEL WOQOD	DOHA
3054.	QATAR KENTZ WLL	DOHA
3055.	QATAR PETROLEUM	BHARUCH
3056.	QATAR PETROLEUM	DOHA
3057.	QATAR PETROLEUM	MESAIEED
3058.	QATAR PETROLEUM DEVELOPMENT CO.LTD.	PUDUCHERRY
3059.	QATAR SHELL GTL	VELLORE
3060.	QATAR STEEL COMPANY	DOHA
3061.	QATARGAS OPERATING COMPANY	AL-KHOR
3062.	QATARGAS OPERATING COMPANY	DOHA
3063.	QLOGIC INDIA PVT. LTD.	PUNE
3064.	QSI HEALTHCARE PVT. LTD.	BANGALORE
3065.	QUALCOMM INDIA PVT. LTD.	BANGALORE
3066.	QUALCOMM INDIA PVT. LTD.	HYDERABAD
3067.	QUALCOMM INDIA PVT. LTD.	VANIYAMBADI
3068.	QUALITY CARE INDIA LTD.	HYDERABAD
3069.	QUALITY CARE INDIA LTD.	TRIVANDRUM
3070.	QUALITY TECHNOLOGIES PVT. LTD.	HYDERABAD
3071.	QUARK MEDIA HOUSE INDIA PVT. LTD.	CHANDIGARH
3072.	QUARK MEDIA HOUSE INDIA PVT. LTD.	MOHALI
3073.	QUARKCITY INDIA PVT. LTD.	NARAINGARH

3074.	QUARKXPRESS PUBLISHING R&D (I) PVT. LTD.	PATIALA
3075.	QUEST GLOBAL MANUFACTURING PVT. LTD.	BANGALORE
3076.	QUEST GLOBAL MANUFACTURING PVT. LTD.	GADAG
3077.	QUEST PVT. LTD.	BANGALORE
3078.	QUICKSTART RESOURCE MANAGEMENT INDIA PVT. LTD.	VADODARA
3079.	QUINNOX CONSULTANCY SERVICES LTD.	JODHPUR
3080.	QUINNOX SOLUTION PTE LTD.	SINGAPORE
3081.	QWEST TELECOM SERVICES PVT. LTD.	BANGALORE
3082.	QWEST TELECOM SERVICES PVT. LTD.	NOIDA
3083.	R SYSTEMS INTERNATIONAL LTD.	NEW DELHI
3084.	R SYSTEMS INTERNATIONAL LTD.	NOIDA
3085.	R.K.INDUSTRIES TAMILNADU PVT. LTD.	CHENNAI
3086.	RABINDRANATH TAGORE INTERNATIONAL INSTIT	KOLKATA
3087.	RADIO MOBILE ACCESS PVT. LTD.	BANGALORE
3088.	RADISYS INDIA PVT. LTD.	BANGALORE
3089.	RADISYS INDIA PVT. LTD.	MADHUGIRI
3090.	RAJSHREE HOSPITAL & RESEARCH CENTRE	INDORE
3091.	RAK STEEL LLC.	RAS AL KHAIMAH
3092.	RAKFIX LLC	RAS AL KHAIMAH
3093.	RAMCO SYSTEMS	CHENNAI
3094.	RANAL ENGINEERING SERVICES PVT. LTD.	HOSUR
3095.	RANDSTAD INDIA LTD.	KRISHNAGIRI
3096.	RANDSTAD INDIA LTD.	TUMKUR
3097.	RANE BRAKE LINING LTD.	PUDUCHERRY
3098.	RANE DIECAST LTD.	HYDERABAD
3099.	RANE DIECAST LTD.	TIRUCHIRAPPALLI
3100.	RANE MADRAS LTD.	HOSUR
3101.	RANE MADRAS LTD.	KANCHIPURAM
3102.	RANE NSK STEERING SYSTEMS LTD.	KANCHIPURAM
3103.	RANE TRW STEERING SYSTEMS LTD.	CHENNAI
3104.	RANGADORE MEMORIAL HOSPITAL	BANGALORE
3105.	RAS AL HAMARA LLC	AKOLA
3106.	RASGAS COMPANY LTD.	AL KHOR
3107.	RASGAS COMPANY LTD.	DOHA
3108.	RASGAS COMPANY LTD.	RASLAFFAN
3109.	RASHTRIYA CHEMICALS & FERTILIZERS LTD.	MUMBAI
3110.	RASHTRIYA COMPUTER SAKSHARTHA MISSION	SRINAGAR
3111.	RAVE TECHNOLOGIES PVT. LTD.	MUMBAI
3112.	RBS INDIA DEVELOPMENT CENTER	KARNAL
3113.	RBS INDIA DEVELOPMENT CENTER	KOTTAYAM
3114.	REACH1TO1 TECHNOLOGIES PVT. LTD.	INDORE
3115.	REALNETWORKS INDIA PVT. LTD.	NEW DELHI
3116.	REC WAFER SINGAPORE PTE LTD.	SINGAPORE
3117.	RECKITT BENCKISER (INDIA) LTD.	JAMMU
3118.	RED EMBEDDED CONSULTING	KOZHIKODE
3119.	RED HAT SOFTWARE SERVICES PVT. LTD.	NAVI MUMBAI
3120.	RED HAT SOFTWARE SERVICES PVT. LTD.	PUNE
3121.	REDKNEE TECHNOLOGY PVT. LMT PUNE	PUNE
3122.	REED ELSEVIER INDIA PVT. LTD.	CHENNAI
3123.	RELIANCE COMMUNICATIONS LTD.	KOLKATA
3124.	RELIANCE INDUSTRIES LTD.	JAMNAGAR
3125.	RELIANCE PORTS & TERMINALS LTD.	MUMBAI
3126.	RELIANCE TRENDS LTD.	BANGALORE
3127.	RELIAISOFT INDIA PVT. LTD.	NAGAPATTINAM
3128.	RELIGARE TECHNOLOGIES	BANGALORE

3129.	RELISYS MEDICAL DEVICES LTD.	HYDERABAD
3130.	RENAULT NISSAN AUTOMOTIVE INDIA PVT. LTD.	CHENNAI
3131.	RENAULT NISSAN AUTOMOTIVE INDIA PVT. LTD.	KANCHIPURAM
3132.	RENAULT NISSAN AUTOMOTIVE INDIA PVT. LTD.	VELLORE
3133.	RENAULT NISSAN TECHNOLOGY BUSINESS CENTRE	CHENGALPET
3134.	RENAULT NISSAN TECHNOLOGY BUSINESS CENTRE	CHENNAI
3135.	RENAULT NISSAN TECHNOLOGY BUSINESS CENTRE	DHARMAPURI
3136.	RENAULT NISSAN TECHNOLOGY BUSINESS CENTRE	KANCHIPURAM
3137.	RENAULT NISSAN TECHNOLOGY BUSINESS CENTRE	MADURAI
3138.	RENAULT NISSAN TECHNOLOGY BUSINESS CENTRE	THIRUVANNAMALAI
3139.	RENASAS MOBILE INDIA PVT. LTD.	BANGALORE
3140.	RENASAS MOBILE INDIA PVT. LTD.	CHENNAI
3141.	RENU ELECTRONICS PVT. LTD.	PUNE
3142.	RETTERI SRI KUMARAN HEALTH CENTRE	CHENNAI
3143.	REVATHI EQUIPMENT LTD.	KANCHIPURAM
3144.	RGM INTERNATIONAL GROUP OF COMPANIES	KARAMA
3145.	RIALTO ENTERPRISES PVT. LTD.	CHELLI NAGAR
3146.	RICARDO INDIA PVT. LTD.	NEW DELHI
3147.	RICO AUTO INDUSTRIES	GURGAON
3148.	RICOH INNOVATIONS PVT. LTD.	BANGALORE
3149.	RIECO IND. LTD.	PUNE
3150.	RIETER INDIA PVT. LTD.	COIMBATORE
3151.	RIVERSTONE INFOTECH PVT. LTD.	NAGERCOIL
3152.	RL INSTITUTE OF NAUTICAL SCIENCES	MADURAI
3153.	RM EDUCATION SOLUTIONS INDIA PVT. LTD.	KOTTAYAM
3154.	RNTBCI (RENAULT NISSAN ALLIANCE)	KANCHIPURAM
3155.	ROAD TRANSPORT AUTHORITY	DUBAI
3156.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	BANGALORE
3157.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	CHENNAI
3158.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	COIMBATORE
3159.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	DAVANGERE
3160.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	ERNAKULAM
3161.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	KANCHIPURAM
3162.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	KOLLAM
3163.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	PALAKKAD
3164.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	THANJAVUR
3165.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	TIRUPUR
3166.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	TRICHY
3167.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	TRIVANDRUM
3168.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	TUMKUR
3169.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	VELLORE
3170.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	VISAKHAPATNAM
3171.	ROBERT BOSCH ENGG & BUSINESS SOL LTD.	WEST GODAVARI
3172.	ROCKWELL AUTOMATION INDIA PVT. LTD.	CHENNAI
3173.	ROCKWELL AUTOMATION INDIA PVT. LTD.	VADODARA
3174.	ROCKWELL COLLINS (INDIA) ENTERPRISES PVT. Ltd.	ELURU
3175.	ROCKWELL COLLINS (INDIA) ENTERPRISES PVT. Ltd.	HYDERABAD
3176.	ROCKWELL COLLINS (INDIA) ENTERPRISES PVT. Ltd.	KARIMNAGAR
3177.	ROCKWELL COLLINS (INDIA) ENTERPRISES PVT. Ltd.	MUZAFFFARNAGAR
3178.	ROCKWELL COLLINS (INDIA) ENTERPRISES PVT. Ltd.	NARASARAOPET
3179.	ROCKWELL COLLINS (INDIA) ENTERPRISES PVT. Ltd.	NELLORE
3180.	ROCKWELL COLLINS (INDIA) ENTERPRISES PVT. Ltd.	ZAHEERABAD
3181.	ROHM & HAAS INDIA PVT. LTD.	CHENNAI
3182.	ROLLS ROYCE MARINE INDIA	MUMBAI
3183.	ROLTA INDIA LTD.	DELHI

3184.	ROLTA INDIA LTD.	NOIDA
3185.	ROOTS INDUSTRIES INDIA LTD.	COIMBATORE
3186.	ROSA POWER SUPPLY COMPANY LTD.	JHARGRAM
3187.	ROSA POWER SUPPLY COMPANY LTD.	KEONJHAR
3188.	ROSEN MIDDLE EAST FZE	DUBAI
3189.	ROSTI TECHNICAL PLASTICS (INDIA) PVT.LTD.	CHENNAI
3190.	ROULUNDS BRAKING INDIA PVT. LTD.	SONIPAT
3191.	ROYAL BANK OF SCOTLAND	CHENNAI
3192.	ROYAL BANK OF SCOTLAND	GURGAON
3193.	ROYAL BANK OF SCOTLAND	MADURAI
3194.	ROYAL BANK OF SCOTLAND	NEW DELHI
3195.	ROYAL COURT AFFAIRS	MUSCAT
3196.	ROYAL ENFIELD MOTORS LTD.	CHENNAI
3197.	ROYAL ENFIELD MOTORS LTD.	SALEM
3198.	RSB TRANSMISSION (I) LTD.	PUNE
3199.	RURAL DEVELOPMENT DEPARTMENT	JAMMU
3200.	RUWAIS FERTILIZER INDUSTRIES	ABU DHABI
3201.	S.M.TECHNOCRATS PVT.LTD.	MUMBAI
3202.	S1 SERVICES INDIA PVT. LTD.	PUNE
3203.	S2 INFOTECH PVT. LTD.	NEW DELHI
3204.	SAAKAAR FOUNDATION	NASIK
3205.	SAB MILLER INDIA	PALAKKAD
3206.	SABA SOFTWARE INDIA PVT. LTD.	MUMBAI
3207.	SABAR INSTITUE OF TECHNOLOGY FOR GIRLS	GANDHINAGAR
3208.	SABRE TRAVEL TECHNOLOGIES	BANGALORE
3209.	SAEVUS WILDLIFE INDIA LLP	MUMBAI
3210.	SAFENET INFOTECH PVT. LTD.	FARIDABAD
3211.	SAFENET INFOTECH PVT. LTD.	NEW DELHI
3212.	SAFRAN ENGINEERING SERVICES INDIA PVT. LTD.	BANGALORE
3213.	SAFRAN ENGINEERING SERVICES INDIA PVT. LTD.	COIMBATORE
3214.	SAHAJANAND LASER TECHNOLOGY LTD.	AHMEDABAD
3215.	SAHAJANAND LASER TECHNOLOGY LTD.	GANDHINAGAR
3216.	SAILPOINT TECHNOLOGIES	PUNE
3217.	SAINT GOBAIN GLASS INDIA LTD.	CHENNAI
3218.	SAINT GOBAIN GLASS INDIA LTD.	KANCHIPURAM
3219.	SAINT GOBAIN GLASS INDIA LTD.	PATHANKOT
3220.	SAINT GOBAIN GLASS INDIA LTD.	SALEM
3221.	SAINT GOBAIN GLASS INDIA LTD.	SRIPERUMBUDUR
3222.	SAINT GOBAIN GYPROC EMIRATES INDUSTRIES	ABU DHABI
3223.	SAIPEM CONTRACTING NIGERIA LTD.	KUPPAM
3224.	SAIPEM ENGINEERING SPA	KAYALPATNAM
3225.	SAIPEM INDIA PROJECTS LTD.	CHENNAI
3226.	SAIPEM S.P.A (A ENI S.P.A GROUP)	INDORE
3227.	SAIPEM SHARJAH ENGINEERING	SHARJAH
3228.	SAIRA ASIA INTERIORS PVT. LTD.	VADODARA
3229.	SAITECH ENGINEERING (THAILAND) CO.LTD.	AMPHUR
3230.	SAKSOFT LTD.	VELLORE
3231.	SALCOMP MANUFACTURING INDIA PVT. LTD.	CHENNAI
3232.	SAM GAS PROJECTS PVT. LTD.	GHAZIABAD
3233.	SAME DEUTZ FAHR INDIA PVT. LTD.	CUDDALORE
3234.	SAME DEUTZ FAHR INDIA PVT. LTD.	NAGAPATTINAM
3235.	SAMIN TEKMINZ INDIA PVT. LTD.	DELHI
3236.	SAMIN TEKMINZ INDIA PVT. LTD.	NEW DELHI
3237.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	AMBALA
3238.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	BANGALORE

3239.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	BULANDSHAHR
3240.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	CHENNAI
3241.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	DEHRADUN
3242.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	DELHI
3243.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	ERODE
3244.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	GHAZIABAD
3245.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	GURGAON
3246.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	HARDOI
3247.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	KARIMNAGAR
3248.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	KURUKSHETRA
3249.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	MEERUT
3250.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	NEW DELHI
3251.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	NEYVELI
3252.	SAMSUNG INDIA ELECTRONICS PVT. LTD.	NOIDA
3253.	SAMSUNG INDIA SOFTWARE OPERATIONS PVT. LTD.	ALLAHABAD
3254.	SAMSUNG INDIA SOFTWARE OPERATIONS PVT. LTD.	AMBALA
3255.	SAMSUNG INDIA SOFTWARE OPERATIONS PVT. LTD.	AMBUR
3256.	SAMSUNG INDIA SOFTWARE OPERATIONS PVT. LTD.	BALASORE
3257.	SAMSUNG INDIA SOFTWARE OPERATIONS PVT. LTD.	BANGALORE
3258.	SAMSUNG INDIA SOFTWARE OPERATIONS PVT. LTD.	BUNDI
3259.	SAMSUNG INDIA SOFTWARE OPERATIONS PVT. LTD.	COIMBATORE
3260.	SAMSUNG INDIA SOFTWARE OPERATIONS PVT. LTD.	GHAZIABAD
3261.	SAMSUNG INDIA SOFTWARE OPERATIONS PVT. LTD.	KARIMNAGAR
3262.	SAMSUNG INDIA SOFTWARE OPERATIONS PVT. LTD.	MYSORE
3263.	SAMSUNG INDIA SOFTWARE OPERATIONS PVT. LTD.	NASIK
3264.	SAMSUNG INDIA SOFTWARE OPERATIONS PVT. LTD.	NEW DELHI
3265.	SAMSUNG INDIA SOFTWARE OPERATIONS PVT. LTD.	ROHTAK
3266.	SAMSUNG INDIA SOFTWARE OPERATIONS PVT. LTD.	SAHARANPUR
3267.	SAMTEL COLOR LTD.	GHAZIABAD
3268.	SAMVITH TECHNOLOGIES	BANGALORE
3269.	SANDISK INDIA DEVICE DESIGN CENTER PVT. LTD.	BANGALORE
3270.	SANDVIK ASIA PVT. LTD.	PUNE
3271.	SANDVIK ASIA PVT. LTD.	VIJAYAWADA
3272.	SANDVINE TECHNOLOGIES (INDIA) PVT. LTD.	BANGALORE
3273.	SANKARA NETHRALAYA	CHENNAI
3274.	SANMAR FERROTECH LTD.	COIMBATORE
3275.	SANMINA INDIA PVT. LTD.	MADURAI
3276.	SANMINA-SCI TECHNOLOGIES INDIA PVT. LTD.	CHENNAI
3277.	SANOVI TECHNOLOGIES PVT. LTD.	BANGALORE
3278.	SANVIENS INFRATECH PVT.	GHAZIABAD
3279.	SANY HEAVY INDUSTRY INDIA PVT. LTD.	PUNE
3280.	SAP LABS INDIA PVT. LTD.	BANGALORE
3281.	SAP LABS INDIA PVT. LTD.	FARIDABAD
3282.	SAP LABS INDIA PVT. LTD.	GONIKOPAL
3283.	SAP LABS INDIA PVT. LTD.	KOLKATA
3284.	SAPA PROFILES INDIA PVT. LTD.	KUPPAM
3285.	SAPIENT CONSULTING PVT. LTD.	BANGALORE
3286.	SAPIENT CONSULTING PVT. LTD.	GHAZIABAD
3287.	SAPIENT CONSULTING PVT. LTD.	PULIYANGUDI
3288.	SAPIENT CORPORATION PVT. LTD.	BANGALORE
3289.	SAPIENT CORPORATION PVT. LTD.	CHENNAI
3290.	SAPIENT CORPORATION PVT. LTD.	GHAZIABAD
3291.	SAPIENT CORPORATION PVT. LTD.	HUBLI
3292.	SAPIENT CORPORATION PVT. LTD.	NOIDA
3293.	SAPIENT INDIA PVT. LTD.	BANGALORE

3294.	SARASWATY PRESS LTD.	KALYANI
3295.	SARGAM DIECASTINGS PVT. LTD.	KANCHIPURAM
3296.	SAS R&D INDIA PVT. LTD.	PUNE
3297.	SASKEN COMMUNICATION TECHNOLOGIES LTD.	AHMEDNAGAR
3298.	SASKEN COMMUNICATION TECHNOLOGIES LTD.	BANGALORE
3299.	SASKEN COMMUNICATION TECHNOLOGIES LTD.	HOSUR
3300.	SASKEN COMMUNICATION TECHNOLOGIES LTD.	KARIMGANJ
3301.	SASKEN COMMUNICATION TECHNOLOGIES LTD.	MAYILADUTHURAI
3302.	SATYAM COMPUTER SERVICES LTD.	BANGALORE
3303.	SATYAM COMPUTER SERVICES LTD.	CHENNAI
3304.	SATYAM COMPUTER SERVICES LTD.	HYDERABAD
3305.	SATYAM COMPUTER SERVICES LTD.	KANCHIPURAM
3306.	SATYAM COMPUTER SERVICES LTD.	ONGOLE
3307.	SATYAM COMPUTER SERVICES LTD.	VIJAYAWADA
3308.	SATYAM ENTERPRISES	GURGAON
3309.	SATYAM VENTURE ENGINEERING SERVICES PVT. LTD.	SECUNDERABAD
3310.	SAUDI CRANES & STEEL WORKS FACTORY	JUBAIL
3311.	SAUER-DANFOSS	PUNE
3312.	SAUJAS TECHNOLOGY SOLUTIONS PVT. LTD.	PUNE
3313.	SAVITRI PACKAGING INDS PVT. LTD.	GREATER NOIDA
3314.	SAYED HAMID BEHBEHANI & SONS CO.	CHENGANNUR
3315.	SAYED HAMID BEHBEHANI & SONS CO.	SHUAIBA
3316.	SCHAEFFLER GROUP - INA BEARINGS INDIA	PUNE
3317.	SCHLUMBERGER ASIA SERVICES LTD.	KULITHALAI
3318.	SCHLUMBERGER ASIA SERVICES LTD.	NAVI MUMBAI
3319.	SCHLUMBERGER ASIA SERVICES LTD.	TRIVANDRUM
3320.	SCHLUMBERGER GLOBAL SUPPORT CENTRE LTD.	PUNE
3321.	SCHLUMBERGER OVERSEAS S.A	THENI
3322.	SCHLUMBERGER TECHNOLOGY INDIA PVT. LTD.	PUNE
3323.	SCHNEIDER ELECTRIC INDIA PVT. LTD.	BANGALORE
3324.	SCHNEIDER ELECTRIC INDIA PVT. LTD.	CHAKALA
3325.	SCHNEIDER ELECTRIC INDIA PVT. LTD.	CHENNAI
3326.	SCHNEIDER ELECTRIC INDIA PVT. LTD.	DUBAI
3327.	SCHNEIDER ELECTRIC INDIA PVT. LTD.	FARIDABAD
3328.	SCHNEIDER ELECTRIC INDIA PVT. LTD.	HOSUR
3329.	SCHNEIDER ELECTRIC INDIA PVT. LTD.	HYDERABAD
3330.	SCHNEIDER ELECTRIC INDIA PVT. LTD.	KANCHIPURAM
3331.	SCHNEIDER ELECTRIC INDIA PVT. LTD.	MUSAFFAH
3332.	SCHNEIDER ELECTRIC INDIA PVT. LTD.	RANGA REDDY
3333.	SCHNEIDER ELECTRIC INDIA PVT. LTD.	SIVAGANGAI
3334.	SCHNEIDER ELECTRIC INFRASTRUCTURE LTD.	KOLKATA
3335.	SCHNEIDER ELECTRIC INFRASTRUCTURE LTD.	NASIK
3336.	SCHOTT GLASS INDIA PVT. LTD.	VADODARA
3337.	SCHWING STETTER INDIA PVT. LTD.	CHENNAI
3338.	SCHWING STETTER INDIA PVT. LTD.	KRISHNAGIRI
3339.	SCIT LTD.	INDORE
3340.	SCM MICROSYSTEMS (INDIA) PVT. LTD.	CHENNAI
3341.	SCMS SCHOOL OF TECHNOLOGY & MANAGEMENT	ALUVA
3342.	SCOPE INTERNATIONAL PVT. LTD.	ARIYALUR
3343.	SCOPE INTERNATIONAL PVT. LTD.	CHENNAI
3344.	SCOPE INTERNATIONAL PVT. LTD.	NAMAKKAL
3345.	SCOPE INTERNATIONAL PVT. LTD.	VELLORE
3346.	SD MIDDLE EAST LLC	HYDERABAD
3347.	SDF INDIA PVT. LTD.	RANIPET
3348.	SDG INDIA PVT. LTD.	FARIDABAD

3349.	SDG SOFTWARE INDIA PVT. LTD.	NEW DELHI
3350.	SDG SOFTWARE INDIA PVT. LTD.	NOIDA
3351.	SE FORGE LTD.	COIMBATORE
3352.	SEA & LAND DRILLING CONTRACTORS INC.	THANE
3353.	SEARS HOLDINGS INDIA	PUNE
3354.	SECO TOOLS INDIA PVT. LTD.	BIJNOR
3355.	SECURE METERS LTD.	UDAIPUR
3356.	SECURITY TECH ENTERPRISES	NEW DELHI
3357.	SELLA SYNERGY INDIA PVT. LTD.	CHENNAI
3358.	SEM2SYS SYSTEMS	HYDERABAD
3359.	SEMBAWANG MARINE & OFFSHORE ENGINEERIN	SINGAPORE
3360.	SEMBCORP GULF O&M COMPANY	FUJAIRAH
3361.	SEMIFI INTEGRATED TECHNOLOGIES	BANGALORE
3362.	SEN-SEI TECHNOLOGIES	BANGALORE
3363.	SERVIGISTICS DEVELOPMENT INDIA PVT. LTD.	GURGAON
3364.	SEVEN HILLS HOSPITAL	MUMBAI
3365.	SEVEN N CONSULTING PVT. LTD.	NOIDA
3366.	SEVEN SEAS COMPUTERS	DUBAI
3367.	SEVERN GLOCON INDIA PVT. LTD.	CHENNAI
3368.	SEVYA IT PVT. LTD.	HYDERABAD
3369.	SEWON VERTEX HEAVY INDUSTRY	MADURAI
3370.	SGS INDIA PVT. LTD.	CHENNAI
3371.	SHAKTI COMPONENT VENTURES PVT.LTD.	VELLORE
3372.	SHARDA UNIVERSITY	GHAZIABAD
3373.	SHARDAMOTOR PVT. LTD.	NASIK
3374.	SHARON SOLUTIONS LTD.	VIRDHUNAGAR
3375.	SHELL EASTERN PETROLEUM PTE LTD.	SINGAPORE
3376.	SHIVPAD ENGINEERS PVT. LTD.	SALEM
3377.	SHREE BAJARANGDASBAPA AROGYADHAM	RAJKOT
3378.	SHREE CEMENT LTD.	JALESWAR
3379.	SHRI SAIBABA SANSTHAN TRUST	RAHATA
3380.	SHRI. B.D MEHTA MAHAVIR HEART INSTITUTE	SURAT
3381.	SHRIJAA ENGINEERING PVT. LTD.	TUTICORIN
3382.	SHRIRAM PISTONS & RINGS LTD.	BHIWADI
3383.	SHRIRAM PISTONS & RINGS LTD.	GHAZIABAD
3384.	SHRIRAM PISTONS & RINGS LTD.	JALANDHAR
3385.	SHRIRAM PROPERTIES LTD.	BANGALORE
3386.	SHRISTI CONSULTANCY	CHENNAI
3387.	SHROFF & ASSOCIATES (ENGINEERS) PVT. LTD.	MUMBAI
3388.	SHUWEIHAT CMS INTERNATIONAL POWER COMPANY	ABU DHABI
3389.	SHUWEIHAT CMS INTERNATIONAL POWER COMPANY	SALEM
3390.	SHUWEIHAT O&M LTD.	RUWAI
3391.	SHV ENRGY PVT. LTD.	GURGAON
3392.	SIBRIDGE TECHNOLOGIES PVT. LTD.	AHMEDABAD
3393.	SIBRIDGE TECHNOLOGIES PVT. LTD.	DUNGARPUR
3394.	SIBRIDGE TECHNOLOGIES PVT. LTD.	JODHPUR
3395.	SICAME INDIA CONNECTORS PVT. LTD.	CHENNAI
3396.	SIEMENS INDUSTRY SOFTWARE INDIA PVT. LTD.	BANGALORE
3397.	SIEMENS INDUSTRY SOFTWARE INDIA PVT. LTD.	PUNE
3398.	SIEMENS INFORMATION SYSTEMS LTD.	CHENNAI
3399.	SIEMENS IT SOLUTIONS & SERVICES PVT. LTD.	DELHI
3400.	SIEMENS LLC	ABU DHABI
3401.	SIEMENS LTD.	AURANGABAD
3402.	SIEMENS LTD.	CHENNAI
3403.	SIEMENS LTD.	KANNUR

3404.	SIEMENS LTD.	KOLKATA
3405.	SIEMENS LTD.	MARGAON
3406.	SIEMENS LTD.	MUMBAI
3407.	SIEMENS LTD.	NAVI MUMBAI
3408.	SIEMENS LTD.	NEW DELHI
3409.	SIEMENS LTD.	NOIDA
3410.	SIEMENS LTD.	THANE
3411.	SIEMENS LTD.	UTTARPARA
3412.	SIEMENS PLM SOFTWARE INDIA PVT. LTD.	NAVI MUMBAI
3413.	SIEMENS POWER ENGINEERING PVT. LTD.	GHAZIABAD
3414.	SIEMENS PTE LTD.	SINGAPORE
3415.	SIEMENS TECHNOLOGY & SERVICES PVT. LTD.	BANGALORE
3416.	SIENNA ECAD TECHNOLOGIES PVT. LTD.	ERODE
3417.	SIERRA ATLANTIC SOFTWARE SERVICES LTD.	CHENNAI
3418.	SIFY TECHNOLOGIES LTD.	CHENNAI
3419.	SIFY TECHNOLOGIES LTD.	HYDERABAD
3420.	SIFY TECHNOLOGIES LTD.	JAIPUR
3421.	SIFY TECHNOLOGIES LTD.	NEW DELHI
3422.	SILICON GRAPHICS SYSTEMS INTERNATIONAL	BANGALORE
3423.	SILTRONIC SINGAPORE PTE LTD.	KANCHIPURAM
3424.	SILTRONIC SINGAPORE PTE LTD.	TAMPINES
3425.	SILVERTECH MIDDLE EAST	JABEL ALI
3426.	SINGHANIA UNIVERSITY	PILANI
3427.	SINTERCOM INDIA PVT. LTD.	SATARA
3428.	SIS TECHNOLOGIES	KANPUR
3429.	SISTEMA SHYAM TELESERIVCES LTD.(MTS)	JAIPUR
3430.	SKF INDIA LTD.	CHENNAI
3431.	SKF INDIA LTD.	HARIDWAR
3432.	SKF TECHNOLOGIES INDIA PVT. LTD.	BANGALORE
3433.	SKF TECHNOLOGIES INDIA PVT. LTD.	MYSORE
3434.	SKM AIR-CONDITIONING EQUIPMENT LLC	SHARJAH
3435.	SKODA AUTO INDIA PVT. LTD.	AURANGABAD
3436.	SKS GROUP CO W.L.L	KUWAIT
3437.	SKS SDN. BHD.	KUALA BELAIT
3438.	SLK SOFTWARE SERVICES PVT. LTD.	BANGALORE
3439.	SMART ENOVATIONS (INDIA) PVT. LTD.	VIRAJPET
3440.	SMC PNEUMATICS INDIA PVT. LTD.	NEW DELHI
3441.	SMC PNEUMATICS INDIA PVT. LTD.	NOIDA
3442.	SMI AMTEK CRANKSHAFT PVT. LTD.	ALWAR
3443.	SMILECARE DENTAL HOSPITAL	HYDERABAD
3444.	SMOE PTE LTD.	SINGAPORE
3445.	SMS INDIA PVT. LTD.	GURGAON
3446.	SMT. JAYABEN MODY HOSPITAL	WADHWAN
3447.	SN INDUSTRIAL CONSULTANTS	BANGALORE
3448.	SN INDUSTRIAL CONSULTANTS	SIRA
3449.	SNC-LAVALIN ENGINEERING INDIA PVT. LTD.	KOLKATA
3450.	SNECMA HAL AEROSPACE PVT. LTD.	BANGALORE
3451.	SNECMA HAL AEROSPACE PVT. LTD.	HINDUPUR
3452.	SNERITH ENGINEERS	CHENNAI
3453.	SOBHA CONTRACTING LLC	DUBAI
3454.	SOBHA ENGINEERING CONTRACTING LLC	DUBAI
3455.	SOCIETE GENERALE GSC PVT. LTD.	BANGALORE
3456.	SOFTCELL TECHNOLOGIES LTD.	CHENNAI
3457.	SOFTDEL PVT. LTD.	PUNE
3458.	SOFTENGER INDIA PVT. LTD.	JALGAON

3459.	SOFTWARE AG BANGALORE TECHNOLOGIES LTD.	BANGALORE
3460.	SOFTWARE ASSOCIATES	KOZHIKODE
3461.	SOFTWARE ASSOCIATES	MALAPPURAM
3462.	SOFTWARE QUALITY SYSTEMS	PATHANKOT
3463.	SOFTWARE TECHNOLOGY PARKS OF INDIA	JAIPUR
3464.	SOHAR ALUMINIUM LLC	JAMNAGAR
3465.	SOLITON TECHNOLOGIES PVT. LTD.	BANGALORE
3466.	SOLO AUTOMATIONS	BANGALORE
3467.	SONA KOYO STEERING SYSTEMS LTD.	GURGAON
3468.	SONA OKEGAWA PRECISION FORGINGS LTD.	GURGAON
3469.	SONAKOYO STEERING SYSTEMS	CHENNAI
3470.	SONATA SOFTWARE LTD.	CHENNAI
3471.	SONATA SOFTWARE LTD.	HYDERABAD
3472.	SONATA SOFTWARE LTD.	KASARAGOD
3473.	SONICWALL INFOSECURITY PVT. LTD.	BANGALORE
3474.	SONICWALL INFOSECURITY PVT. LTD.	PUNE
3475.	SONJOY ENTERPRISES	COIMBATORE
3476.	SONY ELECTRONICS (S) PTE LTD.	SINGAPORE
3477.	SONY INDIA SOFTWARE CENTRE	BANGALORE
3478.	SONY INDIA SOFTWARE COMPANY	CHENNAI
3479.	SOPRA GROUP INDIA PVT. LTD.	NEW DELHI
3480.	SOPRA INDIA PVT. LTD.	NOIDA
3481.	SOURCESOL INTERACTIVE TECHNOLOGIES PVT. LTD.	TIRUCHIRAPPALLI
3482.	SOURCETRACE SYSTEMS INDIA PVT. LTD.	COIMBATORE
3483.	SOUTHERN PETROCHEMICAL INDUSTRIES CORPOR	TUTICORIN
3484.	SOUTHERN RAILWAYS	PALAKKAD
3485.	SOWJANYA DENTAL HOSPITAL	HYDERABAD
3486.	SPACE APPLICATIONS CENTRE	AHMEDABAD
3487.	SPAN INFOTECH	BANGALORE
3488.	SPECIALISED METAL SYSTEMS	SHARJAH
3489.	SPECIALIST MEDICAL CENTRE	AJMAN
3490.	SPECIALIST SERVICES	DUBAI
3491.	SPECIALIST SERVICES	SHARJAH
3492.	SPECTRAL SERVICES CONSULTANTS PVT. LTD.	AZAMGARH
3493.	SPECTRAL SERVICES CONSULTANTS PVT. LTD.	GHAZIABAD
3494.	SPECTRAL SERVICES CONSULTANTS PVT. LTD.	KOLKATA
3495.	SPECTRIS TECHNOLOGIES PVT. LTD.	NAVI MUMBAI
3496.	SPEECH & SOFTWARE TECHNOLOGIES	CHENNAI
3497.	SPIC LTD.	CHENNAI
3498.	SPICER INDIA LTD.	HUBLI
3499.	SPICER INDIA LTD.	MUMBAI
3500.	SPICER INDIA LTD.	NAMAKKAL
3501.	SPICER INDIA LTD.	RUDRAPUR
3502.	SPICER INDIA LTD.	TIRUNELVELI
3503.	SPRY RESOURCES INDIA PVT. LTD.	HYDERABAD
3504.	SRA SYSTEMS LTD.	CHENNAI
3505.	SREE RAMCIDES CHEMICALS PVT. LTD.	CHENNAI
3506.	SREE SAKTHI PAPER MILLS LTD.	ALUVA
3507.	SREEVARI ENGINEERS PVT. LTD.	TRICHY
3508.	SREI EQUIPMENT FINANCE PVT. LTD.	NEW DELHI
3509.	SREI SAHAJ E-VILLAGE LTD.	KOLKATA
3510.	SRF LTD.	CHENNAI
3511.	SRI CHANIKYA COMPONENTS	HYDERABAD
3512.	SRI VASAVI AGENCY	TIRUVANNAMALAI
3513.	SRI VENKATESWARA INSTITUTE OF MEDICAL SC	TIRUPATI

3514.	SRISHTI SOFTWARE APPLICATIONS PVT. LT	BANGALORE
3515.	ST ERICSSON PVT. LTD.	UDUPI
3516.	ST MICROELECTRONICS PVT. LTD.	GREATER NOIDA
3517.	ST MICROELECTRONICS PVT. LTD.	GURGAON
3518.	ST MICROELECTRONICS PVT. LTD.	SINGAPORE
3519.	STANDARD CHARTERED SCOPE INTERNATIONAL	CHENNAI
3520.	STANDARD FABRICATION & ENGINEERING W	THIRUNELVELI
3521.	STAR CEMENT - ADITYA BIRLA	RAS AL KHAIMAH
3522.	STAR ELEVATOR SYSTEM&METALTECHNOLOGY	THANJAVUR
3523.	START UP FARMS IT PVT. LTD.	CHANDIGARH
3524.	STATE BANK OF INDIA	THANJAVUR
3525.	STATRON ME FZCO	DUBAI
3526.	STEEL AUTHORITY OF INDIA LTD.	KEONJHAR
3527.	STEEL EXCHANGE INDIA LTD.	SREERAMPURAM
3528.	STERIA INDIA LTD.	BHUJ
3529.	STERIA INDIA LTD.	DELHI
3530.	ST-ERICSSON INDIA PVT. LTD.	BANGALORE
3531.	ST-ERICSSON INDIA PVT. LTD.	GREATER NOIDA
3532.	STERLING & WILSON LTD.	CHENNAI
3533.	STERLING & WILSON LTD.	KALYAN
3534.	STERLING COMMERCE SOLUTIONS INDIA PVT. LTD.	BANGALORE
3535.	STERLING HOLIDAYS	VILLUPPURAM
3536.	STERLITE TECHNOLOGIES LTD.	AURANGABAD
3537.	STI SANOH INDIA LTD.	CHENNAI
3538.	STMICROELECTRONICS PVT. LTD.	NEW DELHI
3539.	STMICROELECTRONICS PVT.LTD.	PATIALA
3540.	STRIDES ARCOLAB LTD.	BANGALORE
3541.	STRYKER CORPORATION	NEW DELHI
3542.	STUDEC TECHNOLOGIES INDIA PVT. LTD.	BANGALORE
3543.	SUBEX LTD.	BANGALORE
3544.	SUBROS LTD.	DELHI
3545.	SUBROS LTD.	NOIDA
3546.	SUCCESSFACTORS AN SAP COMPANY	BANGALORE
3547.	SUHAIL BAHWAN HEALTH CARE CENTER LLC	CHENNAI
3548.	SULZER TECH INDIA PVT. LTD.	NAVI MUMBAI
3549.	SULZER TECH INDIA PVT. LTD.	PUNE
3550.	SULZER TECH INDIA PVT. LTD.	THANE
3551.	SULZER TECH INDIA PVT.LTD.	NAVI MUMBAI
3552.	SUMMUS SOFTWARE SOLUTIONS PVT. LTD.	BANGALORE
3553.	SUN KNOWLEDGE PVT. LTD.	HOWRAH
3554.	SUN MICROSYSTEMS INDIA PVT. LTD.	BANGALORE
3555.	SUNDARAM AUTO COMPONENTS LTD.	CHENNAI
3556.	SUNDARAM AUTO COMPONENTS LTD.	HOSUR
3557.	SUNDARAM AUTO COMPONENTS LTD.	MADURAI
3558.	SUNDARAM AUTO COMPONENTS LTD.	PUDHUCHERRY
3559.	SUNDARAM CLAYTON LTD.	CHENNAI
3560.	SUNDARAM CLAYTON LTD.	HOSUR
3561.	SUNDARAM CLAYTON LTD.	SALEM
3562.	SUNDARAM FASTENERS LTD.	THIRUVOTTIYUR
3563.	SUNDARAM INDUSTRIES LTD.	CHENNAI
3564.	SUNDARAM INFOTECH SOLUTIONS	CHENNAI
3565.	SUNDARAM-CLAYTON LTD.	CHENGALPET
3566.	SUNDRAM BLEISTAHL LTD.	THENI
3567.	SUNDRAM FASTENERS LTD.	CHENNAI
3568.	SUNDRAM FASTENERS LTD.	DHARMAPURI

3569.	SUNDRAM FASTENERS LTD.	HOSUR
3570.	SUNDRAM FASTENERS LTD.	MAYILADUTHURAI
3571.	SUNDRAM FASTENERS LTD.	NAMAKKAL
3572.	SUNDRAM FASTENERS LTD.	PONDICHERRY
3573.	SUNDRAM FASTENERS LTD.	SALEM
3574.	SUNDRAM FASTENERS LTD.	TRICHY
3575.	SUNGARD SOLUTIONS (INDIA) PVT. LTD.	PUNE
3576.	SUNGWOO GESTAMP HITECH(PUNE) PVT. LTD.	SATARA
3577.	SUNSERVICES FORKLIFT PARTS PVT. LTD.	CHENNAI
3578.	SUNSMART TECHNOLOGIES PVT. LTD.	CHENNAI
3579.	SUNTEC BUSINESS SOLUTIONS	TECHNOPARK
3580.	SUPER AUTO FORGE LTD.	CHENNAI
3581.	SURIN AUTOMOTIVE PVT. LTD.	BANGALORE
3582.	SUSPA PNEUMATICS INDIA PVT. LTD.	CHENNAI
3583.	SUTHERLAND GLOBAL SERVICES	VELLORE
3584.	SUZLON ENERGY GMBH	BERLIN
3585.	SUZLON ENERGY LTD.	JAISALMER
3586.	SUZLON ENERGY LTD.	NAGERCOIL
3587.	SUZLON ENERGY LTD.	PUNE
3588.	SUZLON ENERGY LTD.	SALEM
3589.	SUZLON INFRA. SERVICES LTD.	JAIPUR
3590.	SUZLON WIND INTERNATIONAL LTD.	MANGALORE
3591.	SUZUKI MOTORCYCLE INDIA PVT. LTD.	GURGAON
3592.	SUZUKI MOTORCYCLE INDIA PVT. LTD.	NEW DELHI
3593.	SWORD GLOBAL INDIA PVT. LTD.	CHENNAI
3594.	SWORKS TECHNOLOGY SOLUTIONS	CHENNAI
3595.	SYMANTEC SOFTWARE & SERVICES INDIA PVT. LTD.	CHENNAI
3596.	SYMANTEC SOFTWARE & SERVICES INDIA PVT. LTD.	COIMBATORE
3597.	SYMANTEC SOFTWARE & SERVICES INDIA PVT. LTD.	KANNUR
3598.	SYMANTEC SOFTWARE & SERVICES INDIA PVT. LTD.	NASIK
3599.	SYMANTEC SOFTWARE & SERVICES INDIA PVT. LTD.	PUNE
3600.	SYMANTEC SOFTWARE & SERVICES INDIA PVT. LTD.	TRICHY
3601.	SYMBOL TECHNOLOGIES INDIA PVT. LTD.	BANGALORE
3602.	SYMPHONY INFOSPACE INDIA PVT. LTD.	BANGALORE
3603.	SYMPHONY SERVICES CORP INDIA PVT. LTD.	BANGALORE
3604.	SYMPHONY SERVICES CORP INDIA PVT. LTD.	JALANDHAR
3605.	SYMPHONY SERVICES CORP INDIA PVT. LTD.	PUNE
3606.	SYMPHONY TELECA CORPORATION	BANGALORE
3607.	SYNAPSE LABS PVT. LTD.	PUNE
3608.	SYNECHRON TECHNOLOGIES PVT. LTD.	CHINCHWAD
3609.	SYNECHRON TECHNOLOGIES PVT. LTD.	PUNE
3610.	SYNERZIP SOFTECH INDIA PVT. LTD.	PUNE
3611.	SYNIVERSE TECHNOLOGIES SERVICE PVT. LTD.	BANGALORE
3612.	SYNOPSIS INDIA PVT. LTD.	BANGALORE
3613.	SYNTEL INTERNATIONAL PVT. LTD.	CHENNAI
3614.	SYNTEL INTERNATIONAL PVT. LTD.	ERODE
3615.	SYNTEL LTD.	COIMBATORE
3616.	SYNTEL LTD.	PUNE
3617.	SYNTEL LTD.	SALEM
3618.	SYNTHITE INDUSTRIES LTD.	THIRUNELVELI
3619.	SYSTIME GLOBAL SOLUTIONS PVT. LTD.	CHENNAI
3620.	T D WILLIAMSON INDIA LTD.	VADODARA
3621.	T&B INTERNATIONAL PVT. LTD.	CHENNAI
3622.	T3-ENERGY SERVICES ASWAN ME LLC	DUBAI
3623.	TACO HENDRICKSON SUSPENSIONS PVT. LTD.	PUNE

3624.	TADI ENGINEERING & TECHNOLOGY CONSULTING	HYDERABAD
3625.	TAEGUTEC INDIA PVT. LTD.	BANGALORE
3626.	TAJ GROUP OF HOTELS	CHENNAI
3627.	TAKE SOLUTIONS GLOBAL LLP	CHENNAI
3628.	TAKREER REFINERY	UMM AL NARR
3629.	TAL MFG SOLUTION LTD. PUNE	PUNE
3630.	TALISMA CORPORATION PVT. LTD.	BANGALORE
3631.	TALLY SOLUTIONS PVT. LTD.	BANGALORE
3632.	TAMAMOUL MOTORS	COIMBATORE
3633.	TAMILNADU NEWSPRINT & PAPERS LTD.	KARUR
3634.	TANISHI TECHNOLOGIES	JAIPUR
3635.	TARGET CORPORATION INDIA PVT. LTD.	BANGALORE
3636.	TARGET CORPORATION INDIA PVT. LTD.	BELGAUM
3637.	TATA ADVANCED MATERIALS LTD.	BANGALORE
3638.	TATA AUTOCOMP SYSTEMS LTD.	PUNE
3639.	TATA BUSINESS SUPPORT SERVICES LTD.	BEGUMPET
3640.	TATA BUSINESS SUPPORT SERVICES LTD.	HYDERABAD
3641.	TATA COMMUNICATIONS LTD.	CHENNAI
3642.	TATA COMMUNICATIONS LTD.	HOWRAH
3643.	TATA COMMUNICATIONS LTD.	HYDERABAD
3644.	TATA COMMUNICATIONS LTD.	NAVI MUMBAI
3645.	TATA CONSULTANCY SERVICES LTD.	ANGUL
3646.	TATA CONSULTANCY SERVICES LTD.	BANGALORE
3647.	TATA CONSULTANCY SERVICES LTD.	BASAVANAGUDI
3648.	TATA CONSULTANCY SERVICES LTD.	CHENNAI
3649.	TATA CONSULTANCY SERVICES LTD.	COIMBATORE
3650.	TATA CONSULTANCY SERVICES LTD.	DAVANGERE
3651.	TATA CONSULTANCY SERVICES LTD.	DEHRADUN
3652.	TATA CONSULTANCY SERVICES LTD.	DEHUGAON
3653.	TATA CONSULTANCY SERVICES LTD.	DELHI
3654.	TATA CONSULTANCY SERVICES LTD.	DINDIGUL
3655.	TATA CONSULTANCY SERVICES LTD.	DOMBIVLI
3656.	TATA CONSULTANCY SERVICES LTD.	DURGAPUR
3657.	TATA CONSULTANCY SERVICES LTD.	ERNAKULAM
3658.	TATA CONSULTANCY SERVICES LTD.	ERODE
3659.	TATA CONSULTANCY SERVICES LTD.	GANDHINAGAR
3660.	TATA CONSULTANCY SERVICES LTD.	GHAZIABAD
3661.	TATA CONSULTANCY SERVICES LTD.	GREATER NOIDA
3662.	TATA CONSULTANCY SERVICES LTD.	GURGAON
3663.	TATA CONSULTANCY SERVICES LTD.	GWALIOR
3664.	TATA CONSULTANCY SERVICES LTD.	HANUMANGARH
3665.	TATA CONSULTANCY SERVICES LTD.	HASSAN
3666.	TATA CONSULTANCY SERVICES LTD.	HAZARIBAGH
3667.	TATA CONSULTANCY SERVICES LTD.	HISAR
3668.	TATA CONSULTANCY SERVICES LTD.	HOSUR
3669.	TATA CONSULTANCY SERVICES LTD.	HYDERABAD
3670.	TATA CONSULTANCY SERVICES LTD.	JAIPUR
3671.	TATA CONSULTANCY SERVICES LTD.	JODHPUR
3672.	TATA CONSULTANCY SERVICES LTD.	KARUR
3673.	TATA CONSULTANCY SERVICES LTD.	KHAMMAM
3674.	TATA CONSULTANCY SERVICES LTD.	KOCHI
3675.	TATA CONSULTANCY SERVICES LTD.	KOLKATA
3676.	TATA CONSULTANCY SERVICES LTD.	KOTTAYAM
3677.	TATA CONSULTANCY SERVICES LTD.	KUMBAKONAM
3678.	TATA CONSULTANCY SERVICES LTD.	MADURAI

3679.	TATA CONSULTANCY SERVICES LTD.	METTUR
3680.	TATA CONSULTANCY SERVICES LTD.	MUMBAI
3681.	TATA CONSULTANCY SERVICES LTD.	NAGPUR
3682.	TATA CONSULTANCY SERVICES LTD.	NARASARAOPET
3683.	TATA CONSULTANCY SERVICES LTD.	NASIK
3684.	TATA CONSULTANCY SERVICES LTD.	NAVI MUMBAI
3685.	TATA CONSULTANCY SERVICES LTD.	NAZARETH
3686.	TATA CONSULTANCY SERVICES LTD.	NEW DELHI
3687.	TATA CONSULTANCY SERVICES LTD.	NEYVELI
3688.	TATA CONSULTANCY SERVICES LTD.	PONDICHERRY
3689.	TATA CONSULTANCY SERVICES LTD.	PUNE
3690.	TATA CONSULTANCY SERVICES LTD.	SALEM
3691.	TATA CONSULTANCY SERVICES LTD.	SECUNDERABAD
3692.	TATA CONSULTANCY SERVICES LTD.	SOMPETA
3693.	TATA CONSULTANCY SERVICES LTD.	SYDNEY
3694.	TATA CONSULTANCY SERVICES LTD.	THANE
3695.	TATA CONSULTANCY SERVICES LTD.	THANJAVUR
3696.	TATA CONSULTANCY SERVICES LTD.	THOOTHUKUDI
3697.	TATA CONSULTANCY SERVICES LTD.	THRISSUR
3698.	TATA CONSULTANCY SERVICES LTD.	TIRUCHIRAPPALLI
3699.	TATA CONSULTANCY SERVICES LTD.	TIRUPATI
3700.	TATA CONSULTANCY SERVICES LTD.	TRICHY
3701.	TATA CONSULTANCY SERVICES LTD.	TRIVANDRUM
3702.	TATA CONSULTANCY SERVICES LTD.	TUMKUR
3703.	TATA CONSULTANCY SERVICES LTD.	UDUMALPET
3704.	TATA CONSULTANCY SERVICES LTD.	VIJAYAWADA
3705.	TATA CONSULTANCY SERVICES LTD.	VILLIVAKKAM
3706.	TATA CONSULTANCY SERVICES LTD.	WARANGAL
3707.	TATA CONSULTING ENGINEERS LTD.	CHENNAI
3708.	TATA CONSULTING ENGINEERS LTD.	KOLKATA
3709.	TATA CUMMINS LTD.	BARAMATI
3710.	TATA CUMMINS LTD.	JAMSHEDPUR
3711.	TATA CUMMINS LTD.	PHALTAN
3712.	TATA ELXSI LTD.	BANGALORE
3713.	TATA ELXSI LTD.	CHENNAI
3714.	TATA ELXSI LTD.	COIMBATORE
3715.	TATA ELXSI LTD.	ERNAKULAM
3716.	TATA ELXSI LTD.	KANCHIPURAM
3717.	TATA ELXSI LTD.	MADURAI
3718.	TATA ELXSI LTD.	NEW DELHI
3719.	TATA ELXSI LTD.	PUNE
3720.	TATA ELXSI LTD.	SALEM
3721.	TATA ELXSI LTD.	THIRUVANANTHAPURAM
3722.	TATA ELXSI LTD.	THODUPUZHA
3723.	TATA ELXSI LTD.	TRIVANDRUM
3724.	TATA GLOBAL BEVERAGES LTD.	BANGALORE
3725.	TATA HITACHI CONSTRUCTION MACHINERY CO. LTD.	DHARWAD
3726.	TATA INSTITUTE OF FUNDAMENTAL RESEARCH	THANE
3727.	TATA JOHNSON CONTROLS AUTOMOTIVE LTD.	PUNE
3728.	TATA JOHNSON CONTROLS AUTOMOTIVE LTD.	RAJGURUNAGAR
3729.	TATA LOCKHEED MARTIN AEROSTRUCTURES LTD.	HYDERABAD
3730.	TATA METALIKS LTD.	HOWRAH
3731.	TATA MOTORS LTD.	AHMEDABAD
3732.	TATA MOTORS LTD.	AMRAVATI
3733.	TATA MOTORS LTD.	AURANGABAD

3734.	TATA MOTORS LTD.	BASMATHNAGAR
3735.	TATA MOTORS LTD.	CHENNAI
3736.	TATA MOTORS LTD.	HALDWANI
3737.	TATA MOTORS LTD.	JABALPUR
3738.	TATA MOTORS LTD.	JAMSHEDPUR
3739.	TATA MOTORS LTD.	LUCKNOW
3740.	TATA MOTORS LTD.	PALANI
3741.	TATA MOTORS LTD.	PUNE
3742.	TATA MOTORS LTD.	RUDRAPUR
3743.	TATA MOTORS LTD.	SAHARANPUR
3744.	TATA POWER SED LTD.	BANGALORE
3745.	TATA POWER SED LTD.	MUMBAI
3746.	TATA POWER SED LTD.	THANE
3747.	TATA PROJECTS LTD.	CHENNAI
3748.	TATA PROJECTS LTD.	NELLORE
3749.	TATA STEEL LTD.	GHATOTAND
3750.	TATA STEEL LTD.	JAMSHEDPUR
3751.	TATA TECHNOLOGIES LTD.	AHMEDABAD
3752.	TATA TECHNOLOGIES LTD.	CHENNAI
3753.	TATA TECHNOLOGIES LTD.	HYDERABAD
3754.	TATA TECHNOLOGIES LTD.	JAMSHEDPUR
3755.	TATA TECHNOLOGIES LTD.	PUNE
3756.	TATA TECHNOLOGIES LTD.	SOLAPUR
3757.	TATA TELESERVICES LTD.	JAIPUR
3758.	TATA TELESERVICES LTD.	TARAKESWAR
3759.	TATABLUESCOPE STEEL LTD.	JAMSHEDPUR
3760.	TATRA VECTRA MOTORS LTD.	HOSUR
3761.	TAURUS AGILE TECHNOLOGY CORPORATION PRIV	PANCHKULA
3762.	TAURUS ESDAN HYDRAULICAS PVT. LTD.	JAMSHEDPUR
3763.	TAVANT TECHNOLOGIES PVT. LTD.	BANGALORE
3764.	TAVANT TECHNOLOGIES PVT. LTD.	NEW DELHI
3765.	TAWEELA A2 OPERATING COMPANY	ABU DHABI
3766.	TAYANA SOFTWARE SOLUTION PVT. LTD.	BANGALORE
3767.	TCE CONSULTING ENGINEERS LTD.	KALYAN
3768.	TCL INDIA HOLDINGS PVT. LTD.	CHENNAI
3769.	TCP LTD.	TRICHY
3770.	TEBODIN MIDDLE EAST	ABU DHABI
3771.	TEBODIN MIDDLE EAST LTD.	CHENNAI
3772.	TECH MAHINDRA LTD.	BANGALORE
3773.	TECH MAHINDRA LTD.	CHENNAI
3774.	TECH MAHINDRA LTD.	DELHI
3775.	TECH MAHINDRA LTD.	JAIPUR
3776.	TECH MAHINDRA LTD.	JALGAON
3777.	TECH MAHINDRA LTD.	NABADWIP
3778.	TECH MAHINDRA LTD.	NEW DELHI
3779.	TECH MAHINDRA LTD.	PONDICHERRY
3780.	TECH MAHINDRA LTD.	PUNE
3781.	TECH MAHINDRA LTD.	SALEM
3782.	TECH MAHINDRA LTD.	TUMKUR
3783.	TECH SEMICONDUCTOR SINGAPORE PTE LTD.	CHENNAI
3784.	TECH SEMICONDUCTOR SINGAPORE PTE LTD.	SINGAPORE
3785.	TECH SEMICONDUCTOR SINGAPORE PTE LTD.	VILLUPURAM
3786.	TECHNICAL EQUIPMENT CO.LLC	ABU DHABI
3787.	TECHNICO INDUSTRIES LTD.	REWARI
3788.	TECHNIP INDIA PVT. LTD.	CHENNAI

3789.	TECHNIP KT INDIA LTD.	DELHI
3790.	TECHNIP KT INDIA LTD.	MUMBAI
3791.	TECHNO ELECTRIC & ENGINEERING CO. LTD.	BURDWAN
3792.	TECHNOSOFT GLOBAL SERVICES PVT. LTD.	SALEM
3793.	TECNOTREE CONVERGENCE LTD.	BANGALORE
3794.	TECNOTREE CONVERGENCE LTD.	CHITRADURGA
3795.	TEGA INDUSTRIES LTD.	ALIGARH
3796.	TEJAS NETWORKS LTD.	BANGALORE
3797.	TELCO CONSTRUCTION EQUIPMENT CO. LTD.	KHARAGPUR
3798.	TELCO CONSTRUCTION EQUIPMENT CO. LTD.	MEDINIPUR
3799.	TELCO CONSTRUCTION EQUIPMENT CO. LTD.	SECUNDERABAD
3800.	TELECA SOFTWARE SOLUTIONS INDIA PVT. LTD.	BANGALORE
3801.	TELECA SOFTWARE SOLUTIONS INDIA PVT. LTD.	TRIVANDRUM
3802.	TEMENOS INDIA PVT. LTD.	BANGALORE
3803.	TEMENOS INDIA PVT. LTD.	CHENNAI
3804.	TENNECO AUTOMOTIVE INDIA PVT. LTD.	HOSUR
3805.	TENXLABS TECHNOLOGIES PVT. LTD.	HYDERABAD
3806.	TERASOFT LTD.	NOIDA
3807.	TEREX EQUIPMENT PVT. LTD.	FARIDABAD
3808.	TESA TAPES (I) PVT. LTD.	NEW DELHI
3809.	TESCO HSC PVT. LTD.	BANGALORE
3810.	TESCO HSC PVT. LTD.	HYDERABAD
3811.	TESSOLVE ENGINEERING SERVICESPTE LTD.	KANCHIPURAM
3812.	TESSOLVE SERVICES PVT. LTD.	BANGALORE
3813.	TEST YANTRA SOFTWARE SOLUTIONS	BANGALORE
3814.	TEST YANTRA SOFTWARE SOLUTIONS	MANDYA
3815.	TETRA PAK INDIA PVT. LTD.	PUNE
3816.	TEXAS INSTRUMENTS (INDIA) PVT. LTD.	BANGALORE
3817.	TEXTRON INDIA PVT. LTD.	BANGALORE
3818.	TEZPUR UNIVERSITY	TEZPUR
3819.	THAI SUMMIT NEEL AUTO PVT. LTD.	MADURAI
3820.	THAI SUMMIT NEEL AUTO PVT. LTD.	THIRUVANNAMALAI
3821.	THALES SOFTWARE INDIA PVT.LTD.	CHENNAI
3822.	THERMAX ENGINEERING CONSTRUCTION COMPANY	KOLKATA
3823.	THERMAX LTD.	AHMEDABAD
3824.	THERMAX LTD.	HYDERABAD
3825.	THERMAX LTD.	PUNE
3826.	THERMO LLC	ABU DHABI
3827.	THERMOFISHER SCIENTIFIC INDIA PVT. LTD.	TIRUNELVELI
3828.	THERMOKING INDIA PVT. LTD.	BANGALORE
3829.	THINK FUTURE TECHNOLOGIES	GHAZIABAD
3830.	THINKSOFT GLOBAL SERVICES	CHENNAI
3831.	THINKSOFT GLOBAL SOLUTIONS	KARUR
3832.	THIRDWARE TECHNOLOGY SOLUTIONS PVT. LTD.	CHENNAI
3833.	THOMSON REUTERS INDIA SERVICES PVT. LTD.	BANGALORE
3834.	THOMSON REUTERS INDIA SERVICES PVT. LTD.	CHENNAI
3835.	THOMSON REUTERS INDIA SERVICES PVT. LTD.	MALAPPURAM
3836.	THOUGHTWORKS INDIA PVT. LTD.	CHENNAI
3837.	THOUGHTWORKS INDIA PVT. LTD.	TIRUNELVELI
3838.	THOUGHTWORKS TECHNOLOGIES INDIA PVT. LTD.	CHENNAI
3839.	THOUGHTWORKS TECHNOLOGIES INDIA PVT. LTD.	NEW DELHI
3840.	THREE GEE SOLUTION PVT. LTD.	NOIDA
3841.	THYSSENKRUPP ELEVATOR INDIA PVT. LTD.	NEW DELHI
3842.	THYSSENKRUPP ELEVATORS UAE LLC	ABU DHABI
3843.	THYSSENKRUPP ELEVATORS UAE LLC	DEIRA

3844.	THYSSENKRUPP INDUSTRIES INDIA PVT. LTD.	PUNE
3845.	TI CYCLES OF INDIA	CHENNAI
3846.	TI METAL FORMING	THIRUVALLUR
3847.	TIBCO SOFTWARE INDIA PVT. LTD.	PUNE
3848.	TIBCO SOFTWARE PVT. LTD.	MUMBAI
3849.	TIMKEN INDIA MANUFACTURING PVT. LTD.	CHENNAI
3850.	TIMKEN INDIA MANUFACTURING PVT. LTD.	PONDICHERRY
3851.	TIPPERS & TRAILERS INDIA PVT. LTD.	ANEKAL
3852.	TITAN INDUSTRIES LTD.	BANGALORE
3853.	TITAN INDUSTRIES LTD.	CUDDALORE
3854.	TITAN INDUSTRIES LTD.	HOSUR
3855.	TITAN INDUSTRIES LTD.	MADURAI
3856.	TITAN INDUSTRIES LTD.	SALEM
3857.	TITAN INDUSTRIES LTD.	TIRUNELVELI
3858.	TITAN INDUSTRIES LTD.	VILLUPURAM
3859.	TML DRIVELINES LTD.	JAMSHEDPUR
3860.	TNS INDIA PVT. LTD.	SECUNDERABAD
3861.	TOBOC INTERNATIONAL	BANGALORE
3862.	TOKHEIM INDIA PVT. LTD.	NAGERCOIL
3863.	TOLANI MARITIME INSTITUTE	INDURI
3864.	TOLANI MARITIME INSTITUTE	PUNE
3865.	TOOLTECH GLOBAL ENGINEERING PVT. LTD.	PUNE
3866.	TOPAZ ENGINEERING	AL QUOZ
3867.	TORRENT PHARMACEUTICALS	KOLKATA
3868.	TOSHIBA EMBEDDED SOFTWARE (INDIA) PVT. LTD.	BANGALORE
3869.	TOSHIBA GLOBAL COMMERCE SOLUTIONS	BANGALORE
3870.	TOSHIBA JSW TURBINE & GENERATOR PVT. LTD.	CHENNAI
3871.	TOSHIBA JSW TURBINE & GENERATOR PVT. LTD.	KRISHNAGIRI
3872.	TOSHIBA MACHINE (CHENNAI) PVT.LTD.	CHENNAI
3873.	TOSHIBA SOFTWARE (INDIA) PVT. LTD.	BANGALORE
3874.	TOSHNIWAL HYVAC PVT. LTD.	CUDDALORE
3875.	TOTAL QUALITY MOBILE SOLUTIONS PVT. LTD.	MUMBAI
3876.	TOTAL TRAINING INNOVATION PVT. LTD.	MADURAI
3877.	TOWARDS VISION TECHNOLOGIES PVT. LTD.	GURGAON
3878.	TOYO ENGINEERING INDIA LTD.	THANE
3879.	TOYOTA KIRLOSKAR MOTOR PVT. LTD.	BANGALORE
3880.	TOYOTA KIRLOSKAR MOTOR PVT. LTD.	BIDADI
3881.	TOYOTA KIRLOSKAR MOTOR PVT. LTD.	CHENNAI
3882.	TOYOTA KIRLOSKAR MOTOR PVT. LTD.	DHARWAD
3883.	TOYOTA KIRLOSKAR MOTOR PVT. LTD.	MANDYA
3884.	TPSC(INDIA)PVT. LTD.	HYDERABAD
3885.	TPVISION INDIA PVT. LTD.	BANGALORE
3886.	TR ENGINEERING LLC	MUSCAT
3887.	TR ENGINEERING LLC	RUWI
3888.	TRAC FUJICO AIR SYSTEMS LTD.	CHENNAI
3889.	TRACTORS & FARM EQUIPMENT LTD.	BANGALORE
3890.	TRACTORS & FARM EQUIPMENT LTD.	CHENGANNUR
3891.	TRACTORS & FARM EQUIPMENT LTD.	CHENNAI
3892.	TRACTORS & FARM EQUIPMENT LTD.	DODDABALLAPUR
3893.	TRACTORS & FARM EQUIPMENT LTD.	MADURAI
3894.	TRANE INDIA PVT. LTD.	NEW DELHI
3895.	TRANS GULF ELECTRO MECHANICAL LLC	DOHA
3896.	TRANS GULF ELECTRO MECHANICAL LLC	DUBAI
3897.	TRANSCO-ADWEA	FUJAIRAH
3898.	TRANSGUARD GROUP LLC	DUBAI

3899.	TREE TECHNOLOGIES PVT. LTD.	BANGALORE
3900.	TRELLEBORG SEALING SOLUTIONS	BANGALORE
3901.	TRICORE SOLUTIONS	JAIPUR
3902.	TRIDAT TECHNOLOGIES PVT. LTD.	MUMBAI
3903.	TRIDENT INFOSOL PVT. LTD.	BANGALORE
3904.	TRIFORCE CONSULTANCY PVT. LTD.	GANDHINAGAR
3905.	TRIGYN TECHNOLOGIES PVT. LTD.	DARWIN
3906.	TRIMBLE INFORMATION TECHNOLOGIES (I) PVT. LTD.	CHENNAI
3907.	TRIPLE POINT TECHNOLOGY (I) PVT. LTD.	PUNE
3908.	TRUVEN HEALTH ANALYTICS	BANGALORE
3909.	TRX TECHNOLOGIES INDIA PVT. LTD.	BANGALORE
3910.	TUBE PRODUCTS OF INDIA	CHENNAI
3911.	TUBE PRODUCTS OF INDIA	GURGAON
3912.	TULIP TELECOM	JAMMU
3913.	TURBO ENERGY LTD.	CHENNAI
3914.	TURBO MIDDLE EAST.FZC	CHENNAI
3915.	TURNING POINT EXPORTS PVT. LTD.	RAEBARELI
3916.	TUSHACO PUMPS PVT.LTD.	DAMAN
3917.	TUV RHEINLAND INDIA PVT. LTD.	KANCHIPURAM
3918.	TUV SUD SOUTH ASIA PVT. LTD.	BANGALORE
3919.	TUV SUD SOUTH ASIA PVT. LTD.	CHENNAI
3920.	TV TODAY NETWORK LTD.	DELHI
3921.	TVM SIGNALLING & TRANSPORTATION SYSTEMS	BANGALORE
3922.	TVS ELECTRONICS LTD.	CHENNAI
3923.	TVS INFOTECH LTD.	CHENNAI
3924.	TVS MOTOR COMPANY	KARUR
3925.	TVS MOTOR COMPANY LTD.	CHENNAI
3926.	TVS MOTOR COMPANY LTD.	GUDIYATTAM
3927.	TVS MOTOR COMPANY LTD.	HOSUR
3928.	TVS MOTOR COMPANY LTD.	MYSORE
3929.	TVS MOTOR COMPANY LTD.	TUTICORIN
3930.	TVS SOUTHERN ROADWAYS LTD.	MADURAI
3931.	TVS SUNDARAM CLYTON LTD.	TIRUPUR
3932.	TVS SUNDRAM FASTENERS LTD.	COIMBATORE
3933.	TVS SUNDRAM FASTENERS LTD.	HOSUR
3934.	TVS SUNDRAM FASTENERS LTD.	TIRUVANNAMALAI
3935.	TYCO ELECTRONICS INDIA PVT. LTD.	BANGALORE
3936.	TYCO ELECTRONICS INDIA PVT. LTD.	TUTICORIN
3937.	TYCO FIRE & SECURITY INDIA PVT. LTD.	BANGALORE
3938.	TYCO FIRE & SECURITY INDIA PVT. LTD.	DELHI
3939.	TYCO FIRE & SECURITY INDIA PVT. LTD.	GURGAON
3940.	TYCO FIRE & SECURITY UAE	ABU DHABI
3941.	TYCO SANMAR LTD.	COIMBATORE
3942.	TYCO SANMAR LTD.	MADURAI
3943.	TYFONE CDI PVT. LTD.	SAGARA
3944.	U.S.TECHNOLOGY INTERNATIONAL PVT. LTD.	KOLLAM
3945.	UBS INDIA SERVICE CENTER	CHENNAI
3946.	UCAL FUEL SYSTEMS LTD.	VILLUPURAM
3947.	UDUPI POWER CORPORATION LTD.	UDUPI
3948.	UEC TECHNOLOGIES PVT. LTD.	BANGALORE
3949.	UL MANAGEMENT SYSTEMS SOLUTIONS INDIA	HARDOI
3950.	ULTRATECH CEMENT LTD.	AWARPUR
3951.	ULTRATECH CEMENT LTD.	CHANDRAPUR
3952.	ULTRATECH CEMENT LTD.	GREATER NOIDA
3953.	ULTRATECH CEMENT LTD.	GULBARGA

3954.	ULTRATECH CEMENT LTD.	JAIPUR
3955.	ULTRATECH CEMENT LTD.	JODHPUR
3956.	ULTRATECH CEMENT LTD.	MUMBAI
3957.	ULTRATECH CEMENT LTD.	RAIPUR
3958.	ULTRATECH CEMENT LTD.	TIRUCHIRAPPALLI
3959.	UMBER SYSTEMS PVT. LTD.	PUNE
3960.	UNIPRES INDIA PVT. LTD.	CHEYGAR
3961.	UNISYS GLOBAL SERVICES INDIA	BANGALORE
3962.	UNITED BREWERIES LTD.	BHIAWADI
3963.	UNITED ENGINEERING SERVICES LLC	MUSCAT
3964.	UNITED ENGINEERING SERVICES LLC	RUSAYL
3965.	UNITED HEALTH GROUP	DELHI
3966.	UNITED HEALTH GROUP	FARIDABAD
3967.	UNITED HEALTH GROUP	GURGAON
3968.	UNITED HEALTH GROUP	JAIPUR
3969.	UNITED HEALTH GROUP	NABHA
3970.	UNITED ONLINE SOFTWARE DEV. INDIA PVT. LTD.	HYDERABAD
3971.	UNITED PHOSPHORUS LTD.	BHARUCH
3972.	UNITED SEAMLESS TUBULAAR PVT. LTD.	GUNTUR
3973.	UNITED SPIRITS LTD.	UDAIPUR
3974.	UNITED TECHNOLOGIES CORP. INDIA PVT. LTD.	BANGALORE
3975.	UNITY APPLIANCES LTD.	DINDIGUL
3976.	UNIVERSAL HOSPITAL LLC	ABU DHABI
3977.	UNIVERSAL PRODUCTS SOLUTION	PALAKKAD
3978.	UNIVERSITY OF KASHMIR	SRINAGAR
3979.	UPASANA ENGINEERING LTD.	HOSUR
3980.	US CONSULATE DUBAI	DUBAI
3981.	USHA INTERNATIONAL LTD.	ROORKEE
3982.	USHAMRTIN LTD.	JAMSHEDPUR
3983.	UST GLOBAL INTERNATIONAL PVT. LTD.	CALICUT
3984.	UST GLOBAL INTERNATIONAL PVT. LTD.	CHENNAI
3985.	UST GLOBAL INTERNATIONAL PVT. LTD.	ERNAKULAM
3986.	UST GLOBAL INTERNATIONAL PVT. LTD.	KADAKKAL
3987.	UST GLOBAL INTERNATIONAL PVT. LTD.	KOLLAM
3988.	UST GLOBAL INTERNATIONAL PVT. LTD.	MADURAI
3989.	UST GLOBAL INTERNATIONAL PVT. LTD.	MAVELIKARA
3990.	VA TECH WABAG LTD.	PUNE
3991.	VA TECH WABAG LTD.	THRISSUR
3992.	VAATA INFRA PVT. LTD.	CHENNAI
3993.	VALDEL ENGINEERS & CONSTRUCTORS PVT. LTD.	BANGALORE
3994.	VALEO ELECTRICALS INDIA PVT.LTD.	PUNE
3995.	VALEO ENGINEERING CENTER INDIA PVT. LTD.	CHENNAI
3996.	VALEO INDIA PVT. LTD.	CHENNAI
3997.	VALLABH SOFTWARE SOLUTION PVT. LTD.	BANGALORE
3998.	VALUE SOURCE TECHNOLOGIES PVT. LTD.	CHENNAI
3999.	VALVO-EICHER COMMERCIAL VEHICLE LTD.	INDORE
4000.	VAM DRILLING MIDDLE EAST FZE	DUBAI
4001.	VAMSOFT TECHNOLOGY & CONSULTANCY PVT. LTD.	CHENNAI
4002.	VANDE SOFTECH PVT. LTD.	BELLARY
4003.	VANDERLANDE INDUSTRIES	PUNE
4004.	VARDHMAN FABRICS	TIRUVARUR
4005.	VARIAN MEDICAL SYSTEMS INDIA PVT. LTD.	PUNE
4006.	VARROC ENGINEERING PVT. LTD.	AURANGABAD
4007.	VARROC ENGINEERING PVT. LTD.	CHAKAN
4008.	VARROC ENGINEERING PVT. LTD.	PUNE

4009.	VARROC ENGINEERING PVT. LTD.	RUDRAPUR
4010.	VARROC POLYMER PVT. LTD.	AURANGABAD
4011.	VARROC POLYMERS PVT. LTD.	PUNE
4012.	VARUN BEVERAGES LTD.	GURGAON
4013.	VDL ENABLING TECHNOLOGIS GROUP	TRICHY
4014.	VE COMMERCIAL VEHICLES LTD.	BANGALORE
4015.	VE COMMERCIAL VEHICLES LTD.	DEHRADUN
4016.	VE COMMERCIAL VEHICLES LTD.	DEWAS
4017.	VE COMMERCIAL VEHICLES LTD.	INDORE
4018.	VE COMMERCIAL VEHICLES LTD.	KOLKATA
4019.	VE COMMERCIAL VEHICLES LTD.	PITHAMPUR
4020.	VEDAMS SOFTWARE SOLUTIONS INDIA PVT. LTD.	HYDERABAD
4021.	VEDANTA ALUMINIUM LTD.	JHARSUGUDA
4022.	VEDSRI I.T. SOLUTIONS PVT.LTD.	HYDERABAD
4023.	VELANKANNI ENGINEERS	TIRUNELVELI
4024.	VELOSI LLC	AL KHUWAIR
4025.	VELOSI LLC	CHENNAI
4026.	VELOSI LLC	HAMRIYA
4027.	VELOSI LLC	MUMBAI
4028.	VELOSI LLC	MUSCAT
4029.	VELOSI LLC	PALAKKAD
4030.	VERIFONE INDIA PVT. LTD.	BANGALORE
4031.	VERIZON DATA SERVICES INDIA PVT. LID	CHENNAI
4032.	VERIZON DATA SERVICES INDIA PVT. LTD.	BANGALORE
4033.	VERIZON DATA SERVICES INDIA PVT. LTD.	CHEYEAR
4034.	VERIZON DATA SERVICES INDIA PVT. LTD.	COIMBATORE
4035.	VERIZON DATA SERVICES INDIA PVT. LTD.	HYDERABAD
4036.	VERIZON DATA SERVICES INDIA PVT. LTD.	KRISHNAGIRI
4037.	VERIZON DATA SERVICES INDIA PVT. LTD.	SONEPAT
4038.	VESTAS TECHNOLOGY R&D CHENNAI PVT. LTD.	CHENNAI
4039.	VESTAS WIND TECHNOLOGY INDIA PVT. LTD.	THENI
4040.	VGN DEVELOPERS PVT. LTD.	CHENNAI
4041.	VICTORA AUTO PVT. LTD.	HISAR
4042.	VICTORA TOOL ENGINEERS PVT. LTD.	FARIDABAD
4043.	VIDEOCON INDUSTRIES LTD.	NEW DELHI
4044.	VIDEOCON INDUSTRIES LTD.	VIRUDHACHALAM
4045.	VIDEOCON TELECOMMUNICATION LTD.	GURGAON
4046.	VIDEOCON TELECOMMUNICATION LTD.	NILAKKOTTAI
4047.	VIDEOCON TELECOMMUNICATIONS LTD.	NAVI MUMBAI
4048.	VIHAAN NETWORKS LTD.	GURGAON
4049.	VIKRAM CEMENT WORKS	KHOR
4050.	VIKRAM SARABHAI SPACE CENTRE	THIRUVANANTHAPURAM
4051.	VIKRAM SARABHAI SPACE CENTRE	TRIVANDRUM
4052.	VINAI ELECTRIC COMPANY	CHEYEAR
4053.	VINCULUM SOLUTIONS PVT. LTD.	MALKAPUR
4054.	VINCULUM SOLUTIONS PVT. LTD.	UDAIPUR
4055.	VIP INDUSTRIES LTD.	NASIK
4056.	VIRAGE LOGIC INC	NOIDA
4057.	VIRAJ ENGINEERING COMPANY	NASIK
4058.	VIRGO ENGINEERS LTD.	COIMBATORE
4059.	VIRGO ENGINEERS LTD.	NAGERCOIL
4060.	VIRIDENT SYSTEMS	BANGALORE
4061.	VIRTUAL GALAXY INFOTECH PVT. LTD.	NAGPUR
4062.	VIRTUSA CONSULTING SERVICES PVT. LTD.	HYDERABAD
4063.	VIRTUSA INDIA PVT. LTD.	CHENNAI

4064.	VIRTUSA INDIA PVT. LTD.	KRISHNAGIRI
4065.	VIRTUSA INDIA PVT. LTD.	MADURAI
4066.	VIRTUSA INDIA PVT. LTD.	THOOTHUKUDI
4067.	VIRTUSA INDIA PVT. LTD.	VAYALPAD
4068.	VIRTUSA SOFTWARE SERVICES PVT. LTD.	CHENNAI
4069.	VIRTUSA SOFTWARE SERVICES PVT. LTD.	SALEM
4070.	VISA POWER LTD.	KOLKATA
4071.	VISTEON AUTOMOTIVE SYSTEMS INDIA PVT. LTD.	CHENGALPATTU
4072.	VISTEON AUTOMOTIVE SYSTEMS INDIA PVT. LTD.	CHENNAI
4073.	VISTEON TECHNICAL & SERVICES CENTRE	CHENNAI
4074.	VISTEON TECHNICAL & SERVICES CENTRE	COIMBATORE
4075.	VISUAL IQ TECHO SERVICES PVT. INDIA LTD.	COCHIN
4076.	VITEX SOLUTIONS PVT. LTD.	FARIDABAD
4077.	VIZUAL BUSINESS TOOL PVT. LTD.	CHENNAI
4078.	VMWARE SOFTWARE INDIA PVT. LTD.	BANGALORE
4079.	VMWARE SOFTWARE INDIA PVT. LTD.	CHENNAI
4080.	VMWARE SOFTWARE INDIA PVT. LTD.	KANCHIPURAM
4081.	VODAFONE INDIA SERVICES PVT. LTD.	BANGALORE
4082.	VODAFONE INDIA SERVICES PVT. LTD.	PUNE
4083.	VOITH PAPER TECHNOLOGY (INDIA) LTD.	KOLKATA
4084.	VOLKSWAGEN INDIA PVT. LTD.	DELHI
4085.	VOLKSWAGEN INDIA PVT. LTD.	PIMPRI
4086.	VOLKSWAGEN INDIA PVT. LTD.	PUNE
4087.	VOLKSWAGEN INDIA PVT. LTD.	SANGLI
4088.	VOLTAMP MFG CO LLC	RUSSAYL
4089.	VOLTAS LTD.	BANGALORE
4090.	VOLTAS LTD.	DOHA
4091.	VOLTAS LTD.	MUMBAI
4092.	VOLTECH ENGINEERS PVT. LTD.	CHENNAI
4093.	VOLVO BUSES INDIA PVT. LTD.	HOSUR
4094.	VOLVO EICHER COMMERCIAL VEHICLE LTD.	LUCKNOW
4095.	VOLVO INDIA PVT. LTD.	BANGALORE
4096.	VOLVO INDIA PVT. LTD.	CHENNAI
4097.	VOLVO INDIA PVT. LTD.	COIMBATORE
4098.	VOLVO TRUCKS INDIA	CHENNAI
4099.	VUBITES INDIA PVT. LTD.	MUMBAI
4100.	WABCO INDIA LTD.	CHENNAI
4101.	WABCO INDIA LTD.	PUNE
4102.	WABCO TVS INDIA LTD.	CHENNAI
4103.	WAI INSURANCE BROKING SERVICES PVT. LTD.	CHENNAI
4104.	WALCHANDNAGAR INDUSTRIES LTD.	KOLKATA
4105.	WALCHANDNAGAR INDUSTRIES LTD.	WALCHANDNAGAR
4106.	WALMART GLOBAL TECHNOLOGY SERVICES	BANGALORE
4107.	WARTSILA GULF LLC	DUBAI
4108.	WARTSILA INDIA LTD.	ALIGARH
4109.	WARTSILA INDIA LTD.	CHENNAI
4110.	WARTSILA INDIA LTD.	HOSUR
4111.	WATERS INDIA PVT. LTD.	KARAIKUDI
4112.	WB PRECISSION ENGINEERING SOLUATIONS PVT. LTD.	KOLKATA
4113.	WEATHERFORD DRILLING INTERNATIONAL	AL BARSHA
4114.	WEB ACCESS (INDIA) PVT. LTD.	MUMBAI
4115.	WEBCOMMERCE(I) PVT. LTD.	NOIDA
4116.	WEBEX COMMUNICATIIONS INDIA PVT. LTD.	BANGALORE
4117.	WEG INDUSTRIES (INDIA) PVT. LTD.	HOSUR
4118.	WEIR ENGINEERING SERVICES	CHENNAI

4119.	WEIR ENGINEERING SERVICES CO.	DUBAI
4120.	WEIR MINERALS (I) PVT. LTD.	BANGALORE
4121.	WELLS FARGO INDIA SOLUTIONS PVT. LTD.	ALAPPUZHA
4122.	WELLS FARGO INDIA SOLUTIONS PVT. LTD.	HYDERABAD
4123.	WELLS FARGO INDIA SOLUTIONS PVT. LTD.	KOTTAYAM
4124.	WELMADE LOCKING SYSTEMS PVT. LTD.	PUNE
4125.	WENDT INDIA LTD.	HOSUR
4126.	WESLEY CLOVER COMMUNICATION SYSTEMS	BANGALORE
4127.	WESTERN THOMSON INDIA LTD.	BATLAGUNDU
4128.	WESTERN THOMSON INDIA LTD.	DEVAKOTTAI
4129.	WGM SPECTRUM RESEARCH	NEW DELHI
4130.	WHEELS INDIA LTD.	ATPADI
4131.	WHEELS INDIA LTD.	CHENNAI
4132.	WHEELS INDIA LTD.	COIMBATORE
4133.	WHEELS INDIA LTD.	KARMALA
4134.	WHIRLPOOL OF INDIA LTD.	PONDICHERRY
4135.	WHIRLPOOL OF INDIA LTD.	PUNE
4136.	WHIRLPOOL OF INDIA LTD.	SALEM
4137.	WHIRLPOOL OF INDIA LTD.	THOOTHUKUDI
4138.	WHITE COLLAR TECHNOLOGIES	HYDERABAD
4139.	WIELAND METALS SINGAPORE PTE LTD.	SINGAPORE
4140.	WILLIAM HARE UAE LLC	ABU DHABI
4141.	WILLIAM HARE UAE LLC	MUSSAFAH
4142.	WINCH HOUSE INDIA PVT. LTD.	HOSUR
4143.	WIND RIVER SYSTEMS INC	GURGAON
4144.	WINERGY DRIVE SYSTEMS INDIA PVT. LTD.	THOOTHUKUDI
4145.	WINSTAR ELECTRO MECHANICAL LLC	AL QUSAIS
4146.	WINSTAR ELECTRO MECHANICAL LLC	DUBAI
4147.	WINWIND POWER ENERGY PVT. LTD.	CHENNAI
4148.	WIPRO BPO LTD.	BANGALORE
4149.	WIPRO ECO ENERGY	BANGALORE
4150.	WIPRO GE HEALTHCARE PVT. LTD.	BANGALORE
4151.	WIPRO GE HEALTHCARE PVT. LTD.	CHENNAI
4152.	WIPRO INFOTECH LTD.	BANGALORE
4153.	WIPRO INFOTECH LTD.	CHENNAI
4154.	WIPRO INFOTECH LTD.	DELHI
4155.	WIPRO INFOTECH LTD.	ERNAKULAM
4156.	WIPRO INFOTECH LTD.	ERODE
4157.	WIPRO INFOTECH LTD.	GHAZIABAD
4158.	WIPRO INFOTECH LTD.	HYDERABAD
4159.	WIPRO INFOTECH LTD.	MYSORE
4160.	WIPRO INFOTECH LTD.	NANGAL
4161.	WIPRO INFRASTRUCTURE ENGINEERING LTD.	CHENNAI
4162.	WIPRO INFRASTRUCTURE ENGINEERING LTD.	HYDERABAD
4163.	WIPRO INFRASTRUCTURE ENGINEERING LTD.	KRISHNAGIRI
4164.	WIPRO TECHNOLOGIES LTD.	AURANGABAD
4165.	WIPRO TECHNOLOGIES LTD.	BANGALORE
4166.	WIPRO TECHNOLOGIES LTD.	CHENNAI
4167.	WIPRO TECHNOLOGIES LTD.	COCHIN
4168.	WIPRO TECHNOLOGIES LTD.	COIMBATORE
4169.	WIPRO TECHNOLOGIES LTD.	CUDDALORE
4170.	WIPRO TECHNOLOGIES LTD.	DELHI
4171.	WIPRO TECHNOLOGIES LTD.	DINDIGUL
4172.	WIPRO TECHNOLOGIES LTD.	DOMBIVLI
4173.	WIPRO TECHNOLOGIES LTD.	ERODE

4174.	WIPRO TECHNOLOGIES LTD.	HYDERABAD
4175.	WIPRO TECHNOLOGIES LTD.	JABALPUR
4176.	WIPRO TECHNOLOGIES LTD.	KANCHIPURAM
4177.	WIPRO TECHNOLOGIES LTD.	KANDUKUR
4178.	WIPRO TECHNOLOGIES LTD.	KARAIKUDI
4179.	WIPRO TECHNOLOGIES LTD.	KOLKATA
4180.	WIPRO TECHNOLOGIES LTD.	KRISHNAGIRI
4181.	WIPRO TECHNOLOGIES LTD.	LUCKNOW
4182.	WIPRO TECHNOLOGIES LTD.	MADURAI
4183.	WIPRO TECHNOLOGIES LTD.	MUMBAI
4184.	WIPRO TECHNOLOGIES LTD.	MUZAFFARNAGAR
4185.	WIPRO TECHNOLOGIES LTD.	MYSORE
4186.	WIPRO TECHNOLOGIES LTD.	NAGPUR
4187.	WIPRO TECHNOLOGIES LTD.	NAMAKKAL
4188.	WIPRO TECHNOLOGIES LTD.	NEYVELI
4189.	WIPRO TECHNOLOGIES LTD.	PANRUTI
4190.	WIPRO TECHNOLOGIES LTD.	PATIALA
4191.	WIPRO TECHNOLOGIES LTD.	PUDUCHERRY
4192.	WIPRO TECHNOLOGIES LTD.	PUNE
4193.	WIPRO TECHNOLOGIES LTD.	SALEM
4194.	WIPRO TECHNOLOGIES LTD.	SRIKAKULAM
4195.	WIPRO TECHNOLOGIES LTD.	TIRUPATI
4196.	WIPRO TECHNOLOGIES LTD.	TIRUTTANI
4197.	WIPRO TECHNOLOGIES LTD.	TRICHY
4198.	WIPRO TECHNOLOGIES LTD.	TUMKUR
4199.	WIPRO TECHNOLOGIES LTD.	VELLORE
4200.	WOLKEN SOFTWARE PVT. LTD.	BANGALORE
4201.	WONDER CEMENT LTD.	NINBAHERA
4202.	WOOD GROUP - CCC LTD.	MUSCAT
4203.	WORLEY PARSONS	MUMBAI
4204.	WORLEY PARSONS ENGG PTY LTD.	ABU DHABI
4205.	WORLEY PARSONS OMAN	KANYAKUMARI
4206.	WS ATKINS & PARTNERS OVERSEAS	DUBAI
4207.	WS ATKINS INDIA PVT. LTD.	BANGALORE
4208.	WSP MIDDLE EAST	ABU DHABI
4209.	XAVIENT INFORMATION SYSTEMS	NEW DELHI
4210.	XCHANGING SOLUTIONS LTD.	CHENNAI
4211.	XCHANGING TECHNOLOGIES LTD.	GURGAON
4212.	XEBIA IT ARCHITECTS INDIA PVT. LTD.	GURGAON
4213.	XEROX INDIA LTD.	ALUVA
4214.	XEROX INDIA LTD.	BANGALORE
4215.	XEROX INDIA LTD.	CHENNAI
4216.	XEROX INDIA LTD.	COCHIN
4217.	XEROX INDIA LTD.	MUMBAI
4218.	XL GROUP LTD.	NEW DELHI
4219.	XOMOX SANMAR LTD.	MADURAI
4220.	XOMOX SANMAR LTD.	TRICHIRAPPALLI
4221.	XPANXION INTL. PVT. LTD.	PUNE
4222.	XXAT SOLUTION	RAIPUR
4223.	XYBION INDIA PVT. LTD.	CHENNAI
4224.	Y.K.K INDIA P.LTD.	MOHINDERGARH
4225.	YAGACHI VIDYUNMAAN PVT. LTD.	HASSAN
4226.	YAHOO SOFTWARE DEVELOPMENT INDIA PVT. LTD.	BANGALORE
4227.	YALAMANCHILI SOFTWARE EXPORTS	CHENNAI
4228.	YANTRA SOLUTIONS	THIRUCHENGODE

4229.	YASH TECHNOLOGIES PVT. LTD.	KOLAR
4230.	YATNA ENGINEERING SOLUTIONS PVT. LTD.	HYDERABAD
4231.	YATRA ONLINE PVT. LTD.	HYDERABAD
4232.	YAZAKI WIRING TECHNOLOGIES INDIA PVT. LTD.	CHENNAI
4233.	YERLA DENTAL COLLEGE & HOSPITAL	NAVI MUMBAI
4234.	YODLEE INFOTECH PVT. LTD.	BANGALORE
4235.	YOKOGAWA IA TECHNOLOGIES INDIA PVT. LTD.	BENGALURU
4236.	YOROZU JBM AUTOMOTIVE TAMILNADU PVT. LTD.	TRICHY
4237.	YOUNG BUHMWOO INDIA PVT. LTD.	CHENNAI
4238.	YTL POWER SERAYA	KARAIKAL
4239.	YTL POWER SERAYA PTE LTD.	SINGAPORE
4240.	YUME ADVERTISING INDIA PVT. LTD.	CHENNAI
4241.	ZAKUM DEVELOPMENT COMPANY (ZADCO)	SHREERAMNAGAR
4242.	ZAMIL AIRCONDITIONERS PVT. LTD.	DAMMAM
4243.	ZAMIL COOL CARE	JUBAIL
4244.	ZAMIL INDUSTRIAL PVT. LTD.	CHENNAI
4245.	ZAMIL STEEL BUILDINGS INDIA PVT. LTD.	PUNE
4246.	ZEN SOFTWARE SOLUTION PVT. LTD.	NEW DELHI
4247.	ZEN TECHNOLOGIES LTD.	HYDERABAD
4248.	ZENER ELECTRONICS SERVICES LTD.	VARANASI
4249.	ZENER FIRE & SECURITY LLC	DUBAI
4250.	ZENSAR TECHNOLOGIES LTD.	DHULE
4251.	ZENSAR TECHNOLOGIES LTD.	INDORE
4252.	ZENSAR TECHNOLOGIES LTD.	JOHANNESBURG
4253.	ZENSAR TECHNOLOGIES LTD.	KOLHAPUR
4254.	ZENSAR TECHNOLOGIES LTD.	PUNE
4255.	ZEUS SYSTEMS LTD.	CUDDALORE
4256.	ZF WIND POWER COIMBATORE LTD.	COIMBATORE
4257.	ZOHO CORPORATION PVT. LTD.	CHENNAI
4258.	ZUARI INDUSTRIES LTD.	MARGAO
4259.	ZULAIQA HOSPITAL	DUBAI
4260.	ZYME SOLUTIONS PVT. LTD.	BANGALORE
4261.	ZYNGA GAME NETWORK INDIA PVT. LTD.	BANGALORE

LIST OF PROJECT WORK SUBMITTED BY STUDENTS UNDER THE WORK INTEGRATED LEARNING PROGRAMMES IN THE YEAR 2012

Engineering Technology

1. 132KV/33KV PLUG IN TERMINATION
2. A COMBINED EXPERIMENTAL SETUP FOR THE STUDY OF VENTURIMETER, ORIFICEMETER & ROTAMETER.
3. A REPORT ON 5MW GRID CONNECTED SOLAR POWER PROJECT USING CRYSTALLINE TECHNOLOGY
4. A STUDY ON THE FATIGUE BEHAVIOUR OF AUSTEMPERED DUCTILE IRON
5. ADVANCED ALARM NOTIFICATION IN DISTRIBUTED CONTROL SYSTEM USING SMS AND E-MAIL.
6. ADVANCED STRETCHER
7. AIR CONDITIONS FOR RESIDENTIAL BUILDING
8. AIR HANDLING EQUIPMENT (AHU) CONDENSATE COLLECTION AND REUSE
9. AIRCRAFT WINDSCREEN TEMPERATURE CONTROLLER
10. AIRSIDE SAFETY IN AVIATION INDUSTRY
11. ALTERNATIVE FUELS – TRIGGERS & BARRIERS
12. ANALYSIS OF THE DISTRIBUTION OF INTERMETALLIC PARTICLES AND GRAIN SIZE IN AA6063 ALUMINIUM ALLOY
13. ANALYSIS ON FAILURE OF BOILER WATER WALL TUBES.
14. ANALYZING ABB DRIVES MARKET IN ORISSA REGION
15. APPLICATION OF BOTTOM ASH DISPOSAL SYSTEM THROUGH HIGH CONCENTRATION SLURRY DISPOSAL FORM.
16. ASSET PRODUCTIVITY IMPROVEMENT IN MD9/11 FLYWHEEL HOUSING MACHINING CELL
17. AUTOMATED BIW WELDING FIXTURE
18. AUTOMATED ISSUE OF SELECTION PARTS IN KAPAA ENGINE
19. AUTOMATED MEASUREMENT SYSTEMS IN CMM
20. AUTOMATED VERTICAL FORM, FILL & SEAL PACKAGING MACHINE
21. AUTOMATIC BUS TRANSFER THROUGH GOOSE
22. AUTOMATIC TRANSFER SWITCH OPERATED USING MOBILE THROUGH PLC
23. AUTOMATION IN IRON SEPARATION PROCESS
24. AUTOMATION OF BATTERY ASSEMBLY PROCESS
25. AUTOMATION OF CAPTIVE POWER PLANT'S COOLING TOWER
26. AUTOMATION OF LOADING & UNLOADING OF ALUMINIUM SLABS FOR TWO TIER VERTICAL ROTARY HEARTH FURNACE
27. AUTOMATION TEST SET-UP FOR CC1500, 6000HP IGBT BASED PROPULSION CONVERTER FOR INDIAN RAILWAY
28. AUTOMOBILE HEAD LIGHT LAMP INTENSITY DIMMER TO CONTROL GLARE
29. BENEFITS OF RISK MANAGEMENT ON PROJECT EXECUTION AND PROFITABILITY
30. CAPACITY ENHANCEMENT & IMPROVING MATERIAL FLOW OF NEW ABC TRANSMISSION COMPONENTS.
31. CAPACITY ENHANCEMENT & IMPROVING MATERIAL FLOW TRANSMISSION ASSEMBLY.
32. CAPACITY ENHANCEMENT OF ENGINE ASSEMBLY TEST BENCH
33. CAPACITY IMPROVEMENT BY LINE BALANCING & PROCESS MODIFICATION
34. CAPACITY PLANNING AND MANAGEMENT
35. CASE STUDY OF MUTUAL LINE COMPENSATION IN DISTANCE RELAYS FOR OVER HEAD LINE
36. CI AND GPRS COMMUNICATION SYSTEM BETWEEN DISTRICT COOLING PLANT AND ETS STATION
37. COMMERCIAL VEHICLE FRONTAL CRASH SYSTEM DESIGN MEETING ECER NORMS.
38. COMPUTER BASED PROGRAM FOR DESIGNING OF STORAGE TANKS

39. CONTROL OF LIAISON COMPLAINTS IN CHENNAI ENGINEERING DESIGN CENTRE
40. CONTROLLABILITY IMPROVEMENT IN CONTROL VALVES
41. CONTROLLING AND ACCOUNTING OF REBALANCING OF THE DC INVENTORY ACROSS THE WORLDWIDE DISTRIBUTION CENTERS
42. CORRECTION FACTORS AND UNCERTAINTY ESTIMATION IN LUMINOUS FLUX MEASUREMENT
43. COST OPTIMIZATION OF TURBINE SHAFT USING INNOVATIVE DESIGN & MANUFACTURING PROCESS
44. CUSTOMER COMPLAINT REDUCTION FROM 2 % TO = 0.5%
45. CYCLE TIME REDUCTION IN MODULE MANUFACTURING
46. CYCLIC TIME ANALYSIS OF CONSTRUCTION OF SUPERCRITICAL BOILER
47. DEBOTTLENECKING OF DESALTER PLANTS.
48. DEFECT REDUCTION IN NX DRAWINGS BY AUTOMATED TOOL
49. DEODORIZED FIELD CONDENSATE UNIT (DFC)
50. DESIGN & DEVELOPMENT OF A SMART PROXIMITY SENSOR SYSTEM FOR ROBOTIC APPLICATION
51. DESIGN & OPTIMIZATION OF ARTICLE INTEGRATION DEVICE FOR MISSILE LAUNCHER
52. DESIGN & STANDARDIZATION OF ELECTRICAL SWITCHING STATION FOR POWER EVACUATION OF 350MW POWER PLANT AT 230KV VOLTAGE LEVEL.
53. DESIGN AND ANALYSIS OF DEDICATED PENDULUM FRONTAL IMPACT TEST RIG
54. DESIGN AND CUSTOMIZING THE KOBELCO EXCAVATOR GRAPPLE UNIT
55. DESIGN AND DEVELOPMENT OF BREAK OUT CABLE TO IMPROVE RFT (RIGHT FIRST TIME) FOR CUMMINS ELECTRONICS CONTROLLER POWER COMMAND CONTROL – ECM , SENSORS, HARNESS, PCC 3100, PCC 1301 AND PCC 2100 CONTROLLERS.
56. DESIGN AND DEVELOPMENT OF BUFFING MACHINE
57. DESIGN AND DEVELOPMENT OF COOLANT SYSTEM BETWEEN OIL DISTRIBUTOR HOUSING AND INTERCOOLER FOR 8V4000 SERIES ENGINES FOR RAIL APPLICATION DUE TO CHANGE IN LENGTH OF EXHAUST MANIFOLD BOLTS FOR THERMAL STRESS RELIEF.
58. DESIGN AND DEVELOPMENT OF PETROL –T VALVE
59. DESIGN AND FABRICATION OF EMISSION FREE ENGINE
60. DESIGN AND IMPLEMENTATION OF BUILDING MANAGEMENT SYSTEM FOR OFFICE BUILDING
61. DESIGN AND PERFORMANCE EVALUATION OF A GRID CONNECTED SOLAR PHOTOVOLTAIC SYSTEM WITH POWER CONTROL UNIT
62. DESIGN AND VIBRATION ANALYSIS OF AUTOMOTIVE HEADLAMP
63. DESIGN LIFE CYCLE TIME REDUCTION USING KNOWLEDGE BASE ENGINEERING
64. DESIGN MODIFICATION OF CURRENT TRANSMISSION FOR ADAPTATION IN CUSTOMER VEHICLE
65. DESIGN OF AUTOMATED LOADING & UNLOADING OF ALUMINUM FOR TWO TIER VERTICAL ROTARY FURNACE
66. DESIGN OF CABLE ACTUATED, QUADRANT BOX
67. DESIGN OF HYDRAULIC HAND TOOL DURING MAINTENANCE OF ELECTRICAL MOTOR
68. DESIGN OF INJECTION MOULD FOR A-PILLAR
69. DESIGN OF LOW POWER DLL (DELAY LOCKED LOOP) FOR MEMORY APPLICATIONS
70. DESIGN OF PNEUMATIC VACUUM CONTROLLED MATERIAL HANDLING ELEVATOR
71. DESIGN OF THEATER BUILDING IN STRUCTURAL STEEL
72. DESIGN OF WATER BOTTLE HOLDER FOR EXPORT TRACTORS
73. DESIGN OPTIMIZATION & VALIDATION OF FRAME STRUCTURE FOR PARALLEL COMPRESSOR RACK UNITS
74. DESIGN, VALIDATION AND IMPLEMENTATION OF FRONT UNDER RUN PROTECTION DEVICE (FUPD) AS PER CMVR NORMS.
75. DESIGNING A BRAKE PEDAL SENSING UNIT (BPSU) USING STRAIN GAUGES
76. DESIGNING OF COMMERCIAL VEHICLE CHASSIS CARRIER
77. DEVELOP METHODOLOGY AND PROVIDE GUIDELINE FOR "ACHIEVING TARGET COST THROUGH COST REDUCTION IN PLASTIC PARTS" FOR NEW PRODUCT.
78. DEVELOP PROJECT MANAGEMENT COMPETENCY FRAMEWORK & IMPROVEMENT SYSTEM
79. DEVELOPING MECHANICAL DESIGN GUIDELINES FOR THE PROPOSED PLANT EXPANSION

80. DEVELOPING SPECIAL GRADE IN DUCTILE IRON FOR NEW PRODUCT DEVELOPMENT
81. DEVELOPMENT AND DESIGN OF INDIGENIZED KILN CEMENT ANALYSER SYSTEM SIMILAR TO THE IMPORT PRODUCT FROM ABB GERMANY.
82. DEVELOPMENT IN DESIGN OF ELECTRICAL SWITCHGEARS FOR COST-REDUCTION.
83. DEVELOPMENT OF CAST COMPONENT OF ENGINE USING CASTING SIMULATION TECHNIQUE.
84. DEVELOPMENT OF HIGH GRADE & HIGH WALL THICKNESS INDUCTION BENDS BY CONTROLLING PROCESS PARAMETERS.
85. DEVELOPMENT OF HOIST SYSTEM FOR TRUNK LID ASSEMBLY OF A CAR TO REDUCE FATIGUE FACTOR AND CYCLE TIME
86. DEVELOPMENT OF I.V.C. FLASHBACK DEMONSTRATION DEVICE
87. DEVELOPMENT OF KEYLOCK JOINT FOR GLASS REINFORCED EPOXY PIPE
88. DEVELOPMENT OF MANUFACTURING PROCESS FOR DOUBLY FED INDUCTION GENERATOR (DFIG) FOR WIND APPLICATION
89. DEVELOPMENT OF SEMI-AUTOMATIC FOR ASSEMBLY LINE FOR MAGNETIC MODULE.
90. DOOR TEAR DOWN ELIMINATION
91. DOUBLE DECKER ICE MAKER
92. DUAL-FUEL FIRED CAPABILITY ENABLING IN BOILER
93. DYNAMIC ANALYSIS
94. EFFECT OF ENVIRONMENT OVER TRACTOR INDUSTRY
95. EFFECTIVE AUTOMATION OF HMI PAINT SHOP STEEL BARCODE SYSTEM (PLC SYSTEM)
96. EFFECTIVE METHOD OF STAINLESS STEEL EROSION SHIELD WELDING
97. EFFECTIVE PLANNING & COSTING FOR PROJECT EXECUTION
98. EFFECTS OF SECURITY SURVEILLANCE SYSTEMS AND TECHNOLOGY TO THE SOCIETY AND ITS VARIOUS APPLICATIONS.
99. EFFICIENCY IMPROVEMENT OF DUST COLLECTION SYSTEM IN LAUNDRY PILOT PLANT
100. EI BASED INDEPENDENT CROSS OVER OPERATION USING AXLE COUNTER
101. ELECTRICAL ENERGY CONSERVATION BY INSTALLING VFD FOR ID FAN IN POWER HOUSE
102. ELECTRICITY CONSERVATION
103. ELECTRONIC CONTROLLED VISCOUS FAN INTEGRATION
104. ELIMINATE CUSTOMER COMPLAINT 'REAR WHEEL WOBBLING' IN SCOOTY PEP (ASSEMBLY OF 4-STROKE SCOOTERETTE ENGINE)
105. ELIMINATE CUSTOMER COMPLAINT IN STATIONARY GEAR USED IN PASSENGER CAR STARTER MOTOR
106. ELIMINATE IN HOUSE REJECTION DUE TO OIL SEAL ELIMINATE CUSTOMER REJECTION DUE TO OIL SEAL PRESSING
107. ELIMINATION OF WIND SHIELD CRACK IN TOYOTA ETIOS MODEL
108. ELIMINATION OIL LEAKAGE FROM MISSION CASE OIL SEAL
109. ENERGY AND COST SAVING FOR ULTRA VIOLET UNITS IN DE-IONIZED WATER PLANT.
110. ENERGY CONSERVATION BY HEAT RECOVERY FROM CHILLER REFRIGERANT AND GENERATE HOT WATER - TECHNICAL AND COMMERCIAL FEASIBILITY REPORT
111. ENERGY CONSERVATION FOR SUSTAINABLE DEVELOPMENT IN RGIA
112. ENERGY CONSERVATION IN FABRICATION SHOP
113. ENERGY CONSERVATION IN PAINTSHOP OVEN BOOTH
114. ENERGY EFFICIENT HVAC SYSTEM FOR COMMERCIAL BUILDING
115. ENERGY MANAGEMENT
116. ENERGY MANAGEMENT BY WATER RECYCLING
117. ENERGY MANAGEMENT IN FUEL OIL HEATING
118. ENERGY MANAGEMENT SYSTEM/SCADA FOR ELECTRICAL SUBSTATIONS
119. ENERGY RECOVERY SYSTEM IN SCREW COMPRESSOR
120. ENGINEERING APPLICATION LICENSE REQUISITION, USAGE MONITORING AND MANAGEMENT SYSTEM.
121. ENHANCING THE ROLLS LIFE BY ANALYZING ROLL MATERIAL IN STRUCTURAL STEEL ROLLING MILL

122. ENHANCING THE VACUUM OF THE STEAM TURBINE EQUIPPED WITH AIR COOLED CONDENSER, TO AVOID THE LOAD SHEDDING DUE TO LOW VACUUM.
123. ENHANCING VALUE PROPOSITIONS FOR EICHER CUSTOMERS OF EXISTING LMD TRUCKS WITH NEW FEATURES
124. ENTERPRISE SYSTEM MANAGER FOR LINUX
125. EPC OF 20 MW MAIN INTAKE NEW ELEVATED A-27 SUBSTATION
126. EPP FAILURE REDUCTION
127. ESTABLISHING SUPPLIER PROCESSES FOR MASS PRODUCTION (NEW PRODUCT-VESPA VEHICLE PARTS)
128. EVALUATING CORRELATION FACTORS FOR PROCESS CONTROL OF COREX IRONMAKING
129. EXHAUST BRAKE ASSEMBLY
130. EXPERIMENTAL ANALYSIS FOR INCREASING THE PRODUCTIVITY BY ORGANIZING THE TIME SCHEDULE OF MACHINES
131. FAULT LEVEL ANALYSIS IN A POWER PLANT
132. FEED FOR INSTALLATION OF CONDENSATE RETURN PUMP
133. FIRE ALARM & FIRE FIGHTING SYSTEM INSTALLATION, TESTING & COMMISSIONING
134. FIRE DETECTION & PROTECTION SYSTEM
135. FIRE PROTECTION & CLEAN AGENT SUPPRESSION SYSTEM
136. FIRE SAFETY AUDIT FOR EXISTING WAREHOUSE
137. FIXTURE DESIGN FOR CONNECTING ROD'S INTEGRATED OPERATIONS
138. FLUE GAS DESULFURIZATION (FGD)
139. FRESH AIR INTAKE UNIT FOR DOMESTIC AIR CONDITIONER
140. FTT IMPROVEMENT IN SDM PRODUCTION LINE
141. FUEL VAPOUR RECOVERY SYSTEM IN FILLING STATION
142. GARMENT CARE PRODUCT DESIGN
143. GPIO ELECTRICAL VALIDATION ON SOC
144. GROUNDING ANALYSIS FOR SUBSTATIONS AND PLANT USING FINITE ELEMENT METHOD AND IEEE 80
145. GSM & WCDMA NETWORK OPTIMIZATION
146. GSM AUTOMATED FREQUENCY OPTIMIZATION
147. HEAVY VEHICLE MOBILE TESTING
148. HVAC EQUIPMENT DESIGN
149. HYDRATE MANAGEMENT OF SUBSEA WET GAS PIPELINES
150. HYDRAULIC POWER PACK INTERFACED IN TRIDENT MACHINE WITH MITSUBISHI CONTROLLER
151. ICE BREAKING MACHINE
152. IDENTIFICATION OF COST REDUCTION IDEAS IN ROTORS BY BENCHMARKING OF LEADING MANUFACTURER OF COMPRESSOR THROUGH MARKETING RESEARCH.
153. IMPACT IMPROVING ACTIVITIES
154. IMPELLER CELL PRODUCTIVITY IMPROVEMENT THROUGH VSM
155. IMPLEMENTATION & MONITORING OF CAPDB (CAPACITY DATABASE) AND AUTOBKM (DEMAND AND CAPACITY MANAGEMENT) TO ACHIEVE 170K PRODUCTION VOLUME FOR THE CY 2012 FOR VW INDIA
156. IMPLEMENTATION OF "IMPROVEMENTS IN INSTRUMENTATION DESIGN DELIVERABLE"
157. IMPLEMENTATION OF AUTOMATIC LOAD SHEDDING USING SCADA IN AUTOMATED SUB-STATION
158. IMPLEMENTATION OF ENERGY MANAGEMENT SYSTEM IN HVAC PROJECTS
159. IMPLEMENTATION OF SINGLE PIECE FLOW FOR CYLINDER BLOCK FINISH MACHINING
160. IMPLEMENTING SYSTEM FOR LEAD TIME REDUCTION & WASTE REDUCTION IN THE PROCESS OF ASSEMBLING PLC PANELS
161. IMPORTANCE AND EVALUATION OF FATIGUE LIFE OF PIPING SYSTEMS
162. IMPROVE ALIGNMENT OF IMPROVEMENT PROJECTS TO ANNUAL POLICY OBJECTIVES OF DEPARTMENT & COMPANY OBJECTIVES
163. IMPROVE MAINTENANCE RELIABILITY AND IN AIRCRAFT REFUELLING EQUIPMENT MAINTENANCE SAFETY

164. IMPROVE PAINTING PROCESS TO AVOID CORROSION OF THE PRODUCT
165. IMPROVE PROCESS,QUALITY AND COST THROUGH KAIZEN
166. IMPROVE PRODUCTIVITY & COST SAVING IN TRANSFORMER WINDING PROCESS
167. IMPROVE THE MACHINE PERFORMANCE THROUGH TPM ACTIVITIES (AUTONOMOUS MAINTENANCE IMPLEMENTATION)
168. IMPROVED & SAFE METHOD OF OVERHAULING OF CRANE WHEELS
169. IMPROVED METHODOLOGY IN PIPING QUANTITY ESTIMATION
170. IMPROVEMENT AND IMPLEMENTATION OF MAINTENANCE WITH SAFETY IN INDITAL REACH STACKERS
171. IMPROVEMENT IN AIRCRAFT MAINTENANCE AND RELIABILITY PROGRAM
172. IMPROVEMENT IN KPI'S OF MECHANICAL MAINTENANCE
173. IMPROVEMENT IN QUALITY OF LENS USED IN INSTRUMENT CLUSTERS
174. IMPROVEMENT OF OVERALL EQUIPMENT EFFECTIVENESS THROUGH TOTAL PRODUCTIVE MAINTENANCE
175. IMPROVEMENT OF PRODUCTIVITY THROU PRODUCTION MANAGEMENT
176. IMPROVEMENT OF QUALITY AND EFFICIENCY OF OFFSHORE STRUCTURAL FABRICATION DRAWINGS.
177. IMPROVEMENT TRACTORS QUALITY THROUGH REDUCTION OF SCRETTCHES ON SHEET METAL
178. IMPROVING AVAILABILITY IN GE GAS TURBINES
179. IMPROVING CSI THROUGH BUSINESS FLOW IMPLEMENTATION
180. IMPROVING FIRST PASS YIELD BY ELIMINATING SPIGOT DIAMETER ISSUES IN TUBE CASTINGS.
181. IMPROVING LEAD TIME REDUCTION IN SWITCH BOARD MANUFACTURING
182. IMPROVING MACHINE SHOP OEE BY REDUCING NVAS AND DOWNTIMES
183. IMPROVING PRODUCTION YIELD BY REDUCING REJECTIONS IN ALUMINUM CASTINGS COMMODITY USING SIX SIGMA – GREEN BELT METHODOLOGY
184. IMPROVING PRODUCTIVITY THROUGH DMAIC CONCEPT IN FLUENCE ASSEMBLY LINE
185. INCREASE PRODUCTIVITY THROUGH REJECTION & DOWN TIME REDUCTION
186. INCREASING PRODUCTIVITY BY IMPLEMENTING NEW TOOLING & FIXTURE TECHNICS
187. INCREASING THE ENGINE COOLING EFFICIENCY BY INCREASING THE FAN SPEED ON BACKHOE LOADER.
188. INCREASING THE FUEL EFFICIENCY IN WHEEL LOADER BY IMPROVING THE JOB SET UP AND MAINTENANCE
189. INCREASING THE LIFE OF COMPRESSOR BY PREVENTION OF LOBES PITTING AND CORROSION ON DR-2 SEAL GAS COMPRESSOR
190. INCREASING THE LIFE OF TRAVEL DEVICE ON EXCAVATOR THROUGH PREVENTIVE MAINTENANCE
191. INSPECTION & MEASUREMENT EFFICIENCY BY INTEGRATION OF FIXTURES IN BODY SHOP.
192. INSULATION WORKS FOR 2550 TPD AIR SEPARATION UNIT, JAMSHEDPUR
193. INTEGRATION OF CELLULAR TECHNOLOGY AND DATA ACQUISITION SYSTEMS FOR EFFECTIVE CAPTURE OF CUSTOMER USAGE DATA
194. INTEGRATION OF DCP OVER FIBER OPTIC NETWORK
195. INTEGRATION OF ELECTRONIC THROTTLE IN AN ELECTRIC VEHICLE
196. INTEGRATION OF SYSTEMS & SERVICES IN CENTRAL MONITORING STATION (CMS CENTRAL MONITORING STATIONS (CMS))
197. INTELLIGENT ENERGY MANAGEMENT SYSTEM
198. INTERFERENCE MANAGEMENT SYSTEM (OIL & GAS INDUSTRIES)
199. INTERPRETATION OF THE TRANSFORMER FAILURE USING SWEEP FREQUENCY RESPONSE ANALYSIS AND SUPPORTED TESTS INTERPRETATION OF THE TRANSFORMER FAILURE USING SWEEP FREQUENCY RESPONSE ANALYSIS AND SUPPORTED TESTS
200. INTRODUCTION OF BLAST FURNACE GAS IN WASTE HEAT RECOVERY BOILERS FOR POWER GENERATION
201. INTRODUCTION OF MEMBRANE BASED RECYCLED TECHNOLOGIES AND ZERO LIQUID DISCHARGE SYSTEMS IN AUTOMOBILE INDUSTRY
202. INTRODUCTION, OPERATION AND GENERAL MAINTENANCE OF FLUIDIZED BED COMBUSTION BOILER AND INCREASING OF ITS EFFECIENCY

203. INTRODUCTION, OPERATION AND MAINTENANCE OF TRANSFORMER EXPLOSION AND FIRE PREVENTION SYSTEM AND INCREASING ITS EFFICIENCY
204. INVENTORY: NON-MOVING, SLOW-MOVING AND AGED INVENTORY DISPOSITION AND CONTROL
205. KAIZEN
206. KANBAN IMPLEMENTATION FOR SIL (SPICER INDIA LTD) FGS TO TIER 1 (ASSEMBLY LINE) & TIER 2 (CHILD PART MACHINING)
207. LAYOUT OF IN-HOUSE LOGISTICS
208. LEAD TIME REDUCTION FOR ENGINEERED VALVES
209. LEAD-TIME REDUCTION IN BILL OF MATERIAL CREATION
210. LEAN MANAGEMENT IN PROCUREMENT FUNCTIONS
211. LEAN PRODUCTION MANAGEMENT
212. LIFE MANAGEMENT TECHNIQUES OF LARGE POWER & AUTO TRANSFORMER.
213. LOAD SHEDDING OF 3X20 MW A.C GENERATORS
214. LOGIN SECURITY REPORT
215. LTV TRANSMISSION UPGRADE
216. MAINTENANCE AND REPAIR MANAGEMENT
217. MANUFACTURE OF STARCH FROM CORN
218. MANUFACTURER'S PROCUREMENT DECISION FOR MULTIPLE SUPPLIERS USING CONDITIONAL VALUE-AT-RISK
219. MANUFACTURING COST REDUCTION IN DRIVE SHAFT PART (SLIP YOKE) THROUGH PROCESS CHANGE, ADAPTING V.A.V.E. (VALUE ANALYSIS/ VALUE ENGINEERING) AT KORES INDIA LTD
220. MARKETING OF WELDING MACHINE THROUGH SERVICE MANAGEMENT
221. MATERIAL CONSUMPTION OPTIMIZATION IN SPECIAL CABLES
222. MATERIAL VALUE CONTROL THROUGH EFFECTIVE INVENTORY MANAGEMENT TOOLS
223. MECHANICAL MAINTENANCE IN FERTILIZER PLANTS
224. MINIMIZATION OF RAW MATERIAL (LINEAR) WASTAGES IN TRANSMISSION LINE TOWER MANUFACTURING
225. MITIGATION OF CONTAMINATED AND WASTE OIL PITS (BURN PIT) IN GAS PLANT
226. MODELING OF CHOPPER FED SEPARATELY EXCITED D.C.MOTOR.
227. MODIFICATION IN HYDRAULICS SYSTEM FOR POWER SAVING IN CTCM (CONTINUOUS TANDEM COLD ROLLING MILL)
228. MODIFICATION OF FLUIDIZED TRANSFERRING OF CEMENT CONVEYING SYSTEM FOR IMPROVING MAINTAINABILITY AND SERVICEABILITY SILO FILTERS
229. MOULD DESIGN
230. IMPROVEMENT IN THE PROCESS EFFICIENCY AND REDUCTION IN POWER CONSUMPTION BY MODIFICATION IN AUTOMATION
231. NACE GUIDELINES TO PREVENT SULFIDE STRESS CRACKING IN REFINING INDUSTRIES.
232. NETWORK MANAGEMENT SYSTEM RELAY. (NMS RELAY)
233. NEW LEAN PROCESS FOR EXISTING ENGINEERING CHANGE MANAGEMENT.
234. NEW PRODUCT DESIGN OF HARD PARCEL SHELF
235. NEW PRODUCT DEVELOPMENT
236. NEW PRODUCT DEVELOPMENT FOR 2-WHEELER ELECTRONIC INSTRUMENT CLUSTER
237. NEW PRODUCT ENTRY STRATEGY IN THE EXISTING SEGMENT
238. OBJECTIVE MEASUREMENT SYSTEM FOR ORGANIZATION QUALITY IMPROVEMENT
239. OIL PAN DEVELOPMENT FOR INDIAN RAILWAYS AS STRATEGIC BUSINESS PLAN
240. ONLINE FLOW MONITORING SYSTEM FOR EFFLUENT DISCHARGE WATER SYSTEM
241. ONLINE LUBRICATION SYSTEM FOR MOTORS
242. OPERATIONAL EFFICIENCY ENHANCEMENT IN THE DEVESTING PROCESS OF JEWEL MANUFACTURING THROUGH AUTOMATION
243. OPTICAL FIBRE COMMUNICATION BASED MULTI CONTROL SYSTEM FOR UNIVERSAL MOTOR.
244. OPTIMIZATION OF A DISTILLATION PROCESS" OPTIMIZATION OF A DISTILLATION PROCESS
245. OPTIMIZATION OF DCS PRE-COMMISSIONING AND COMMISSIONING.

246. OPTIMIZATION OF DEEP WATER DRILLING PERFORMANCE WITH CHANGES IN DRILLING FLUID DESIGN AND OTHER PERIPHERALS
247. OPTIMIZATION OF HEPA FILTERS FOR HVAC APPLICATIONS USING ACCELERATED LIFE CYCLE ANALYSIS
248. OPTIMIZATION OF MACHINING CYCLE TIME & PRODUCTIVITY THROUGH OPTIMIZED MACHINING STRATEGY
249. OPTIMIZATION OF MOBILE SWITCHING CENTER
250. OPTIMIZATION OF POLYURETHANE ENAMELLED COPPER WIRE PROCESS
251. OPTIMIZATION OF PRODUCTION IN CONCRETE BATCHING PLANTS
252. OPTIMIZATION OF PROJECT DELIVERY TIME THROUGH EFFECTIVE PROJECT MANAGEMENT
253. OPTIMIZATION OF RAW MATERIAL PROCUREMENT PROCESS IN TRANSMISSION LINE TOWER MANUFACTURING
254. OXYGEN ANALYSER
255. PARASITIC CURRENT MEASUREMENT & DATA LOGGING TECHNIQUE
256. PARTS LOCALISATION
257. PERFORMANCE EVALUATION & ENHANCEMENT OF WHRB'S EFFICIENCY
258. PERFORMANCE EVALUATION OF SAP IMPLEMENTATION PROJECTS USING DATA ENVELOPE ANALYSIS (DEA)
259. PHOTOGRAMMETRIC 3D SCANNER
260. PLANT COST ANALYSIS & PRODUCT COSTING PLANT COST ANALYSIS & PRODUCT COSTING
261. POWER CONSUMPTION REDUCTION IN DISC PAD MODULE
262. POWER PLANT STEAM SYSTEM – EFFICIENCY IMPROVEMENT
263. POWER QUALITY AND PROTECTION SYSTEMS
264. POWER SYSTEM AUTOMATION (PSA) FOR ONSHORE/OFFSHORE APPLICATIONS
265. PREDICTION OF TOOL WEAR DURING TURNING OF AISI304 WITH CARBIDE TOOL USING FORCE RATIO
266. PRESSURE REGULATION IN SOFT WATER SYSTEM
267. PREVENTING OFFLOADING OF GAS TURBINE IN BOOSTER COMPRESSOR DURING SUMMER IN NGL COMPLEX.
268. PREVENTIVE MAINTENANCE OF DOWNHOLE ELECTRONICS BOARDS USING TECHNIQUES/AGING GUIDELINES
269. PROACTIVE MAINTENANCE OF MATERIAL HANDLING SYSTEM IN ALUMINIUM SMELTER
270. PROCESS EFFICIENCY IMPROVEMENT IN SOLVENT RECOVERY PLANT
271. PROCESS MAPPING OF ROLLER TEST BENCH
272. PROCESS MODIFICATION OF PACKAGING SYSTEM
273. PROCESS YIELD AND PROCESS COST REDUCTION
274. PRODUCT AND COST OPTIMIZATION IN SUPPORTING PLATE KBK I AND KBK II FOR GLOBAL SOURCING BUSINESS VIA PROCESS AND PRODUCTION SYSTEM IMPROVEMENTS AT SUPPLIER KOLTE PRESSING WORKS
275. PRODUCT IDENTIFICATION AND TRACEABILITY
276. PRODUCT IMPROVEMENT
277. PRODUCT MODIFICATION FOR BETTER EFFICIENCY AND SAFETY
278. PRODUCT REDESIGN FOR LOW COST MANUFACTURING PROCESS
279. PRODUCT YIELD IMPROVEMENT BY MANUFACTURING PROCESS ENHANCEMENT
280. PRODUCTIVITY ENHANCEMENT THROUGH PROCESS INNOVATION
281. PRODUCTIVITY IMPROVEMENT BY IMPLEMENTATION OF CORE ASSEMBLY FIXTURE
282. PRODUCTIVITY IMPROVEMENT BY REDUCTION IN IN-HOUSE REJECTION
283. PRODUCTIVITY IMPROVEMENT IN A CLASS SERVO PRESS LINE
284. PRODUCTIVITY IMPROVEMENT IN TRACTOR ASSEMBLY THROUGH LEAN SIX SIGMA
285. PRODUCTIVITY IMPROVEMENT OF MIRRORS ASSEMBLY FOR PASSENGER CAR
286. PROJECT MANAGEMENT
287. PROJECT MANAGEMENT AND PROJECT CONTROL
288. PROJECT MANAGEMENT FOR INSTALLATION AND COMMISSIONING OF CEM ACCESS CONTROL SYSTEM AT BARCLAYS SHARED SERVICES, NOIDA, UP

289. PROJECT MANAGEMENT FOR INSTALLATION, COMMISSIONING AND PERFORMANCE TESTING OF AIR-CONDITIONING SYSTEM FOR IOCL OHCU PROJECT, HALDIA, WEST BENGAL.
290. PROJECT MANAGEMENT IN CONSTRUCTION INDUSTRY IN POWER PLANT INSTRUMENTATION WORK
291. PSO BASED ECONOMIC EMISSION DISPATCH WITH FUZZY OBJECTIVES
292. PUBLICATIONS TIMELINE
293. PUMP PIPING DESIGN
294. QC PROBLEM SOLUTION IN LPG NOT FILLING IN PASSENGER CAR (HYUNDAI EON)
295. QUALITY CONTROL IN COLD ROLLED COILS AFTER REMOVING OF DEFECTS I.E. ROUGH SURFACE IN HOT ROLLED COILS THROUGH CONTINUOUS ANNEALING AND PICKLING PROCESS
296. QUALITY CONTROL IN COLD ROLLED COILS AFTER REMOVING OF DEFECTS I.E ROUGH SURFACE IN HOT ROLLED COILS THROUGH CONTINUOUS ANNEALING AND PICKLING PROCESS
297. QUALITY IMPROVEMENT (REDUCE REJECTION IN HYUNDAI I20 PASSENGER CAR BODY PART OF REAR FLOOR- SHEET METAL)
298. QUALITY IMPROVEMENT IN COMPRESSOR ASSEMBLY LINE BY REDUCING PERFORMANCE NG DEFECT
299. QUALITY IMPROVEMENT ON "DASH BOARD (BOLT ON) ASSEMBLY"
300. QUALITY MANAGEMENT SYSTEM
301. QUALITY VARIATION CONTROL CHARACTERISTICS TARGET - IMPROVEMENTS
302. RAILWAY SIDING WORKS-ADDITIONAL FEEDER LINE
303. RAPID PROTO PARTS DEVELOPMENT USING VARIOUS RAPID PROTO TYPING TECHNIQUES LIKE FDM, 3D PRINTER, SILICON MOULD, VACUUM CASTING, METAL CASTING & CNC MACHINING FOR NEW PRODUCT DEVELOPMENT.
304. REACTOR CONTROL OF SHORT CIRCUIT CURRENT & HIGH VOLTAGE
305. REAR GRIP PROCESS CHANGE FROM PAINTING TO POWDER COATING
306. RECIPROCATING GAS COMPRESSOR RELIABILITY ENHANCEMENT
307. RECOVERY OF HYDROGEN FROM ISOM NET-GAS
308. REDESIGNING OF CLUTCH PLATE TO ELIMINATE CUSTOMER COMPLAINT
309. REDUCE THE LINER BORE OVER SIZE PROBLEM IN CYLINDER BLOCK
310. REDUCE THE VALVE LEAKAGE PROBLEM IN MARUTI SWIFT DIESEL ENGINE, FROM CYLINDER HEAD
311. REDUCE WRONG PART FITMENT
312. REDUCING RPN RATING AMONG TOP 3 RPN IN FMEA
313. REDUCING WELD DISTORTION IN PRESSURE VESSEL DURING FABRICATION.
314. REDUCTION IN DELAY AT Z#4 MILL
315. REDUCTION IN LEAD TIME BY PRE ALIGNMENT OF ENGINE AUXILIARY MODULE IN THE ABSENCE OF DG SET
316. REDUCTION IN MANUFACTURING COST OF TATA AGRICO SHOVELS AT EPA'S
317. REDUCTION OF DOWNTIME IN AUTO CUTTER MACHINE (BOIENG SLIDE CELL)
318. REDUCTION OF LOW TORQUE REJECTION/REWORK IN G25 ASSEMBLY
319. REDUCTION OF MOTOR FAILURE AT SPD PLANT
320. REDUCTION OF START UP NEWSPRINT WASTE DUE TO COLOR REGISTER OUT PROBLEM.
321. REDUCTION OF SUPPLIER REJECTION PPM
322. REDUCTION OF TOGGLE PRINTING REJECTION
323. REDUCTION OF WAITING TIME IN SHIPPING CONVEYOR
324. REFORMER CATALYST
325. REGENERATIVE BRAKING IN CONVENTIONAL CARS
326. REJECTION REDUCTION IN VW LINE
327. RELIABILITY CENTERED MAINTENANCE OF ELECTRICAL EQUIPMENTS IN PETROLEUM REFINERY
328. RELIABILITY IMPROVEMENT OF POLYETHYLENE REACTOR CIRCULATION PUMP MECHANICAL SEAL SYSTEM

329. REPLACEMENT OF ACTIVATED CHARCOAL WITH CHARCOAL IMPREGNATED PADS AND CYCLE TIME REDUCTION FOR THE PRODUCT OF ZIDOVUDINE
330. REPLACEMENT OF ELECTROSTATIC PRECIPITATORS BY BAG FILTER TO COMPLY TO THE POLLUTION CONTROL NORMS.
331. RETROFITTING OF CUP OD GRINDER
332. RISK SPARES ANALYSIS FOR CRITICAL EQUIPMENTS
333. ROAD TO RIG CORRELATION FOR BARKE FRICTION MATERIAL LIFE PREDICTION
334. ROBOTIC ROLLER HEMMING CELL FOR REGULAR AND COMPACT VARIANT OF HOOD
335. RUGGED COMPUTING SYSTEM FOR MILITARY APPLICATIONS
336. SAFE DESIGN FOR OPERATION & MAINTENANCE OF BULK MATERIAL HANDLING EQUIPMENTS – AN ANALYSIS OF STANDARDS & REQUIREMENTS VS ACTUAL DESIGN IN THE VIEW OF OCCUPATIONAL SAFETY & HEALTH.
337. SAFETY & MAINTENANCE IN CONSTRUCTION INDUSRY
338. SAP BASED LOGISTICS AND SUPPLY CHAIN MANAGEMENT USING CROSS DOCKING.
339. SCRAP REDUCTION PROJECT IN BTS PRODUCTS MANUFACTURING
340. SEAMLESS MOBILITY BETWEEN CURRENT AND FUTURE IP NETWORKS
341. SELECTION OF TECHNOLOGY FOR TREATMENT OF SPENT CAUSTIC EFFLUENT FROM ABU DHABI REFINERY
342. SEMI-AUTOMATIC GLASS WASHING M/C
343. SET UP CHANGE TIME REDUCTION FOR MECHANICAL AND ELECTRONIC CYLINDER BLOCK IN NEW CYLINDER BLOCK LINE.
344. SET UP TIME REDUCTION ON LASER CUTTING MACHINE USING DMAIC
345. SETUP OF PRODUCTION PLANNING & CONTROL DEPARTMENT
346. SETUP TIME REDUCTION IN MASTER BOOSTER ASSEMBLY LINE.
347. SETUP TIME REDUCTION IN PISTON ROD HARDENING MACHINE
348. SIGNAL INTEGRITY VALIDATION WIZARD FOR LPDDR2 INTERFACE ON SOC
349. SIMPLIFICATION OF CONTROL SYSTEM PROGRAMMING USING COMMAND INTERFACE
350. SINGLE MINUTE EXCHANGE OF DIE (SMED) IS BEHIND THE SUCCESS OF JUST IN TIME MANUFACTURING CONCEPT IN SHOCK ABSORBER INDUSTRIES.
351. SIX SIGMA METHODS FOR ROBUST PRODUCT DESIGN
352. SKELETON METHODOLOGY IN CATIA V5
353. SOLAR PHOTOVOLTAIC ARRAY & BATTERY SIZING
354. SPEED DETECTION USING IMAGE PROCESSING
355. STANDARDISATION TO INTERFACE FANUC CNC GRINDING MACHINE
356. STANDARDIZING THE SECONDARY SUPPORT MEMBER SIZES FOR PIPING SUPPORTS
357. STATISTICAL PROCESS CONTROL ON CYLINDER HEAD VALVE GUIDE & VALVE SEAT MACHINING
358. STUDY OF COMPRESSOR WASHING IN GAS TURBINE.
359. STUDY ON REDUCTION OF EFFLUENT LOAD BY MEANS OF SEGREGATION, DISTILLATION AND RECYCLE.
360. SUSTAINABLE ENERGY MANAGEMENT USING SOLAR POWER AND LED LIGHTING
361. SWRO FOR OFFSHORE PLATFORM
362. TECHNO-ECONOMIC ASSESSMENT OF SOLAR POWER IN INDIA
363. TECHNOLOGY SOLUTION FOR LOGISTICS AND SUPPLY CHAIN MANAGEMENT
364. TELECOM NETWORK FUDNAMENTALS & CASE STUDY ON PROPOSED APPROACH FOR MPLS IMPLEMENTATION FOR A BANKING ENTERPRISE.
365. TEST TRACK PASS RATIO IMPROVEMENT
366. TESTING AND COMMISSIONING OF NEW 132/11KV POWER TRANSFORMER
367. THREE PHASE VOLTAGE REGULATOR USING SCR AND MICRO-CONTROLLER.
368. TO CONTROL PROCESS DEFECT USING ICOP (INSERTION COMPONENTS OBSERVATION POST)
369. TO CONTROL THE DIVERSION OF MATERIAL DUE TO ROLLED SCRATCH IN COLD ROLLED STAINLESS STEEL
370. TO ELIMINATE QUALITY DEFECT BY AUTOMATED ROTARY UNIT

371. TO ELIMINATE THE LEAKAGE FROM OIL COOLER SIDE Ø25MM WELCH PLUG HOLE ON ENGINE THROUGH QUALITY CONTROL.
372. TO IMPROVE SAFETY & RELIABILITY OF LIME STONE HYDRAULIC WAGON TIPPLER AND SIDE ARM CHARGER.
373. TO INCREASE THE VEHICLE STRAIGHT PASS THROUGH REDUCING VEHICLE ASSEMBLY DEFECTS.
374. TO REDUCE FIP(FUEL INJECTION PUMP) FAILURE CASES IN ECOMAX DIESEL ENGINE BY 50%
375. TO REDUCE THE BREAKAGE OF SOLAR CELLS AT PVD SECTION, FROM INITIAL LEVEL OF 1.4% TO WITHIN 0.7 %
376. TO REDUCE THE CYCLE TIME OF VARNISH PLANT
377. TO REDUCE TRANSMISSION ASSEMBLY RPH
378. TO REDUCE TRANSMISSION TESTING RPH (REPAIRS PER HUNDRED)
379. TO REDUCE WET FIBRE MOISTURE VARIATION AFTER FINAL SQUEEZING IN AFTREATMENT # 3
380. TO STUDY THE PROCESS PERFORMANCE USING THE STATISTICAL PROCESS
381. TOOL FOR SERVICING SUSPENSION LOWER CONTROL ARM
382. TOTAL QUALITY MANAGEMENT
383. TRANSMISSION REENGINEERING FOR 3G IMPLEMENTATION
384. UNDER GROUND PIPING WORKS FOR SULFUR RECOVERY UNIT, HPCL, MAHUL, MUMBAI.
385. UPGRADATION OF 100 TON JOB ROATING MACHINE
386. UPGRADING WOOD WORKING APPLICATION (ABRASIVE PRODUCT) FROM FLINT PAPER TO ALUMINUM OXIDE PAPER
387. VALUE ANALYSIS / VALUE ENGINEERING (VA/VE) USING COMPUTER AIDED ENGINEERING (CAE) FOR PASSENGER CAR WHEEL
388. VALUE ENGINEERING & ITS APPLICATIONS IN INDUSTRY – REDESIGN OF AUTOMATIC LOAD SENSING VALVE FOR COST REDUCTION
389. VALUE ENGINEERING OF FIRE PROTECTION SYSTEM FOR THE WAREHOUSE
390. VALVE THREADING (FITTING) MACHINE INSTRUMENTATION
391. VENDOR EVALUATION – IMPLEMENTATION OF REAL TIME MANAGEMENT SYSTEM USING SAP
392. VIRTUAL PREDICTION OF DISTORTION IN A BUTT JOINT DURING FABRICATION.
393. VISION BASED INSPECTION SYSTEM
394. VMWARE VIRTUALIZATION
395. WARRANTY COST REDUCTION BY IMPLEMENTATION OF RE-BORING OF ENGINE CYLINDER AT THE DEALERSHIPS
396. WARRANTY COST REDUCTION BY REDUCING RADIATOR LAEKAGE THROUGH SIX SIGMA APPROACH
397. WATER CONSERVATION THROUGH RECYCLING OF USED WATER IN TRACTOR WASHING
398. WATER SAVING BY USING WATER EFFICIENT FIXTURE AND REUSE OF WASTE WATER
399. WEB BASED FINGERPRINT RECOGNITION SYSTEM
400. WELDING PROCEDURE QUALIFITION ON PLATE MATERIAL GRADE SA 516 GR 70 N WITH IMPACT @ MINUS 60 DEG C BY SMAW & SAW PROCESS.
401. WELDING PROCESS IMPROVEMENT FOR SOLVING QUALITY PROBLEM
402. YARN QUALITY IMPROVEMENT IN TEXTILE DOUBLING MACHINE
403. YIELD IMPROVEMENT
404. YIELD IMPROVEMENT BY PROCESS DEFECT CONTROL IN DRY ETCH

Information Systems

405. ALERT MANAGEMENT SYSTEM - AMS
406. AUTOMATED VERIFICATION OF DPI ENGINE WITH WINDOWS APPS
407. BENEFITS OF CONFIGURATION MANAGEMENT TOOL (SCCM) IN IT INFRASTRUCTURE ENVIRONMENT
408. CALL PROCESSOR USING SIP PROTOCOL
409. CONTACT CLOSURE INTERFACE FOR LIGHTING CONTROL SYSTEM
410. CUSTOMER PREMISES EQUIPMENT
411. DATA CENTRE OPERATIONS MANAGEMENT SYSTEM USING HTT (DACOM)

412. DATABASE MANAGER
413. DATACENTRE CONSOLIDATION WITH SOLARIS VIRTUALIZATION
414. DESIGN AND DEVELOPMENT OF DICOM SOFTWARE FOR MODALITY: ULTRASOUND SCANNER
415. DIAGNOSING METHODOLOGY USING SIP MESSAGES FOR AVAYA UNIFIED COMMUNICATIONS PRODUCTS.
416. DIGITAL SUBSCRIBER LINE PERFORMANCE ANALYZER
417. ELECTROLOGIXS – DISTRIBUTED INTERLOCKING SYSTEMS
418. EMPLOYEE TASK MANAGEMENT SYSTEM (ETMS)
419. ENERGY METER DATA READING DEVICE AND GUI FOR CONSUMER
420. ENGINE TO GENERATE ALL PATHS OF A FLOWCHART
421. GESTURE DETECTION FOR MULTIMEDIA APPLICATIONS
422. HA (HIGH-AVAILABILITY) CLUSTER IMPLEMENTATION USING SERVICE GUARD
423. HIGH AVAILABILITY WEB SERVICES USING VERITAS CLUSTER SERVER
424. IEXPORT TOOL
425. IMPRO(INDUSTRIAL MAN POWER AND RESOURCE ORGANISER)
426. LOCATION BASED CHARGING FOR MOBILE
427. MICROLOK II HOTSTANDBY SYSTEM BASED AUTOMATIC BLOCK WORKING IN RAILWAYS
428. MODELING AND DETECTION OF CAMOUFLAGING WORM
429. MULTI MEDIA MANAGER
430. NETWORK INVENTORY MANAGEMENT
431. ONLINE PAYMENT AND LINK SYSTEM (.OPAL) - QATCH
432. POWER MANAGEMENT TEST TOOL FOR PC PLATFORM
433. PRIVATE CLOUD IMPLEMENTATION USING OPENSTACK
434. RS485 BASED SMART READER TERMINAL
435. SAN DATA REPLICATION THROUGH WAN (COMPUTER NETWORKING)
436. STEGANOGRAPHY
437. TREND ANALYSIS USING DATAMART
438. ULTRASOUND 4D VOLUMETRIC IMAGING
439. VMWARE SITE RECOVERY MANAGER.
440. XEROX ONLINE TECHNICAL ALERTESCALATION SOLUTION.

**LIST OF DISSERTATION SUBMITTED BY STUDENTS UNDER THE WORK
INTEGRATED LEARNING PROGRAMMES IN THE YEAR 2012**

Consultancy Management

1. ADVANCEMENT OF AUTOMATION IN INDIAN POWER GENERATION
2. AN EMPIRICAL STRATEGY ON THE MARKETING POLICY OF SUZLON ENEGERY
3. APPLICATION OF PATINFORMATICS AS COMPETITIVE INTELLIGENCE TOOL IN BIOINFORMATICS SECTOR
4. APPLICATION OF RAILWAY SIGNALLING ON INDUSTRIAL RAILROADS - CREATION OF NEW BUSINESS OPPORTUNITIES BY DEVELOPING INNOVATIVE SOLUTIONS IN DESIGN, INSTALLATION AND OPERATION
5. BASELINE SURVEY FOR ASSESSING THE NEEDS OF SOCIO-ECONOMICALLY DISADVANTAGED SECTIONS OF SOCIETY IN AND AROUND GURGAON DISTRICT
6. BPR TO ENHANCE OVERALL CUSTOMER EXPERIENCE FOR A LADING TELECOM SERVICE PROVIDER IN SOUTH AFRICA
7. BUSINESS EXCELLENCE THROUGH BPR RE-ENGINEERING PROCURE-TO-PAY
8. BUSINESS TOGETHER AS A SERVICE CISCO : CLOUD COMPUTIN
9. CABLE SYSTEMS FOR MRVC
10. CENTERS OF EXCELLENCE
11. CENTRAL FORMS REPOSITORY SYSTEM
12. CHALLENGES IN GLOBAL DEPLOYMENT OF ERP IN BANKING INDUSTRY
13. CHALLENGES IN TECHNOLOGY TRANSFER
14. CLOUD COMPUTING SECURITY
15. CONSUMER PREFERENCE IN SELECTING A BRAND (IFB,LG , SAMSUNG, GODREJ, KENSTAR, ONIDA& ELECTROLUX) ON THE BASIS OF 4 PS OF MARKETING MIX, WHICH ARE PRICE, PLACE , PRODUCT & PROMOTION.
16. COST IMPROVEMENT PROJECT BY ELIMINATION OF SILICONIZED PAPER WASTAGE IN BAND AID PRODUCTION
17. DAVINCI VOICE PLATFORM - PRODUCT ENHANCEMENT
18. DEBT AND ITS RECOVERY FROM AN MSME'S PERSPECTIVE.
19. DESIGNING "MANAGEMENT INFORMATION SYSTEM"- FOR HUMAN RESOURCES FUNCTION OF - TRACTORS AND FARM EQUIPMENTS LIMITED - CHENNAI
20. DEVELOPMENT OF OUTCOME BASED FRAMEWORK (OBF) FOR INFRASTRUCTURE MANAGEMENT SERVICES (IMS) FOR NASSCOM
21. EFFECTIVENESS & IMPACT OF IMPLEMENTATION OF ISO STANDARDS IN MICRO AND SMALL ENTERPRISES.
22. EFFICIENT RESOURCE UTILIZATION AND COMPETENCY ASSESSMENT
23. EMPLOYEE FIRST, ENTREPRENEUR NEXT: THE NEW NORMAL IN EMPLOYER-EMPLOYEE RELATIONSHIP
24. EXPLORING TECHNO-COMMERCIAL OPPORTUNITIES FOR KOREAN ROBOTICS INDUSTRY IN INDIA. (CAPACITY BUILDING THROUGH EDUCATION & RESEARCH IN ROBOTICS.)
25. EXTENDED MIS SYSTEM IN ORACLE FLEXCUBE
26. FINANCIAL ANALYSIS FOR A THERMAL POWER PLANT PROJECT
27. FRAMEWORK FOR MEASURING AND MANAGEMENT OF CUSTOMER SATISFACTION.
28. GAINING COMPETITIVE EDGE THROUGH EFFECTIVE STRATEGIC R&D MANAGEMENT
29. GEO-TECHNICAL STUDIES FOR DETAILED DESIGN OF BRIDGE NOS 39 & 43 OF KATRA-QAZIGUND RAIL LINK PROJECT, J&K
30. GUIDELINES TO AID FOCUS ON SCOPE DURING VARIOUS STAGES OF A PROJECT
31. HIGHER SERVICE AVAILABILTY AND IMPROVED SENIOR MANAGEMENT AWARENESS OF IT ESTATE HEALTH BY ASSESSMENT AND APPLICATION OF IT ORCHESTRATION
32. IDENTIFYING ISSUE ROOT CAUSE & OPTIMISING TIME TO MARKET

33. IMPLEMENTATION OF KNOWLEDGE MANAGEMENT SYSTEM AS A CORE BUSINESS STRATEGY IN ONE OF THE WORLD'S LARGEST BANK – HAVING GLOBAL OPERATIONS, EXPANSION STRATEGIES, OUTSOURCING INITIATIVES
34. IMPLEMENTING SECURE WEB DESIGN FOR PROFILE DATA MANAGEMENT SYSTEM
35. IMPROVING GIS PROJECT MANAGEMENT BY THE USE OF PROJECT MANAGEMENT MODELS
36. IMPROVING SOFTWARE LICENSE MANAGEMENT IN AN ORGANIZATION
37. IMPROVING TESTING DEVELOPMENT LIFECYCLE ATTRIBUTES USING REFACTORING TECHNIQUES & INDUSTRY BEST PRACTICES
38. INCREASE OPERATIONAL EFFICIENCY INCLUDING COST REDUCTION FOR SELECT BUSINESS DIVISION OF NIIT BY COMPARATIVE STUDY, DESIGN AND IMPLEMENTATION OF CLOUD BASED TECHNOLOGIES FOR LEARNING AND DELIVERY.
39. INSIGHT INTO THE AEROSPACE PRODUCT DEVELOPMENT AND QUALIFICATION IN INDIA
40. KNOWLEDGE MANAGEMENT
41. LEAN MANUFACTURING TOOLS & TECHNIQUES IN ELECTRICAL CONTROL PANEL INDUSTRY (DISCRETE MANUFACTURING)
42. MAKING BT SALES CYCLE EFFICIENT AND ENHANCE CUSOTMER EXPEREINCE
43. MAKING THE CONCEPT OF INNOVATION WORK
44. MANAGING AND IMPROVING PROJECT CASH FLOW IN TIMES OF CRISIS: FOCUS ON CONSULTING ENGINEERING PROJECTS
45. MANAGING OFFSHORE OUTSOURCING OF RESEARCH AND DEVELOPMENT
46. MAXIMIZING PROJECT EXECUTION EFFECTIVENESS: A PRAGMATIC APPROACH
47. NEED OF AN INTEGRATED HOSPITAL MANAGEMENT SYSTEM IN SMALL AND MEDIUM HOSPITALS IN INDIA
48. NEW PRODUCT LAUNCH FOR SME SEGMENT IN RETAIL INDUSTRY
49. OFFSHORE OUTSOURCING PROJECT-RISK AND CHALLENGES
50. OVERCOMING THE CHALLENGES IN PACKAGE TESTING
51. PETROLEUM REFINERY PLANNING WITH “OIL SANDS “-A FUTURE ENERGY PERSPECTIVE.
52. PRIVATIZATION OF ELECTRIC UTILITY - MARKET STUDY, FEASIBILITY & BUSINESS MODEL
53. PROCESS IMPROVEMENTS FOR BANKING CLIENT
54. PROCESS MODEL FORMATION FOR MICROSOFT DYNAMICS PRACTICE
55. PROJECT PLANNING & IMPLEMENTATION – A CASE STUDY OF HOGENAKKAL WATER SUPPLY & FLUOROSIS MITIGATION PROJECT
56. PROJECT SCHEDULING AND RISK MANAGEMENT
57. QUALITY MANAGEMENT SYSTEM (QMS) IMPLEMENTATION AND IMPROVEMENT ACTIVITY FOR GLOBAL DELIVERY.
58. QUALITY OPTIMIZATION USING ORTHOGONAL ARRAY AND RISK BASED TESTING
59. RAPID IMPLEMENTATION METHODOLOGY FOR SAP ERP BUSINESS SOLUTION USING BEST PRACTICES IN SMALL & MEDIUM SIZED ENTERPRISE.
60. REDESIGN OF PROSPECT CAMPAIGN PROCESS FOR PERFORMANCE EFFICIENCY
61. REVIEW OF PROJECT PLANNING - A SELF ASSESSMENT
62. ROLE OF ICT IN SCM
63. SERVICE LEVEL METRICS BASED GOVERNANCE (SLMG) FRAMEWORK FOR AGILE PROJECTS
64. SHELF LIFE OF A PRODUCT – FORECAST ANALYSIS
65. STRATEGISING KNOWLEDGE MANAGEMENT INITIATIVES IN AN AUTOMATION INDUSTRY
66. STRATEGIZE NORTON PRODUCTS TO CAPTURE GROWING INDIAN CONSUMER SECURITY MARKET
67. STRATEGY IN EPC PROJECTS EXECUTION
68. STRATEGY ROLL-OUT OF A LICENSING PROGRAM
69. STUDY AN MARKET POTENTIAL OF SAP-ERP SOLUTIONS IN TATA CONSULTANCY SERVICES
70. STUDY AND DEVELOPMENT OF STRATEGY IN POWER SECTOR
71. STUDY AND IMPROVEMENTS IN OPERATIONS OF A TEXTILE DYEING FACILITY

Quality Management

72. A STUDY ON CONSUMER EXPECTATIONS FOR QUALITY IN SUGAR AND SUGAR VARIANTS
73. ADOPTING AUTOMOTIVE BEST PRACTICES TO AEROSPACE INDUSTRY
74. ANALYSIS ON ATTRITION RATE OF GRADUATE ENGINEER TRAINEES USING DMAIC TECHNIQUE
75. AUTOMATED SMOKE TESTING OF METERMATE™ SOFTWARE
76. CAPITAL ONE – MORTGAGE HOMELOANS.
77. DEFECT MANAGEMENT AND PREVENTION METHODOLOGIES USING TQM APPROACH
78. ESTABLISHING INTEGRATED (QEHS) MANAGEMENT SYSTEM: QMS, EMS & OHSMS, IN DEFENCE PRODUCTION ORGANIZATIONS
79. EVALUATION OF SOFTWARE QUALITY THROUGH DEFECT MATRIX
80. IMPROVE SOFTWARE TESTING PROCESS AND PRODUCT QUALITY USING VALUE STREAM MAPPING TECHNIQUE
81. IMPROVE VEHICLE PROCESS TO REDUCE DEFECTS.
82. IMPROVEMENT OF REQUEST SUPPORT PRACTICES
83. PARAMETER OPTIMAIZATION OF COLD FORGONG PROCESS FOE OUTPUT SHAFT FOR ON OFF APLLICATION IN PSSENGR CAR BY DOE METHOD
84. PROCESS ANALYSIS AND ENHANCEMENT TO REDUCE PRE-RELEASE DEFECTS AND TO IMPROVE QUALITY OF DELIVERABLES TO THE CUSTOMERS
85. PROCESS STANDARDIZATION THROUGH QMS & SIX-SIGMA METHODOLOGY
86. QUALITY MANAGEMENT SYSTEMS AND QUAOLITY RISK MGMT - APPROACHES TO CURRENT GOOD MANUFACTURING PRACTICE (CGMP) REGULATIONS IN PHARMACEUTICAL MANUFACTURING
87. REDUCING RISK IN EXECUTING ORDERS FROM AEROSPACE PRIME COMPANIES USING QUALITY TOOLS
88. REDUCTION IN SPILLOVER TASKS FROM A SPRINT
89. SOFTWARE QUALITY CONTROL OF CONSUMER MESSAGING APPLICATION GROUP
90. STRATEGIC MANAGEMENT EXCELLENCE – A MODEL FOR LNG PLANTS
91. TO STUDY AND DEVELOP AN INTEGRATED MODEL FOR HANDLING QUALITY ASSURANCE OPERATION OF MULTIPLE SOFTWARE RELEASES

Manufacturing Management

92. 4F FILE PROJECT MANAGER (A CONTINUOUS IMPROVEMENT PROCESS)
93. A STUDY OF CAPITAL EXPENDITURE PLANNING IN ARROW COACH BUILDER
94. A FRAMEWORK FOR SUPPLY CHAIN MANAGEMENT
95. A STUDY ON CONSUMERS' ATTITUDE TOWARDS SHOPPING MALLS WITH SPECIAL REFERENCE TO SPENCER PLAZA, CHENNAI
96. ACHIEVING PARTNERING LEVEL IN ENGINEERING DESIGN OUTSOURCING
97. ADVANCE PROCESS & QUALITY PLANNING FOR PROTOTYPE MANUFACTURING PARTS
98. AIM EXPRESS
99. AIR TRAFFIC CONTROL SIMULATION SYSTEM
100. ALUMINUM MAGNET WIRE HERMETIC COMPRESSOR DEVELOPMENT.
101. AN EFFECTIVE MARKETING AND DISTRIBUTION STRATEGY FOR THE NEWLY ADDED FIBERGLASS INSECT
102. ANALYSIS AND CORRECTIVE ACTIONS FOR MIXING AND MOULDING IN COMBINATION STONE
103. ANALYSIS AND IMPLEMENTATION OF ROBUST DESIGN IN PULSE PICK UP MECHANISM IN GASMETER USING DFSS
104. ANALYSIS OF COLLEGE LIBRARY BEFORE & AFTER IMPLEMENTATION OF TQM
105. APPLICATION OF FMEA TOOL IN RING FRAME COMPONENTS
106. APPLICATION OF JIT/FMS/TQM COCEPTS IN OUR NEW MACHINE SHOP
107. ASSEMBLY OF ENGINES IN CONVEYOR SYSTEM FROM SINGLE POLE FIXTURE
108. AUTOMATED PARKING SYSTEM FOR TWO WHEELER
109. AUTOMATIC GENERATION OF MANUFACTURING DOCUMENT (PLANNING & INSTRUCTIONS) USING 3D CAD SOFTWARE AT FRONT END.
110. BODY CONTROL UNIT FOR COMMERCIAL VEHICLE
111. BREAKDOWN REDUCTION OF CONTAINER HANDLING EQUIPMENTS (CHE)

112. CAPACITY ENHANCEMENT BY PROCESS REENGINEERING & BENCHMARKING OF PRETREATMENT & ELECTRODEPOSITION PROCESS IN CABIN PAINT SHOP
113. CAPACITY ENHANCEMENT OF MHAWK (SCORPIO)ENGINE ASSEMBLY LINE.
114. CAR QUALITY IMPROVEMENT IN EXTERIOR FITMENT
115. CARBON FOOT PRINT REDUCTION IN A MANUFACTURING UNIT
116. CARBON FOOTPRINT
117. COMMISSIONING OF EXCLUSIVE CHILLED WATER SYSTEM FOR DUAL EXTRUDER COOLING CONVEYORS.
118. COST EFFECTIVE MANUFACTURING THROUGH IMPLEMENTATION AND DEVELOPEMENT OF ROBUST LEAN-SIGMA CULTURE.
119. COST ESTIMATION AND THEIR APPROACH TOWARDS COST REDUCTION
120. COST OF POOR QUALITY ESTIMATION
121. COST REDUCTION OF LAPTOP MECHANICAL ENCLOSURE BY ANALYSIS OF PRODUCT AND PROCESS DESIGN
122. COST SAVING OF RING GEAR THROUGH PROCESS CHANGE
123. CRIMPING PROCESS IMPROVEMENTS IN TWO PIECE WHEEL NUTS
124. CUSTOMISATION IN CAM-CNC PROGRAMMING FOR MANUFACTURING DIE-CASTING AND PRESS TOOL DIES.
125. CUSTOMISATION IN CNC PROGRAMMING FOR MANUFACTURING DIECASTING AND PRESS TOOL DIES.
126. CYCLE TIME REDUCTION IN TSD SHADES PAINT BATCHES AND RESOLVING THE ISSUE OF UNDER COMPLETION IN TSD DEEP SHADES BATCHES.
127. CYCLE TIME REDUCTION THROUGH AUTOMATION
128. DAS – PHARMA WATER SYSTEM MONITORING
129. DECISION SUPPORT SYSTEM (DSS) FOR OPTIMIZATION OF EMPLOYEE TRANSPORTATION
130. DECOMMISSIONING OF OIL AND GAS OFFSHORE PLATFORMS IN NORTH SEA OF NORWAY
131. DEPOSIT RESISTANCE IMPROVEMENT IN SOLENOID DIESEL INJECTOR BY INTRODUCING SHORT SEAT MACHINING PROCESS IN NOZZLE
132. DESIGN & DEVELOPMENT OF “O” LOOP DRAG TYPE CONVEYOR SYSTEM FOR UV PRODUCTION LINE
133. DESIGN & DEVELOPMENT OF A NEW SOLAR OPERATED HIGH SPEED TABLE FAN BY INCORPORATING ALL TECHNIQUES INVOLVED IN MANUFACTURING ORGANIZATION & MANAGEMENT.
134. DESIGN & DEVELOPMENT OF HOME AUTOMATION SYSTEM (HAS)
135. DESIGN & DEVELOPMENT OF NEEDLE SAFETY MECHANISM FOR I.V.CATHETOR
136. DESIGN & MANUFACTURING OF AUTOMATIC UT TESTING MACHINE
137. DESIGN AND DEVELOPMENT OF RUDDER HINGE FITTINGS FOR A COMMERCIAL PASSENGER AIRCRAFT
138. DESIGN AND DEVELOPMENT OF LATCH MECHANISM
139. DESIGN FOR SIX SIGMA OF A STRUCTURAL CROSS MEMBER
140. DESIGN OF A FORK LIFT SEAT
141. DESIGN OF AUTOMATIC STATION FOR ASSEMBLY OF DOVEL PIN AND GUIDE BUSH ON CRI
142. DESIGN OF BOLT HOLE TOOL FOR TRUCK WHEEL DISC
143. DESIGN OF CO-GENERATION UNIT FOR TYRE PLANT
144. DESIGN OF FLYWHEEL HOUSING FOR STATIONARY GAS ENGINES
145. DESIGN OF LOW COST MODULAR (LHD/RHD) WIPER SYSTEM
146. DEVELOPEMENT OF GLASS COMPOSITES FOR VARIOUS MILITARY AIRCRAFT
147. DEVELOPING THE FRAMEWORK FOR RESOLUTION OF CHRONIC QUALITY ISSUES IN MFN1 AND CASE ANALYSIS OF CHRONIC QUALITY ISSUE OF HYDRAULIC THROUGH FLOW LESS IN DLL NOZZLE
148. DEVELOPMENT AND TESTING OF INVISIBLE HEATING SYSTEM IN GLASS WINDOW
149. DEVELOPMENT OF A CONCEPTUAL FRAMEWORK TO ANALYSE SUPPLY CHAIN DESIGN PRACTICES FOR A MANUFACTURING INDUSTRY – CASE STUDY BHARAT FORGE LTD
150. DEVELOPMENT OF BUSINESS PERFORMANCE MANAGEMENT FRAMEWORK FOR BGEPII
151. DEVELOPMENT OF HERMITICALLY SEALED COMPRESSOR USING ALTERNATIVE REFRIGERANTS

152. DEVELOPMENT OF HIGH PRESSURE,LIGHT WEIGHT HOSE WITH COMPOSITE REINFORCEMENT MATERIALS FOR AEROSPACE APPLICATIONS
153. DEVELOPMENT OF INTERNAL LININGS FOR GATE AND TRUNNION MOUNTED BALL VALVES
154. DEVELOPMENT OF PLUG VALVES WITH INTERNAL LININGS
155. DEVELOPMENT OF PRODUCTION PLANNING & CONTROL(PPC) SYSTEM IN MAKE-TO-ORDER COMPANY
156. DISCRETE EVENT SIMULATION FOR WELDING OPERATIONS
157. E - SOURCING - AN EFFECTIVE TOOL FOR COST REDUCTION IN SUPPLY CHAIN MANAGEMENT
158. EFFECTIVENESS OF ENGINEER'S TRAINING
159. EFFECTS OF MACHINING PARAMETERS ON SURFACE FINISH OVER HARDENED DIE STEEL WORKING ON WIRE CUT EDM MACHINE
160. ELIMINATE THE BLISTER FORMATION ON CHROME PLATED ALUMINUM CASTING
161. ELIMINATION OF ALL GEAR ABNORMAL NOISE IN TRANSMISSION AND OPTIMIZING PROCESS PARAMETERS TO REDUCE NOISE
162. ELIMINATION OF ANGLE CHANGE REJECTS IN YOKE CELL
163. ELIMINATION OF CHRONIC CUSTOMER END LINE REJECTION - BASE COVER JOINT LEAK IN QUICK RELEASE VALVE OF AIR BRAKE SYSTEM
164. ELIMINATION OF CUSTOMER END LINE REJECTION-VACUUM LEAK IN NAVISTAR MASTER CYLINDER OF BRAKE SYSTEM
165. ELIMINATION OF LOSSES OF AGGREGATE SUPPLY IN MAINLINE RESULTING IN PRODUCTION LOSS IN EFFECTING THE CUSTOMER DELIVERY TARGETS.
166. ENERGY CONSERVATION
167. ENERGY CONSERVATION IN R A MINES BY IMPLEMENTING ENERGY AUDIT AND ITS DERIVED PROPOSAL.
168. ENERGY MANAGEMENT IN CROSS BAR COOLER TECHNOLOGY
169. ENGINE MOUNTED DIRECT DRIVE AC COMPRESSOR FOR LCV / ICV PASSENGER VEHICLE
170. ENGINE SHOP MACHINE DOWNTIME REDUCTION TO INCREASE PRODUCTIVITY
171. ENHANCEMENT OF PULVERISED COAL INJECTION (PCI)FOR ENERGY SAVING AND COST REDUCTION IN MINI BLAST FURNACES
172. ENHANCING SUPPLY CHAIN RESPONSIVENESS BY OPTIMISING OVERSEAS PROCUREMENT
173. EQUIPMENT RELATED TYRE SCRAP REDUCTION IN TYRE CURING
174. ERECTION AND COMMISSIONING OF NEW MIXING MILL
175. ERECTION,TESTING & COMMISSIONING OF 10 MWP SOLAR PLANT
176. ESTABLISHING NEW BENCH MARKS FOR PROCUREMENT LOGISTICS
177. EVALUATION & FEASIBILITY STUDY OF QUALITYMANAGEMENT SYSTEM FOR OUTSOURCING BUSINESS
178. FAILURE INVESTIGATION OF RADIATOR SUPPORTING BRACKET FOR STRUCTURAL VIBRATION PROBLEMS USING OPERATIONAL MODAL ANALYSIS, OPERATING DEFLECTION SHAPES AND FINITE ELEMENT ANALYSIS
179. FEASIBILITY STUDY AND DESIGN OF BELT AIRBAG FOR REAR SEAT BELTS TO IMPROVE THE PASSENGER SAFETY
180. FLEXIBLE INTERMEDIATE WAX TANK PROJECT
181. FOOL SETUP SCRAP MINIMIZATION AND FACILITATION
182. FORMING TOOL FOR 3 SIMILAR PRODUCTS IN COWL VEHICLE
183. FORMULATION AND IMPLEMENTATION OF STRUCTURED VALUE ENGINEERING PROCESS
184. FRONT AXLE BEAM DESIGN IN PICKUP TRUCK.
185. FRONT HUB DESIGN OPTIMIZATION THROUGH VALUE ENGINEERING AND VALUE ADDITION.
186. FUNCTION, FORM AND THE FIT (3F'S) THE KEY HUMAN FACTORS OF FOOTWEAR DESIGNING
187. GEOMETRY FIRST PASS YIELD IMPROVEMENT
188. HUMAN RESOURCE MANAGEMENT
189. IDENTIFICATION OF RECOVERING AND RECYCLING PROCESS FOR WASTE ACETONITRILE GENERATED IN DRUG MANUFACTURING PROCESS
190. IMPLEMENTATION OF SEMI-AUTOMATIC GREASE DISPENSING SYSTEM (PROCESS IMPROVEMENT)
191. IMPLEMENTATION OF DIRECT SUBCONTRACTING PROCESS IN SAP

192. IMPLEMENTATION OF FMEA IN ASSEMBLY LINE
193. IMPLEMENTATION OF LEAN LINE DESIGN (LLD) FOR A PRODUCT DC-DC CONVERTER
194. IMPLEMENTATION OF PROCESS QUALITY MEASUREMENT (PQM) IN CONVENTIONAL RELAYS
195. IMPLEMENTATION OF QUALITY GATES SYSTEM FOR VALUE CHAIN IN BOSCH PACKAGING TECHNOLOGY DIVISION.
196. IMPLEMENTATION OF SEMI AUTOMATIC TRANSVERSE BEAM WELDING MACHINE
197. IMPLEMENTING LEAN CONCEPT IN SMALL ASSEMBLY PRODUCTION LINE BY ELIMINATING WASTES AND IMPROVING THE PROCESS PERFORMANCE AND PRODUCTIVITY
198. IMPROVE EFFICIENCY IN MATERIAL REPLENISHMENT PROCESS
199. IMPROVE PRODUCTIVITY IN FOAMING PROCESS USING LEAN CONCEPTS
200. IMPROVED INVENTORY CONTROL FOR LEAN MANAGEMENT
201. IMPROVEMENT IN CCR -CALL COMPLETION RATION AVERAGE 85 %TO 99.95% OF TATA TELE-SERVICES NETWORK - RAJASTHAN
202. IMPROVING BUSINESS GROWTH BY ADOPTING PRODUCT DIVERSIFICATION STRATEGY
203. IMPROVING PARTICLE PERFORMANCE IN PLASMA ENHANCED CHEMICAL VAPOUR DEPOSITION CHAMBERS-SEMICONDUCTOR MANUFACTURING.
204. IMPROVING PUSH/PULL/PUSH ASSEMBLY PROCESS CONTROLS TO ELIMINATE CUSTOMER COMPLAINT
205. IMPROVING THE DESIGN PRODUCTIVITY-WITH FOCUS ON STANDARDIZATION, TOOLS & TECHNIQUES AND AUTOMATION
206. IMPROVISATION OF INWARD LOGISTICS AND SUPPLY CHAIN MANAGEMENT OF IMPORT MATERIALS
207. IN HOUSE DESIGN & DEVELOPMENT OF "CHASSIS DYNAMOMETER" FOR 3 WHEELER VARIANTS AT LOW COST
208. INDIGENIZATION OF 238 CC COMPRESSOR FOR NEW CUSTOMER
209. INFLUENCE OF FINITE ELEMENT ANALYSIS ON NEW PRODUCT DEVELOPMENT OF 32WAY CONNECTOR
210. INNOVATION & NEW TECHNOLOGY IN WAGON HANDLING EQUIPMENT AS DEVELOPED BY L&T TO CATER TO FUTURE INDUSTRIAL REQUIREMENT
211. INTEGRATION OF CLUTCH PEDAL AND CLUTCH CABLE TESTER
212. INTREGATION OF SBU & PROCESS IMPROVEMENT IN WEIR ENGINEERING SERVICES
213. INTRODUCTION OF AIR PRE HEATER IN WHR BOILERS FOR STEAM GENERATION
214. INTRODUCTION OF MEMBRANE BASED WATER TREATMENT (UF – RO – EDI) FOR POWER PLANTS
215. INVESTIGATION OF BEARING STRENGTH OF COMPOSITES
216. KILN UP-GRADATION-PLANT EXPANSION FROM 1100TPD TO 1450 TPD
217. LEAD TIME REDUCTION AT NOZZLE DIAPHRAGM MACHINING PROCESS
218. LEAD TIME REDUCTION IN NEW PRODUCT DEVELOPMENT
219. LEAD TIME REDUCTION OF INSTRUMENT CLUSTER DESIGN & DEVELOPMENT CYCLE
220. LEAN IMPLEMENTATION IN CAMSHAFT MANUFACTURING LINE
221. LEAN IMPLEMENTATION IN FINISHING LINE
222. LEAN MANUFACTURING IMPLEMENTATION IN FULCRUM LEVER SUBASSEMBLY
223. LEAN MANUFACTURING” FOR THROUGH-PUT TIME REDUCTION
224. LOGISTIC OPTIMISATION IN ENGINE FEEDING TO VEHICLE ASSEMBLY
225. LOGISTICS & SUPPLY CHAIN MANAGEMENT OF MANUFACTURING INDUSTRY IN INDIA – A STUDY & ANALYSIS.
226. LOW COST PLATFORM INSTRUMENT CLUSTER FOR EMERGING MARKET
227. LOW ENTRY BUS (RE/FE) CHASSIS FRAME OPTIMIZATION
228. MACHINE RELATED SCRAP REDUCTION IN TYRE CURING PROCESS
229. MAINTENANCE ENGINEERING IN SHIP LAUNCHED SURVEY MOTOR BOATS USED FOR HYDROGRAPHIC SURVEY OF COASTLINE
230. MANAGING SUPERBOMS
231. MANUFACTURING LEAD TIME REDUCTION BY VALUE STREAM MAPPING
232. MANUFACTURING LEAD TIME REDUCTION OF COMPLEX PLAIN JEWELLERY PRODUCTS (22KT GOLD)
233. MANUFACTURING PARTS SCHEDULING METHOD FOR DISCRETE MANUFACTURING

234. MANUFACTURING PROCESS ESTABLISHMENT OF TRIPLE OFFSET BUTTERFLY VALVE WITH AN IMPROVED METHOD
235. MANUFACTURING PROCESS DEVELOPMENT FOR ELECTRIC POWER STEERING
236. MEASUREMENT CAPTURE APPLICATION & WELL PRODUCTION DASH BOARD FOR UPSTREAM OPERATIONS MANAGEMENT IN OIL & GAS SUPPLY CHAIN
237. MITIGATION OF RISK IN MATERIAL MANAGEMENT (SUB CONTRACT)
238. MODEL LINE OFFSET
239. MODERNISATION OF ELECTRIC ARC FURNACE WITH PLC BASED SCADA CONTROL SYSTEM
240. NEW PRODUCT DEVELOPMENT
241. NEW PRODUCT DEVELOPMENT (GAMMA COMPENSATED ION CHAMBER) NEW PRODUCT DEVELOPMENT (GAMMA COMPENSATED ION CHAMBER) NEW PRODUCT DEVELOPMENT (GAMMA COMPENSATED IONIZATION CHAMBERS)
242. NISSAN CARS DOOR LATCHES ASSEMBLY LINE DEVELOPMENT & PRODUCTIONIZATION
243. OPERATING WORKING CAPITAL REDUCTION
244. OPERATIONAL EXCELLENCE IN CPG INDUSTRY
245. OPTIMIZATION AND STABILIZATION OF 5400 TON STAMPING MACHINE
246. OPTIMIZATION OF BIODIESEL PRODUCTION BY TRANS ESTERIFICATION PROCESS
247. OPTIMIZATION OF CYCLE TIME IN METAL FINISH LINE - CABIN IN WHITE SHOP
248. OPTIMIZATION OF HOOD AND COWL GAP
249. OPTIMIZATION OF PROJECTION WELDING PARAMETERS USING TAGUCHI METHOD
250. OPTIMIZATION THROUGH ROBOT AND VISION SYSTEMS
251. OPTIMIZING THE TESTING OF 7 MODELS OF MCB, IN A SINGLE MACHINE THROUGH ROTARY TABLE MECHANISM
252. ORDERING SYSTEM AND BOM GENERATOR
253. OVERALL EQUIPMENT EFFECTIVENESS IMPROVEMENT OF ROLLER HEAD LINE MACHINE.
254. PANEL MISMATCH REDUCTION IN CAR BODY THROUGH PROCESS IMPROVEMENT
255. PEDESTRIAN SAFETY IN INTRA CITY BUS
256. PERFORMANCE IMPROVEMENT MEASURES USING TPM STRATEGIES.
257. PICK TO LIGHT SYSTEM IN VEHICLE TRIM ASSEMBLY LINE
258. PLANNING AND EXECUTION OF PRODUCT DEVELOPMENT FOR NEW VEHICLES
259. PLANNING OF PAINT SHOP SPARE PARTS (BODY HANG-ON PARTS) ED PAINTING, SEALING & PACKING FACILITY
260. POST ASSEMBLY PROCESS IMPROVEMENT IN AUTOMOBILE DRIVE CHAIN MANUFACTURING
261. PROCESS ESTABLISHMENT FOR FREIGHT COST ANALYSIS AND RECOMMEND BEST TRANSPORT METHOD FOR MATERIAL PLANNING OF CPX & HFR VALUE STREAM.
262. PROCESS QUALITY REVAMP OF STRUCTURE INTEGRATION CHECK OF AN AIRCRAFT SECTION.
263. PROCESS REJECTION REDUCTION IN SEAT TRACK MECHNISM
264. PRODUCT DEVELOPMENT: ROUGH BORING CUTTER
265. PRODUCT LIFECYCLE MANAGEMENT IN AUTOMOTIVE INTERIORS
266. PRODUCT QUALITY IMPROVEMENT
267. PRODUCTION IMPROVEMENT BY IMPLEMENTING 5S AND INCREASE THE MTBF
268. PRODUCTIVITY DEVELOPMENT AND CONTINUAL IMPROVEMENT OF SOLAR BASED LED LANTERN
269. PRODUCTIVITY IMPROVEMENT BY EFFECTIVE LINE BALANCING
270. PRODUCTIVITY IMPROVEMENT IN ARM REST LINE
271. PRODUCTIVITY IMPROVEMENT IN COMMON RAIL INJECTOR TESTING LINE
272. PRODUCTIVITY IMPROVEMENT IN HUB CELL THROUGH LEAN MANUFACTURING & LOSS ELIMINATION STUDY
273. PRODUCTIVITY IMPROVEMENT IN SELFSEV ATM ASSEMBLY LINE
274. PRODUCTIVITY IMPROVEMENT OF WOUND ROTOR BY 10% WITH IMPLEMENTATION OF HOT DIP ROLE FOR HC4/5 ALTERNATORS
275. PRODUCTIVITY IMPROVEMENT WITH ERROR REDUCTION THROUGH AUTOMATION METHODS
276. PROJECT MANAGEMENT
277. PROJECT MANAGEMENT – PROCESS DEVELOPMENT FOR CUSTOMIZATION OF PRODUCTS FOR NEW MARKET

278. PROJECT MANAGEMENT FOR SINGOLI BHATWARI HYDRO ELECTRIC PROJECT
279. PROJECT MANAGEMENT FOR SMALL AND LARGE PROJECTS
280. PROJECT MANAGEMENT: DEVELOPING & IMPLEMENTATION OF PROCESS FOR QUICK LOOP PROJECT
281. PROJECT ON PRODUCT LIFE CYCLE (STUDY IN COMMERCIAL VEHICLE INDUSTRY)
282. PROJECT PREPARATION FOR A "GREEN FIELD FOUNDRY PROJECT"
283. PULLING UNIT FOR REAR SUSPENSION DECKING
284. QUALITY IMPROVEMENT BY PDCA METHODOLOGY IN PASSENGER CAR CLUTCH PERFORMANCE
285. QUALITY IMPROVEMENT IN SOLENOID FRAMES
286. QUALITY IMPROVEMENT OF REFRIGERATOR WATER FILTERS TO REDUCE FIELD FAILURES.
287. QUALITY IMPROVEMENT THROUGH LEAN SIX SIGMA IN RING FRAME MACHINE
288. QUALITY PROBLEM SOLVING IN PAINT DEPARTMENT THROUGH HANGER REDESIGN & STANDARDIZA
289. RAW MATERIAL YIELD IMPROVEMENT IN PINION
290. RE-ARRANGEMENT OF THE ASSEMBLY LINE (LEAN APPROACH)
291. REDESIGN OF END EFFECTOR FOR PECVD PROCESS TEST STAND
292. RE-DESIGN OF SEAT AND RAIL ASSEMBLY
293. REDUCE SCRAP COST AND LABOR EFFICIENCY LOSS.
294. REDUCE THE SCRAP COST OF INTERMEDIATE DRIVE SHAFT PRODUCT FROM CURRENT RS.5.6/- TO RS.3.6/-PER PRODUCT MANUFACTURED
295. REDUCE VARIABILITY FOR TAIL GATE WITH SPARE WHEEL WHICH DRIVE GAPS & FLUSHNESS
296. REDUCING INTERNAL REJECTION RATE OF ENGINE FLANGE THROUGH CONTINUOUS IMPROVEMENT & MONITORING
297. REDUCING NEW PRODUCT DEVELOPMENT TIME
298. REDUCTION AND LIQUIDATION OF DIVERTED FINISHED PRODUCTS IN PLANT
299. REDUCTION IN ENERGY CONSUMPTION OF LIQUID AMMONIA MANUFACTURING PLANT (AMMONIA-1, CAPACITY 350 MTPD)
300. REDUCTION OF BREAKDOWN TIME IN IL-06 FURNACE DUE TO LOCAL HEATERS FAILURE
301. REDUCTION OF BRUISE DEFECT IN AUTOMOTIVE GLASS PRODUCTION
302. REDUCTION OF LINE FAILURE OF IMPORTED ITEMS (MD ASSEMBLY) AND ACHIEVE QUALITY TARGETS.
303. REDUCTION OF TOOL COST IN FASTENER MANUFACTURING
304. REDUCTION REJECTION IN FLYWHEEL HOUSING THROUGH QUALITY CONTROL.
305. REMANUFACTURING OF 3500 ENGINE INJECTOR SOLENOID SALVAGE PROJECT
306. RE-RATING OF HEAT EXCHANGER
307. RESOLUTION OF FIELD FAILURES IN 4WD TRANSMISSION
308. RESOURCE OPTIMIZATION IN PORT OPERATIONS
309. RISK MANAGEMENT IN WAREHOUSE INDUSTRY
310. RM YIELD IMPROVEMENT IN GEAR
311. ROOT CAUSE ANALYSIS OF CUSTOMER COMPLAINTS & CORRECTIVE ACTIONS
312. ROUTE EFFICIENCY MODEL
313. SAFETY MANGEMENT AT CONSTRUCTION PROJECTS
314. SCM INVENTORY REDUCTION PROJECT
315. SIMULATION OF TRANSIENT HEAT CONDUCTION IN ARC WELDING PROCESS USING FEA AND ITS PARAMETER STUDY
316. SINGLE-MINUTE EXCHANGE OF DIE IN FORGE SHOP
317. SOLAR PV MODULE MARKET IN INDIA 2012-15
318. SOLDER PASTE WASTE REDUCTION IN PASTE PRINTING PROCESS
319. SOLUTIONS TO INCREASE TRANSFORMER LIFE
320. SPARE PARTS & CONSUMABLES CONSOLIDATION PROJECT
321. STATISTICAL DATA ANALYSIS TO ESTABLISH A STRATEGY FOR SELECTION OF CONTRACTORS AT BIOTECHNOLOGY PROJECTS
322. STATISTICAL PROCESS CONTROL

323. STEAM CONSUMPTION REDUCTION IN TYRE CURING
324. STRATEGIC AUDIT OF MANGALORE REFINERY & PETROCHEMICALS LIMITED
325. STUDY & EVALUATE OF ESTABLISHING MANUFACTURING FACILITIES IN MEXICO FOR GEARS
326. STUDY AND QUALIFICATION OF PRODUCTION WELDING OF LOW ALLOY STEELS
327. STUDY OF AIR POLLUTANTS IN THE REFINERY AND THE CONTROL MEASURES
328. STUDY OF DEVELOPMENT TIME LINES OF FORGED COMPONENT
329. STUDY OF MARKET POTENTIAL FOR FEASIBILITY OF NEW ELECTRICAL APPLIANCES
330. STUDY ON DEVELOPMENT OF HIGH PRECISION BEARING FOR AIRCRAFT APPLICATION
331. STUDY ON LATEST TECHNOLOGY SOFTWARE TOOL SMART PLANT 3D IN DETAIL DESIGN FOR PROCESS INDUSTRIES
332. SUN SENSOR MOUNTING DESIGN FOR CPV SOLAR SYSTEM
333. SUPERCRITICAL BOILER TECHNOLOGY & EFFICIENCY OF A THERMAL POWER PLANT
334. SUPERMARKET CONCEPT IN PRODUCTION PLANNING FOR INVENTORY MANAGEMENT
335. SUPPLIER DEVELOPMENT
336. SUPPLY CHAIN & INVENTORY MGM AT BHARAT FORGE
337. SUPPLY CHAIN MANAGEMENT FOR GLOBAL DEMANDS OF REFRIGERATED DRYER
338. SUPPLY CHAIN RISK MANAGEMENT IN OUTSOURCING
339. TEMPERATURE VARIATION CONTROL IN SOLUTION TREATED AACR ROLLING
340. THERMAL AND ELECTRICAL ENERGY CONSERVATION AND PERFORMANCE ANALYSIS IN CEMENT INDUSTRY
341. THROUGHPUT TIME REDUCTION OF MANUFACTURE OF ROTAR BLADES FROM AVERAGE 160HRS TO 72HRS.
342. TO COMMISSION & OPTIMIZE CEMENT PLANT PYRO PROCESS (NEW LINE) BY PUMPING THE RAW MEAL FROM OLD LINE
343. TO IMPROVE YIELD PERCENTAGE OF MALT EXTRACT PLANT (PRODUCTION PLANNING & CONTROL)
344. TO REDUCE THE NUMBER OF STOPPAGES IN CONTINUOUS CASTING PLANT FROM 74 PER MONTH TO 66 PER MONTH BY APRIL 2013.
345. TOOL MANAGEMENT SYSTEM FOR AVAILABILITY, ACCESSIBILITY & ACCOUNTABILITY OF TOOLS
346. TURN TIME NOISE REDUCTION IN VEHICLE DRIVESHAFT
347. UTILITY VEHICLES LINE CAPACITY ENHANCEMENT FROM 62/SHIFT TO 81/SHIFT, WITHOUT INCURRING ANY ADDITIONAL CAPITAL INVESTMENT.
348. V52 PITCH SYSTEM FAILURE ANALYSIS AND IMPROVEMENT (CIM 2219)
349. VALUE ENGINEERING BY EXECUTION CHANGE FROM CONVENTIONAL MANUFACTURING PROCESS TO POWDER METALLURGY AND METAL INJECTION MOLDING
350. VALUE ENGINEERING FOR AN ORTHOPEDIC SURGICAL INSTRUMENT
351. VALUE ENGINEERING IN WIRING HARNESS
352. VALUE ENGINEERING USING PROJECT MANAGEMENT
353. VALUE STREAM MAPPING AND LEAN SUPPLY CHAIN MANAGEMENT IN DOOR AND TRIM SUBE ASSEMBLY LINE AT BMW INDIA PRIVATE LIMITED
354. VALUE STREAM MAPPING IN EFS
355. VALUE STREAM MAPPING OF HEATING DIVISION
356. VALVE OPERATING TORQUE REDUCTION
357. WAGON TIPPLER PROJECT
358. WASTE HEAT RECOVERY SYSTEM IN DALMIA CEMENT, UNIT-I.
359. WEIGHT OPTIMIZATION FOR REAR HUB IN REAR TAG AXLE OF MAV TRUCKS
360. WORK IN PROCESS INVENTORY MANAGEMENT OF A MANUFACTURING UNIT BY THE DEVELOPMENT OF COMPUTERIZED PRODUCTION INFORMATION AND CONTROL SYSTEM
361. YIELD IMPROVEMENT ON STOP RING PART USING SIX SIGMA METHOD
362. YIELD LOSS REDUCTION
363. 3D VIDEO TECHNOLOGY IN ANDROID
364. 4-CHANNEL VIDEO SURVEILLANCE SERVER
365. A BENCHMARK SUITE FOR GENERAL PURPOSE COMPUTING ON GRAPHICS PROCESSING UNITS (GPGPU)

366. A COMPARATIVE STUDY OF AVIONICS DATABUSES AND STANDARDS FOR INTERFACES OF REAL TIME COCKPIT DISPLAY SYSTEMS
367. A FRAMEWORK FOR PERSONAL MOBILE COMMERCE PATTERN MINING AND PREDICTION
368. A FRAMEWORK FOR POLICY BASED DISTRIBUTED SCANNING AND VULNERABILITY ASSESSMENT
369. A HUMIDITY PREDICTION MODEL USING ARTIFICIAL NEURAL NETWORK
370. A METHOD AND DESIGN TO THE IMPLEMENTATION OF MASSIVE ARRAY OF IDLE DISKS TO OPTIMIZE POWER UTILIZATION IN STORAGE ARRAYS
371. A MIDDLEWARE FOR SERVICE DEPLOYMENT IN CONTRIBUTORY COMPUTING SYSTEMS
372. A STACKABLE FILE SYSTEM INTERFACE FOR TAR ARCHIVE FILES
373. A STATISTICS-BASED PACKET FILTERING SCHEME AGAINST DISTRIBUTED DENIAL-OF-SERVICE ATTACKS
374. A STUDY AND IMPLEMENTATION OF PROCESS OF COLLABORATION BETWEEN RETAIL AND CPG (CONSUMER PACKAGED GOODS)
375. A STUDY OF INTERFERENCE BETWEEN RADIO TRANSCEIVERS AND ITS POSSIBLE SOLUTION
376. A STUDY ON MOBILE WIRELESS COMMUNICATION
377. A SYSTEM FOR PROVIDING INFORMATION USING FIXED LOCATION BASED SERVICES FOR TELEVISION VIEWERS
378. A UNIFIED TOOL TO MODEL THE PERFORMANCE OF THE LINUX BLOCK DEVICE LAYER
379. A WAY TOWARDS GREEN DATACENTER - SERVER CONSOLIDATION AND VIRTUALIZATION
380. A WEB-BASED COLLABORATIVE DOCUMENT MANAGEMENT SYSTEM FOR SMALL AND MEDIUM ENTREPRENEURS
381. ACCELERATION OF FILE I/O IN PARALLEL WORK LOADS
382. ACCOUNTING ANALYTICS
383. ACCOUNTING DATA REPORTING CAPABILITY FOR HPOS
384. ACTIVITY MANAGER – TR PLATFORMS
385. ADAPTIVE MULTIRATE-FR DTX
386. ADDING DESKTOP SHARING AND VIEWING CAPABILITIES TO MAC LYNC 14
387. ADOPTING GRC IN CLOUD COMPUTING
388. ADOPTING METRO UI FOR NEXT GENERATION MULTI-DEVICE APPLICATIONS
389. ADVANCED ALGORITHM FOR BDT APPLICATION
390. ADVANCED CAPTCHA SYNTHESIS FRAMEWORK
391. ADVANCED ELECTRO HYDRAULIC CONTROL SYSTEM
392. ADVANCED SEARCH FOR INSIGHT XT
393. ADVANCED SECURITY KEYPAD ON ANDRIOD PLATFORMFOR MANAGING SECURITY SYSTEM ALONG WITH HOME AUTOMATION
394. AERONAUTICAL TELECOMMUNICATION NETWORK (ATN) SOFTWARE CORE COMPONENT FOR DUAL NETWORK AIRCRAFT
395. AFTER HOUR ACCURACY REPORT
396. AGENT ORIENTED SOFTWARE ENGINEERING – ANALYSIS, DESIGN, IMPLEMENTATION OF METHODOLOGY
397. AGILE METHODOLOGY - INCORPORATION
398. AGILE TESTING METHODOLOGY
399. ALOGORITM EDITOR AND COMPARATOR FOR RESOURCE ALLOCATION AND LOAD BALANCING ALGORITHMS IN CLOUD INFRASTRUCTURE._
400. AMALGAMATED TEST BED APPROACH FOR WEBSERVICES TEST SCRIPTS ::: USING AGILE METHODOLOGY
401. AMELIORATING PARALLEL COMPILATION FOR SUPPORTING HIGH PERFORMANCE APPLICATIONS
402. AMTS - ASSET MANAGEMENT TRACKING SYSTEM
403. AN GENERIC APPROACH TO GENERATE COUSIN SEARCH QUERIES (CSQ)
404. AN INTEGRATED SEARCH SOLUTION WITH MULTI-TYPE DATA SOURCES
405. AN INTELLIGENT RESOURCE BROKERING AND META SCHEDULING MECHANISM FOR OPTIMISING THE PERFORMANCE OF HYBRID APPLICATION ON GRID
406. ANALYSIS OF INDEX POISONING ATTACK IN FILE SHARING SYSTEMS OF ASSAM ENGINEERING INSTITUTE
407. ANALYSIS OF ORACLE DATABASE FOR UNDETECTED DATA ACCESS AND MANIPULATION

408. ANALYSIS OF SHORTEST PATH AND SPANNING TREE ALGORITHMS, WITH SUGGESTED OPTIMIZATIONS FOR SPECIFIC APPLICATIONS
409. ANALYSIS OF SOFTWARE TESTING METHODOLOGIES AND TECHNIQUES IN IT PROJECTS (BANKING DOMAIN).
410. ANALYSIS OF THE 802.11S MESH TECHNOLOGY
411. ANALYSIS OF THE CPU CYCLES USING DTRACE TO OPTIMIZE THE SYSTEM CALLS FOR ENERGY EFFICIENCY
412. ANALYSIS OF THE ZETTABYTE FILE SYSTEM AND ENHANCEMENT PROPOSAL
413. ANALYSIS OF TRAFFIC FLOW IN ISP ENVIRONMENT & REDESIGNING OF NETWORK FOR BETTER SECURITY, HIGH AVAILABILITY AND OPTIMIZED BANDWIDTH
414. ANALYSIS, IMPLEMENTATION AND COMPARATIVE STUDY OF FUNCTIONAL TEST AUTOMATION FRAMEWORKS
415. ANALYTICAL APPROACH TO REPRESENT COMPONENT CODE CHANGE IMPACT ON THE PRODUCT
416. ANALYTICAL REPORT GENERATION FOR APPLICATION DISCOVERY SOFTWARE
417. ANDROID APPLICATION TO RECOGNIZE BUSINESS CARDS
418. ANDROID BASED PERSONAL ASSISTANT
419. ANDROID BASED PERSONAL BANKING APPLICATION
420. ANDROID BUILD SYSTEM
421. ANDROID WEB SCREENSHARE
422. ANNOTATE TV
423. ANNUITY DATAMART CREATION FOR DECISION SUPPORT SYSTEMS
424. ANONYMIZING CLASSIFICATION DATA FOR PRIVACY PRESERVATION
425. ANSI - AUTOMATED NETWORK AND SOFTWARE INVENTORY
426. ANTIALIASING IN OPENGL
427. APARTMENT MANAGEMENT SYSTEM – A SIMPLE YET COMPREHENSIVE PROPERTY MANAGEMENT APPLICATION
428. API AUTOMATION OF DPORTAL SERVICE LAYER
429. APP LOAD SHARING OVER SMP
430. APPLICATION FUNCTIONALITY DEVELOPMENT FOR MOBILE OPERATING SYSTEMS
431. APPLICATION INTEGRATION FRAMEWORK FOR BMC RELEASE PROCESS MANAGEMENT
432. APPLICATION OF A MODIFIED FRAMEWORK FOR RELIABLE TESTING OF MODEL BASED SYSTEM IN AUTOMOTIVE INDUSTRY
433. APPLICATION OF BIG DATA INSTEAD OF TRADITIONAL DATA WAREHOUSING IN AUTOMOBILE INDUSTRY
434. APPLICATION OF FACTORY DESIGN PATTERN IN MODELING THE IMAGING PROCESS OF OPTICAL INDIAN REMOTE SENSING PAYLOADS
435. APPLICATION PERFORMANCE ANALYSIS IN CLOUD ENVIRONMENT
436. APPLICATION PERFORMANCE MANAGEMENT IN ENTERPRISE APPLICATION LIFECYCLE
437. APPLICATION SECURITY ASSESSMENT
438. APPLICATION SOFTWARE TESTING AND QUALITY ASSURANCE FOR INDUSTRIAL AUTOMATION SYSTEMS
439. APPLICATION STATUS CHECK AND INTERFACE DEVELOPMENT IN CLOUD COMPUTING
440. APPLICATION THREAT MODELING APPROACH FOR SECURITY ENGINEERING
441. APPLICATIONS DESIGN FOR HIGH AVAILABILITY IN INTERNET DATA CENTRE
442. APPLYING DATA MINING ALGORITHMS FOR UNDERSTANDING MAINTAINABILITY OF SOURCE CODE
443. APPROACHES TO LARGE SCALE OUTSOURCED PRODUCT DEVELOPMENT WITH AGILE
444. ARCHITECTING AND DESIGNING JAVA ENTERPRISE EDITION (JAVA EE) PLATFORM COMPLIANT APPLICATION
445. ARCHITECTURAL ROADMAP FOR BUSINESS INTELLIGENCE SYSTEMS AT BPCL
446. AS-TRADED ASSETS AND HOLDINGS INFORMATION
447. ASYNC – OLTP DATABASE SYNCHRONIZATION FOR FINANCIAL TRANSACTIONS
448. AUGMENT REALITY BASED BUILDING MANAGEMENT SYSTEM
449. AUGMENTING THE BRAINS BEHIND YIELD MANAGEMENT

450. AUTHENTICATED TRANSACTION USING DATABASE EXTENSION
451. AUTO CONFIGURATION AND MANAGEMENT OF FEMTO CPE IN LTE
452. AUTO DEPLOYMENT TOOL FOR DIS INVENTORY
453. AUTO GENERATION OF ELECTRICAL BEHAVIOR OF ANALYSIS MODEL FROM SYMBOL
454. AUTO MANAGER II
455. AUTOMATE MACHINE PROVISIONING, PRODUCT DEPLOYMENT AND GUI TESTING BY INTEGRATING IBM TOOLS
456. AUTOMATED API TESTING FRAMEWORK
457. AUTOMATED ATTENDANCE SYSTEM USING FACE RECOGNITION
458. AUTOMATED BUILD AND REMOTE DEPLOYMENT TOOL FOR EMBEDDED DEVICES
459. AUTOMATED BUILD CHECK FOR SMH
460. AUTOMATED DAILY ACTIVITY TRACKING AND REPORTING TOOL (ADATR)
461. AUTOMATED FAILURE REPORTING TOOL
462. AUTOMATED RESOURCE TRACKING SYSTEM
463. AUTOMATED SYSTEM INTEGRATION AND DATA EXCHANGE (ASIDE)
464. AUTOMATED SYSTEM TESTING FOR AUTOMOTIVE EMBEDDED SOFTWARE
465. AUTOMATED TESTING OF UDS DIAGNOSTIC SERVICES FOR AUTOMOTIVE EMBEDDED SOFTWARE
466. AUTOMATED TOOL FOR SOFTWARE COMPATIBILITY TESTING
467. AUTOMATED UNIT TESTING FOR AGILE DEVELOPMENT
468. AUTOMATED WEB APPS TEST FRAMEWORK
469. AUTOMATIC ASSEMBLY ANALYSIS FRAMEWORK
470. AUTOMATIC CLIMATE CONTROL MODULE SIMULATION USING ALTIA IN PASSENGER CAR
471. AUTOMATIC FARE COLLECTION SYSTEM FOR PUBLIC TRANSPORT IN INDIA
472. AUTOMATING GUI TESTING ON ANDROID
473. AUTOMATING SOFTWARE DISTRIBUTION AND INSTALLATION USING VISUAL DEPLOYMENT MODEL IN A DISTRIBUTED ENTERPRISE ENVIRONMENT
474. AUTOMATION FOR IPT
475. AUTOMATION FRAMEWORK FOR ORACLE ENTERPRISE MANAGER USING SELENIUM
476. AUTOMATION FRAMEWORK FOR TESTING TR069 COMPLIANCE DEVICES
477. AUTOMATION FRAMEWORK FOR TESTING WEB APPLICATION
478. AUTOMATION OF CALL MANAGEMENT FUNCTIONALITY IN MOBILE PHONE
479. AUTOMATION OF COMMISSIONING & INTEGRATION OF GSM NETWORK ELEMENTS IN OSS SERVER
480. AUTOMATION OF DATA TRANSFORMATION & INTEGRATION ON VARIOUS PLATFORMS
481. AUTOMATION OF ELECTRICAL FMEA TESTING OF ECU AND POST PROCESSING OF RESULTS USING MDF READ UTILITY
482. AUTOMATION OF IBM MPA INSTALLATION USING IBM LOTUS AUTOMATOR
483. AUTOMATION OF MENTOR INSPECTION PROCESS
484. AUTOMATION OF MENUBAR TOOLS
485. AUTOMATION OF NEW HIRE PROCESS IN PEOPLESFT
486. AUTOMATION OF OEM OPS CENTER TEST USING OATS
487. AUTOMATION OF ORDER OF BATTLE
488. AUTOMATION OF REGRESSION TEST
489. AUTOMATION OF SANITY TESTING FOR (E)GPRS MULTICONTROLLER NODE
490. AUTOMATION TESTING FRAMEWORK FOR SIEBEL APPLICATIONS
491. AUTOMATION TOOL SELECTION FOR WEB BASED CAPITAL PUBLISHER VIEWER
492. BANDWIDTH MANAGEMENT SUPPORT ON VPN SERVER
493. BANKING ACCOUNTS TRACKER
494. BATTERY MANAGEMENT SYSTEM FOR LEAD ACID BATTERIES
495. BIDIRECTIONAL FORWARD DETECTION ON RADIO NETWORK CONTROLLER
496. BI-DIRECTIONAL NETWORK ADDRESS TRANSLATION
497. BIG DATA ANALYTICS USING HADOOP IN FINANCIAL SERVICES

498. BILLING RECONCILIATION SYSTEM FOR A MEDICAID HEALTH MAINTENANCE ORGANISATION
499. BIOMETRIC FINGER PRINT READER FOR ATM
500. BIS FOR EDUCATION SECTOR USING CLOUD COMPUTING
501. BLACKBERRY & VOICE IMPLEMENTATION IN ALARMPPOINT APPLICATION
502. BLACKBOARD SUBSYSTEM
503. BLUETOOTH PROGRAMMING IN JAVA
504. BONUS CARD TRANSACTION HANDLING AT STORES
505. BPMN BASED WEB MVC FRAMEWORK
506. BROKER TRADE REGISTER
507. BUILD QUALITY DASHBOARD
508. BUILDING THE OPERATIONAL DATA STORE (ODS)
509. BUILDING VALUE WITHIN ORGANIZATION THROUGH ENTERPRISE PORTALS
510. BUS TRACKING VIA PARTICIPATORY SENSING
511. BUSINESS INTELLIGENCE - COLLECTION AND STORING OF CARDS DATA
512. BUSINESS INTELLIGENCE - REPORTING IMPACT ANALYZER (BI RIA)
513. BUSINESS INTELLIGENCE SOLUTION FOR SALES ANALYSIS
514. BUSINESS INTELLIGENCE WITH SHAREPOINT AND EXCEL
515. BUSINESS PROCESS AUTOMATION SYSTEM
516. BUSINESS PROCESS RE-ENGINEERING TO FACILITATE FASTER DRAWINGS TRANSFER IN PRODUCTION PROCESS –(OLDT SYSTEM)
517. BUSINESS WORKFLOW IN E-BUSINESS APPLICATION
518. BUY IN GROUP
519. C++ CODE REVIEWER
520. CA CLARITY PPM AUTOMATION
521. CAB AUTO UPDATE DATA FILLER AND QUERY TOOL
522. CAB AUTOMATION
523. CACHING ARCHITECTURE FOR PEER-TO-PEER TRAFFIC
524. CACHING IN JAVA APPLICATIONS USING MEMCAHED
525. CALCULATION OF DENSITY OF NATURAL GAS WHICH INVOLVES CALCULATION OF COMPRESSIBILITY FACTOR BASED ON MOLAR COMPOSITION ANALYSIS OR PHYSICAL PROPERTIES.
526. CALL TRACING SYSTEM
527. CALLERNOTE
528. CALLOUT - TO OPEN YOUR ANDROID APPLICATION.
529. CANNED REPORTS FOR TEAM WORKS PRODUCT USING SSIS
530. CAPACITY PLANNING OF ENTERPRISE SOFTWARE
531. CAR INFOTAINMENT SYSTEM'S HMI USING HTML5
532. CAR NAVIGATION SYSTEM
533. CAREER CONSULTANCY
534. CARRIER ETHERNET SERVICES USING ETHERNET VIRTUAL CONNECTION (EVC)
535. CASE STUDY ON THE IMPLEMENTATION OF CONTINUOUS INTEGRATION
536. CASE STUDY ON USING BLUETOOTH PICONET FRAMEWORK TO A WIDER EXTENT.
537. CDNS CONTENT OUTSOURCING VIA GENERALIZED COMMUNITIES
538. CDR RESOURCE ADAPTOR FOR JAIN SLEE BASED TELECOM APPLICATIONS
539. CELL BROADCAST ENABLING FOR 2G CELLS IN THE NETWORK
540. CENTRAL PROJECT STATUS TRACKING TOOL FOR MANAGEMENT IN AN ORGANIZATION
541. CENTRALIZED BLOOD ENQUIRY SYSTEM
542. CENTRALIZED CONTROLLER FOR INTERCOMPANY INVENTORY TRANSACTIONS
543. CHANGING OWNERSHIP FROM MANUAL OPTICAL CROSS CONNECTS TO CONTROL PLANE OWNED OPTICAL CROSS CONNECT
544. CHAOS MONKEY – A RANDOM TEST EXECUTOR
545. CHARACTERIZING USER BEHAVIOUR ON YAHOO! GROUPS

546. CHECKLIST TOOLS
547. CICS DYNAMIC RPL & TRACKING PRODUCTION CHANGES
548. CINUX – LINUX CUSTOMIZATION
549. CLEANUP TOOL
550. CLICKSTREAM ANALYTICS WITH APACHE HADOOP
551. CLICKTHRU DATA EXTRACTION FROM PDF FOR ESTIMATES
552. CLIMATE CONTROL SYSTEMS IN CAR INFOTAINMENT
553. CLINICAL INTEROPERABILITY
554. CLINICAL TRIAL DATA MANAGEMENT
555. CLOUD ADOPTION ROADMAP FOR ENTERPRISES
556. CLOUD ANALYTICS USING DISTRIBUTED DATABASE
557. CLOUD BASED SOLUTION FOR REVENUE ALLOCATIONS
558. CLOUD COMPUTING
559. CLOUD COMPUTING IN VIDEO SURVEILLANCE
560. CLOUD COMPUTING SERVICES
561. CLOUD COMPUTING: THREATS, RISK ASSESSMENT AND SECURITY CONTROLS FOR INFORMATION SECURITY
562. CLOUD ENABLEMENT PLATFORM (CLEP)
563. CLOUD SIM (CLOUD SIMULATOR)
564. CLOUD-BASED APPLICATION TESTING: EXPLORATION OF SOFTWARE TESTING AS A SERVICE
565. CLUSTER BASED ENERGY EFFICIENT ROUTING IN WIRELESS SENSOR NETWORKS
566. CLUSTER BASED SECURITY ARCHITECTURE FOR INTRUSION DETECTION IN MANET
567. CLUSTERED FILESYSTEM ON CLOUD
568. CLUSTERING TIN NETWORK FOR SLOPE ANALYSIS
569. CO-CLUSTER GRAPHICS PROCESSING
570. CODE REVIEW TOOL
571. CODELESS AUTOMATION FRAMEWORK
572. COLLABORATIVE DEBUGGING OF REMOTE MACHINES USING INSTANT MESSAGING
573. COLLISION DETECTION AND RESOLUTION
574. COMMON CODE DETECTOR SYSTEM
575. COMMON EXPOSURE INFORMATION SYSTEM
576. COMMON MODULE ARCHITECTURE FOR CONTROL SYSTEM
577. COMMUNICATION CLIENT FOR OFFICE APPLICATIONS
578. COMMUNICATION ENGINE
579. COMPARATIVE STUDY OF SOME TESTING TOOLS WITH REFERENCE TO PROGRAMMING LANGUAGE C,C++ AND JAVA
580. COMPARATOR FOR J2EE COOPERATION METHODS WITH ORM TECHNOLOGIES
581. COMPARISON AND ANALYSIS OF WATERMARKING TECHNIQUES
582. COMPARISON OF METHODS TO ACHIEVE IP FLOW MOBILITY IN NETWORK BASED LTE-WIFI HANDOVER'
583. COMPATIBILITY CHECK WITH EXECUTION STATISTICS FOR ENTERPRISE SYSTEMS
584. COMPILATION FRAMEWORK FOR MOBILE ANALYTICS
585. COMPILER AND LOGIC SIMULATOR FOR EASYVL BASED ELECTRONIC CIRCUITS
586. COMPLEX EVENT PROCESSING IN CASE MANAGEMENT
587. COMPONENT TESTING USING VIRTUAL PROTOTYPE METHOD
588. COMPUTER AIDED INTERFACE FOR DETAIL DESIGN AND MANUFACTURE OF BENT TUBE BURNER PANELS
589. COMPUTER VISION IN TEST AUTOMATION
590. CONFIGURATION AND PRICING APPLICATION
591. CONNECTION ADMISSION CONTROL IN ATM NETWORK USING QOS PARAMETERS
592. CONNECTIVITY PACKAGE BUILD AND TEST AUTOMATION
593. CONQUERING THE NEW LEVEL OF EXPLOITATION IN OPERATING SYSTEMS : THE RETURN ORIENTED EXPLOITATION

594. CONSTRUCTION BUSINESS SOFTWARE
595. CONSUMER PORTAL FOR APPS OVER OPENSTACK
596. CONTENT MANAGEMENT SYSTEM
597. CONTEXT MANAGEMENT SUPPORT FOR EMMC IN LINUX KERNEL
598. CONTINUOUS IMPROVEMENT FEEDBACK SYSTEM
599. CONTRACT MANAGEMENT MOBILE UI
600. CORDYS BOP'S WORKFLOW INBOX ON ANDROID BASED SMART DEVICES
601. CORE HR
602. CORPORATE DASHBOARD MANAGEMENT SYSTEM
603. CORPORATE DECISION MANAGEMENT SYSTEM
604. CO-SIMULATOR FOR MULTI FUNCTIONAL DISPLAYS IN AUTOMOTIVES
605. COULD FOUNDRY
606. COULD METER - A VITAL METER TO COMPUTE CLOUD CONSUMPTION
607. COULD SERVICES USING P2P
608. COUNTERFEITING OF HEALTHCARE PRODUCTS USING MOBILE AUGMENTED REALITY
609. CREATING MULTIPLE USER PERFORMANCE TEST FRAMEWORK USING RATIONAL PERFORMANCE TESTER (RPT) FOR IBM RATIONAL SYNERGY
610. CREEPAGE AND CLEARANCE COMPUTATION SOFTWARE FOR QUALITY ASSURANCE IN ELECTRICAL DESIGNS
611. CROSS PLATFORM MENU LIBRARY FOR DESKTOP APPLICATIONS
612. CROSS PLATFORM WEB APPLICATION DEVELOPMENT USING RESTFUL WEB SERVICES
613. CSL INVENTORY MANAGEMENT AND ANALYSIS TOOL
614. CUED CLICK POINTS - AN EFFICIENT METHOD FOR GRAPHIC PASSWORD AUTHENTICATION
615. CURSOR OPTIMIZATION FOR LARGE OBJECTS IN OPENEDGE DATASERVER
616. CUSTOM MEMORY ALLOCTOR FOR SCALABILITY
617. CUSTOMER DATA EXTRACTION AND VERIFICATION
618. CUSTOMER DECISIONING RISK STRATEGIC PROJECT
619. CUSTOMER ORDER FORECASTING USING MACHINE LEARNING TECHNIQUES.
620. CUSTOMER PROFILE MANAGEMENT SYSTEM
621. CUSTOMER SITES CONNECTIVITY USING MPLS VPN
622. CUSTOMER SPECIFIC FLASH PROGRAMMING SOFTWARE
623. CUSTOMISED CALLER ID FEATURES FOR ANDROID PHONES USING CLOUD
624. CUSTOMIZED ETL TOOL
625. CY2B E-COMMERCE PLATFORM FOR REAL-TIME B2B COMMUNICATION
626. CYBER-PHYSICAL SYSTEM: DOS/DDOS TRAFFIC ANALYSIS, MODELING AND MOBILE AGENT BASED TRACING AND MITIGATION
627. DATA CENTRE – IMPLEMENTATION OF VIRTUALIZATION AND PROVISION FOR DISASTER RECOVERY SERVICES
628. DATA CONVERSION APPLICATION
629. DATA CONVERSION TOOL FOR ASSEMBLER TO COBOL MIGRATION
630. DATA EXTRACTION, VALIDATION AND LOAD OF INVENTORY ITEMS & THEIR ON-HAND QUANTITIES
631. DATA LEAKAGE DETECTION
632. DATA MANAGEMENT AND CONNECTIVITY SOLUTIONS FOR THE FETCHING OF PRIOR IMAGES IN PHILIPS MAMMOGRAPHY SYSTEMS
633. DATA MART BUILDING AND IMPACT OF DYNAMIC INCREMENTAL MAINTENANCE
634. DATA MIGRATION FOR KINGFISHER
635. DATA MIGRATION TEST FRAMEWORK
636. DATA MINING FOR SHUTTLE BADMINTON PERFORMANCE
637. DATA MOVEMENT SYSTEM-FEES DUE REPORTING
638. DATA MOVER TOOL (FOR DATA BACKUP & DATA RESTORE)
639. DATA QUALITY MANAGEMENT (DQM)
640. DATA SECURITY

641. DATA SECURITY ASPECTS OF SQL SERVER DATABASE
642. DATA SECURITY USING FILE LEVEL ENCRYPTION MODEL
643. DATA SYNCHRONIZATION FOR FOOD DISTRIBUTOR SERVICES
644. DATA WAREHOUSE AND BUSINESS INTELLIGENCE IN MEDIA INDUSTRY DOMAIN
645. DATA WAREHOUSE ON CLOUD ENABLED PLATFORM
646. DATA WAREHOUSE SOLUTION FOR COTS ENTERPRISE ARCHITECTURE TOOL
647. DATA WAREHOUSING AND ANALYTIC SOLUTION FOR PERFORMANCE MANAGEMENT IN ACADEMICS DOMAIN
648. DATA WAREHOUSING FOR PAINT COLOR FORMULA SYSTEMS
649. DATA WAREHOUSING FOR SALES AND DISTRIBUTION
650. DATA WAREHOUSING WITH CLOUD SERVICES (SQL AZURE)
651. DATA WORKFLOW SECURITY SYSTEM
652. DATABASE DESIGNING OF CABS MANAGEMENT SYSTEM
653. DATABASE EXPLORATION AND ADVISORY TOOL
654. DATABASE MANAGEMENT SYSTEMS
655. DATABASE MODEL THAT WOULD PROVIDE TRACEABILITY, TRANSACTION SUPPORT, ELASTICITY AND RELIABILITY
656. DATABASE SOLUTION FOR DASHBOARD REPORTING
657. DATA-DRIVEN GUI APPLICATION AUTOMATION
658. DATAGEN TOOL DEVELOPMENT FOR DATA ONTAP
659. DATAWAREHOUSE FOR HEALTH CARE SERVICES
660. DATAWAREHOUSE TESTING
661. DBWRITER IN NIKIRA
662. DEBIT CARD REQUEST MANAGEMENT SYSTEM
663. DEBUGGING SOLUTION FOR CONSUMER ELECTRONIC DEVICES LIKE DTV, STB BD PLAYERS AND IPTV THROUGH ANALYSIS OF TRANSPORT STREAMS
664. DEFECT ANALYSIS & PREVENTION USING MANTHAN – (A TOOL TO ANALYZE THE CODE AND DEFECT RATIO)
665. DELIVERY DASHBOARD
666. DEMONSTRATING AUDIO VIDEO BRIDGING IN AUTOMOTIVE ENVIRONMENT.
667. DEPLOYMENT ON PRODUCTION MACHINES FOR LARGE INTERNET COMPANIES
668. DEPOSIT ASSEMBLY & REPAIR TRANSACTIONS
669. DEPOSITORY SYSTEM - NEW DPM - (SETTLEMENT & REPORTING MODULE)
670. DEPOSITORY SYSTEM - NEW DPM (BOOKING & ARCHIVAL MODULE)
671. DEPOSITORY SYSTEM DEVELOPMENT
672. DESIGN & DEVELOPMENT OF GSM BASED HOME AUTOMATION SYSTEM
673. DESIGN & DEVELOPMENT OF SECURE HANDSHAKE FOR UDT APPLICATIONS
674. DESIGN & PERFORMANCE ANALYSIS OF WIRELESS NETWORK BASED ON IEEE 802.11 STANDARDS
675. DESIGN ALGORITHM FOR DETERMINING MULTI-CORE PROCESSOR OCCUPANCY BY APPLICATIONS DEPLOYED
676. DESIGN AND CONSTRUCTION OF STANDARD FORMULATION SYSTEM MODULE
677. DESIGN AND DEVELOPMENT OF A DYNAMIC FIREWALL USING DEFEASIBLE LOGIC
678. DESIGN AND DEVELOPMENT OF A JDBC DRIVER USING DISTRIBUTED RELATIONAL DATABASE ARCHITECTURE (DRDA)
679. DESIGN AND DEVELOPMENT OF CUSTOM SOLUTION TO ENHANCE THE CONTENT MANAGEMENT SYSTEM AS PER RULES AND REGULATIONS SET BY THE ORGANIZATION.
680. DESIGN AND DEVELOPMENT OF RECONNAISSANCE & SURVEILLANCE SYSTEM FOR UNMANNED GROUND VEHICLES
681. DESIGN AND DEVELOPMENT OF SOFTWARE BASED DIGITAL PNP-88 TESTER FOR MIG 29 AIRCRAFT
682. DESIGN AND DEVELOPMENT OF WINDOWS MOBILE PHONE
683. DESIGN AND IMPLEMENTATION OF A MART TABLE FOR CAPTURING DETAILS OF THE EXTERNAL CALL HISTORY

684. DESIGN AND IMPLEMENTATION OF ALERT TO NOTIFY THE CHANGES IN THE ORACLE E-BIZ CUSTOMER MASTER DATA
685. DESIGN AND IMPLEMENTATION OF BASELINE PRIVACY IN DOCSIS BASED CABLE NETWORKS
686. DESIGN AND IMPLEMENTATION OF CABLE MODEM INITIATED DYNAMIC SERVICE FLOWS IN DOCSIS BASED CABLE NETWORKS
687. DESIGN AND IMPLEMENTATION OF CABLE MODEM SOFTWARE UPGRADE IN DOCSIS BASED CABLE NETWORKS
688. DESIGN AND IMPLEMENTATION OF GENERIC SNMP PROXY AGENT FRAMEWORK
689. DESIGN AND IMPLEMENTATION OF SIP STACK INTERFACE OVER PJSIP AND ROAMING MANGER FOR PUSH TO TALK OVER CELLULAR APPLICATION
690. DESIGN AND MIGRATION TO NEXT GENERATION NETWORK
691. DESIGN OF A CORPORATE LEARNING WAREHOUSE FOR TALENT AND COMPETENCY MANAGEMENT ACROSS WIPRO TECHNOLOGIES
692. DESIGN OF CUSTOMIZED REAL TIME OPERATING SYSTEM (RTOS) FOR ONBOARD COMPUTER OF GEOSYNCHRONOUS ORBIT SATELLITE
693. DESIGN OF JAVA BASED GENERIC BUSINESS LOGIC EXECUTION FRAMEWORK FOR BOTH REAL TIME AND NON REAL TIME APPLICATION
694. DESIGN OF MODERN ORDER PROCESSING SUBSYSTEM BASED ON SOA
695. DESIGN OF REMOTE VIDEO MONITORING SYSTEM BASED ON ARM-LINUX PLATFORM AND HTTP PROTOCOL
696. DESIGN SCALE & PERFORMANCE TEST INFRASTRUCTURE FOR LARGE SCALE ENDPOINT DLP (DATA LOSS PREVENTION)
697. DESIGN STUDIO – SERVICE DESIGNER
698. DESIGN, DEVELOPMENT AND INTEGRATION OF EFFECTIVE TASK MANAGEMENT SYSTEM
699. DESIGNING A INTUITIVE AUTOMATION TEST FRAME WORK
700. DESIGNING AND APPLICATION OF FAULT DIAGNOSTIC TOOL
701. DESIGNING AND IMPLEMENTING GEOMETRY KERNEL IN C++
702. DESIGNING CODE ANALYZER AND ANALYSIS TECHNIQUES TO ASSIST IN RE-ENGINEERING OF LEGACY APPLICATIONS ON IBM MAINFRAMES
703. DETECTION OF SOFTWARE PLAGIARISM
704. DEVELOP NATIVE BUILD CAPABILITY FOR SYSTEMS MANAGEMENT SOFTWARE
705. DEVELOPING 3D DESIGN SOLE AND LACE TOOLS TO AID SHOES DESIGN
706. DEVELOPING A LEARNING & SHARING PLATFORM FOR CO-CREATING A CO-CREATIVE ENTERPRISE
707. DEVELOPING AN ANDROID AGENT-BASED APPLICATION FOR PERFORMING REMOTE APPLICATION/CONTENT DISTRIBUTION AND DEVICE DETAILS DISCOVERY USING THE BMC BLADELOGIC CLIENT AUTOMATION (BBCA) PRODUCT SUITE
708. DEVELOPING AN EFFECTIVE INTERFACE FOR INTERACTING WITH HADOOP GRID DATA
709. DEVELOPING TECHNIQUES TO DETECT ROOTKITS ON MICROSOFT WINDOWS FAMILY OF OPERATING SYSTEMS
710. DEVELOPING TOOLS FOR CREATING REALISTIC 3DCAD SHOE MODELS
711. DEVELOPMENT AND INTEGRATION OF PLATFORM COMPONENTS WITH FLIGHTS SITE
712. DEVELOPMENT AND VALIDATION OF MODEL-BASED SOFTWARE FOR BLDC MOTOR CONTROLLER FOR HYBRID CAR APPLICATION
713. DEVELOPMENT OF A TROUBLESHOOTING APPLICATION FOR CREDIT CARDS APPLICATION TO ENABLE QUICK DEFECT FIXING FOR THE APPLICATION DELIVERY TEAM
714. DEVELOPMENT OF AN FPGA BASED EMBEDDED MIL-STD-1553B INTERFACE
715. DEVELOPMENT OF AUTOMATION FRAMEWORK FOR SDK VERIFICATION
716. DEVELOPMENT OF AUTOMATION FRAMEWORK FOR WEB SSO
717. DEVELOPMENT OF CHEQUES AND BILLS DISCOUNTING FACILITY IN BANK
718. DEVELOPMENT OF DIAG SERV TESTING TOOL FOR BOS (BRAKE OVER-RIDE SYSTEM) & ABS (ANTI-LOCK BRAKING SYSTEM) BASED ON ISO14229
719. DEVELOPMENT OF EVALUATION MODULE (EVM) BASED ON SOC PROCESSOR AND BRING UP.
720. DEVELOPMENT OF FRAMEWORK FOR ANIMATIONS IN SET-TOP BOXES
721. DEVELOPMENT OF LOG VIEWER APPLICATION FOR NETACT
722. DEVELOPMENT OF METRIC BASED PROGRESS MONITORING TOOL FOR J2EE PROJECTS

723. DEVELOPMENT OF MICROSTATION BASED AUTOMATION TOOL FOR RAILWAY SIGNALLING BONDING PLAN DESIGN
724. DEVELOPMENT OF NEXT GEN IIP
725. DEVELOPMENT OF OPERATOR INTERFACE SOFTWARE FOR MONITORING THE BEHAVIOR OF GAS ANALYZERS
726. DEVELOPMENT OF SOFTWARE CONFIGURATION TOOL HOSTED ON CLOUD
727. DEVELOPMENT OF SPEECH RECOGNITION SYSTEM FOR TAMIL
728. DEVELOPMENT OF SYSTEM QUALITY METRICS FOR COMPUTER BASED SYSTEM USED FOR PERFORMING SAFETY CRITICAL FUNCTIONS
729. DEVELOPMENT OF TMS320F2812 DSP BASED PCB FOR MOTOR CONTROL.
730. DEVELOPMENT OF WORD DOCUMENT REVIEW TOOL
731. DEVELOPMENT OF XML TESTER AND EXTENSIBLE FRAMEWORK FOR AUTOMATING USING FITNESSE
732. DEVICE DATA LOGGING IN A PROPRIETARY WIRELESS AREA NETWORK
733. DFSS(DESIGN FOR SIX SIGMA) APPROACH FOR SOFTWARE DEVELOPMENT FOR AUTOMOTIVE EMBEDDED SOFTWARE APPLICATIONS; DEVELOPMENT OF SOFTWARE DESIGN SCORECARDS FOR AUTOMOTIVE EMBEDDED SOFTWARE DEVELOPMENT
734. DHSTOR BUNDLE UPGRADE
735. DIAGNOSTICS FOR THE DM3730(ARM) EVALUATION MODULE
736. DIFFERENT TECHNIQUES FOR IMPLEMENTING HISTORY & VERSIONING IN DATA INTENSIVE APPLICATIONS - STUDY AND COMPARISON
737. DIGITAL CERTIFICATE GENERATION USING ASYMMETRIC KEYS
738. DIGITAL MARKETING BASED ON NFC (NEAR FIELD COMMUNICATION)
739. DIGITAL MEDIA PROTECTION THROUGH DIGITAL WATERMARKING
740. DIGITAL TRADE SHOW (DTS)
741. DIMS (DISTRIBUTION INFORMATION MANAGEMENT SYSTEM)
742. DISCOVER AND DROP TO PRINT IN INTRANET
743. DISCOVERED COMPLIANCE FOR DATA CENTERS
744. DISTRIBUTED COMPUTING DRIVEN SENTIMENT ANALYSIS
745. DISTRIBUTED HASH TECHNIQUE FOR SSL SESSION MANAGEMENT
746. DISTRIBUTED LOG MANAGEMENT SYSTEM
747. DISTRIBUTOR MANAGEMENT SYSTEM
748. DLNA BASED MEDIA MANAGER
749. DMAUDIT – A DOCUMENT MANAGEMENT ARCHIVING TOOL
750. DMS CACHE SOLUTION
751. DOMAIN SEMANTICS DRIVING VISUALIZATION CHOICES.
752. DTAC TECHPACK DEVELOPMENT FOR DDC, GYC, PG
753. DTLM - DATATRACE LEGACY MODERNIZATION
754. DUKAAN DIRECT
755. DUMA MEMORY DEBUGGER FOR EMBEDDED TARGETS
756. DYNAMIC COMPILER OPTIMIZATIONS
757. DYNAMIC MEMORY RESOURCE TRACING FOR POWER HYPERVISOR ON IBM POWER SERVERS
758. DYNAMIC POLICY AND QOS CONTROL
759. DYNAMIC PROVISIONING OF VM CLOUD BASED ON USER SPECIFICATIONS SUBMITTED THROUGH A SERVICE OFFERING USER INTERFACE.
760. DYNAMIC REPORTING CENTRE APPLICATION (DRC)
761. DYNAMIC TARGETED SUBSTITUTION ADVERTISEMENTS
762. E POSTAL SYSTEM
763. E-BILLING SYSTEM
764. EBIZ CATALOG INTEGRITY MONITOR
765. EBROADCAST
766. E-BUSINESS SERVICE INTEGRATION USING SERVICE ORIENTED ARCHITECTURE
767. E-COMMERCE APPLICATION WATCHDOG

768. ECOMMERCE HYBRIS BASED BETTING SOLUTION
769. EDUCATIONAL DATA WAREHOUSE FOR STUDENT ATTENDANCE ANALYSIS
770. E-FARMING
771. EFFICIENT ARCHITECTURE MODEL OF XML SCHEMA DEFINITION IN APPLICATIONS WITH MULTIPLE DOWNSTREAM SYSTEMS
772. EFFICIENT RELEVANCE FEEDBACK FOR CONTENT-BASED IMAGE RETRIEVAL
773. EFFORT ESTIMATION & TRACKING OF 3D CAD MODELS
774. EI BASED BLOCK PROVING AXLE COUNTER
775. E-LEARNING SERVICES BASED ON CLOUD COMPUTING USING CLOUD CUBE MODEL
776. ELECTRICAL INTEGRATION THROUGH IEC61850 FOR POWER GENERATION
777. ELECTRO MAGNETIC BATTLE SPACE MANAGEMENT -EXPLORING THE SOLUTION
778. ELECTRONIC INVOICE GATEWAY
779. ELECTRONIC MEDICAL RECORD SYSTEM
780. ELECTRONIC STARTER CONTROL MODULE FOR COMMERCIAL CARS
781. ELETTER
782. E-MAGAZINE COMPOSER
783. E-MAILING SYSTEM WITH CRYPTOGRAPHY SECURITY USING WEB SERVICES
784. EMBEDDED WEB APPLICATION
785. EMERGENCY ASSIST SERVICE
786. EMERGENCY BASED REMOTE COLLATERAL TRACKING SYSTEM USING ANDROID MOBILE PLATFORM
787. EMPLOYEE MANAGEMENT SYSTEM
788. EMPLOYEE PERFORMANCE & DEVELOPMENT PROCESS
789. EMPLOYEE PERFORMANCE MANAGEMENT SYSTEM
790. EMPLOYEE REFERRAL AND RESUME MANAGEMENT SYSTEM IN SALESFORCE CLOUD
791. EMPLOYEE SELF SERVICE (ESS)
792. EMPLOYEE TRANSPORT BOOKING SYSTEM
793. EMPLOYMENT MANAGEMENT SYSTEM
794. ENABLING PUBLIC AUDITABILITY AND DATA DYNAMICS FOR STORAGE SECURITY IN CLOUD COMPUTING
795. ENABLING SURVEY RESPONSE MANAGEMENT FROM MS OUTLOOK
796. END-USER POLICY RENEWAL SYSTEM IN INSURANCE BUSINESS
797. ENERGY EFFICIENT IPV6 PROTOCOL
798. ENERGY PLANNING APPLICATION – AUTOMATED REGRESSION SUITE
799. ENGINEERING & COMMISSIONING REPORT OF SCADA SYSTEM FOR VEDANTA ALUMINUM LIMITED
800. ENHANCED NETWORK TROUBLESHOOTER FOR MAC
801. ENHANCEMENT OF PASSWORD SECURITY AS PER SOX STANDARDS
802. ENHANCEMENT OF THE ASSET MANAGEMENT TOOL TO IMPLEMENT SPREAD SHEET
803. ENHANCEMENT OF TRIGGER MODULE IN ORACLE ESSBASE MULTIDIMENSIONAL DATABASE.
804. ENHANCING PERFORMANCE OF TEXT SEQUENCE PREDICTION FOR A PREDICTIVE TEXT ENTRY SYSTEM
805. ENHANCING RELIABILITY OVER WIRELESS USING ERASURE CODING
806. ENHANCING SECURITY TO IKEV2 PROTOCOL
807. ENIQ EVENTS - SERVICE ASSURANCE
808. ENTERPRISE AUTOMATION FRAMEWORK ARCHITECTURE DESIGN
809. ENTERPRISE CACHING
810. ENTERPRISE DATA WAREHOUSE LOAD ANALYSIS
811. ENTERPRISE IT INVENTORY
812. ENTERPRISE LOGGING PLATFORM
813. ENTERPRISE MOBILITY SYSTEM
814. ENTERPRISE NETWORK SECURITY MANAGEMENT
815. ENTERPRISE PACKAGE TRACKING AND DELIVERY MANAGEMENT SYSTEM

816. ENTERPRISE PROJECT MANAGEMENT
817. ENTERPRISE SEARCH APPLICATION FOR TRADESTONE SUITE
818. ENTERPRISE WEALTH MANAGEMENT SYSTEM
819. ESIGNAGE - A DIGITAL SIGNAGE SOLUTION
820. ETHERNET COMMUNICATION INTERFACE FOR VEHICLE DIAGNOSTICS
821. EVALUATE AND DEVELOP VIRTUAL CURRENCY MODEL TO CREATE REAL REVENUE FOR A SOCIAL NETWORKING APPLICATION
822. EVALUATING AND REVISING DESIGN USABILITY FOR E-COMMERCE WEBSITE
823. EVALUATION OF MIDDLEWARE TECHNOLOGIES USED IN COMMUNICATION BETWEEN SOFTWARE COMPONENTS IN A DISTRIBUTED SYSTEM
824. EVENT MANAGEMENT AND ALERT SYSTEM FOR RISK BASED AUTHENTICATION SYSTEMS
825. EVENT PROCESSING USING ACTION MESSAGE FORMAT
826. EXCEPTION HANDLING FRAMEWORK FOR OPENLINK ENDUR INTERFACES
827. EXCHANGE SERVER 2010 IMPLEMENTATION IN ORGANIZATION
828. EXCHANGING MESSAGES BETWEEN STERLING INTEGRATOR AND WEBSPHERE MQ
829. EXPERION PKS™ CONTROL INFRASTRUCTURE
830. EXPLORING CONTENT MANAGEMENT WITH NATIVE XML DB
831. EXTENDED BUSINESS INTELLIGENCE FOR INHOUSE BUILT APPLICATIONS.
832. EXTENDING MP4 FILE FORMAT WITH TIMECODE TRACK
833. FACEBOOK APP: FRIENDS ACTIVITY GRAPH
834. FACETED PRODUCT SEARCH AND PRODUCT RECOMMENDATION STRATEGIES FOR ELECTRONIC STORE (E-COMMERCE WEBSITE)
835. FAULT MANAGEMENT
836. FAULTY PRODUCT RETURN AND TRACKING SYSTEM
837. FEATURE ACTIVATIONS USING TELEMATICS (ANDROID/QT ON BEAGLEBOARD)
838. FIELD EXPANSION FOR ICD-10 AND SCALABILITY
839. FINACLE CORE CONFIGURATION TUNER (FCCT)
840. FINACLE CRM SUPPORT MODULE
841. FINANCE SALES DATAWAREHOUSE
842. FINANCIAL ACCOUNTING SYSTEM / R.S VI
843. FINANCIAL TRANSACTION PROCESSING USING STREAMS BASED COMPUTING
844. FINGERPRINT IDENTIFICATION SYSTEM
845. FINITE ELEMENT ANALYSIS (FEA) POST-PROCESSING.
846. FLEXI-FLOW MANAGEMENT SYSTEM
847. FLIGHT INFORMATION SYSTEMS
848. FLIGHT OPERATIONS SYSTEMS
849. FOREIGN TEXT TRANSLATION USING IMAGE PROCESSING IN ANDROID
850. FRAGILE WATERMARKING SCHEME OF 3-D POLYGONAL MESH
851. FRAMEWORK DESIGN AND DEVELOPMENT FOR IDENTITY MANAGEMENT AND AMBULATORY CARE MODULES OF INFINITY – ENTERPRISE HEALTH SYSTEM
852. FRAMEWORK DEVELOPMENT USING KEYWORD DRIVEN METHODOLOGY FOR UI AUTOMATION
853. FRAMEWORK FOR DATA DRIVEN TESTING OF VCENTER CAPACITYIQ
854. FRAMEWORK FOR DISTRIBUTED WEB APPLICATION SECURITY SCANNER
855. FRAMEWORK FOR PROVIDING SERVICES ON P2P
856. FRAMEWORK FOR STORE PERFORMANCE ANALYSIS
857. FRAMEWORK FOR TEST AUTOMATION SCRIPT DEVELOPMENT AND EXECUTION
858. FRAMEWORK OF AUTOMATION FOR FLASH SOFTWARE CERTIFICATION ON EMBEDDED DEVICES
859. FRAUD DETECTION RULE ANALYSIS & DESIGN SYSTEM FOR ONLINE TRANSACTIONS
860. FREERTOS VIEWER EXTENSION FOR AVRSTUDIO5
861. FREIGHT TRACKING SYSTEM(FTS)
862. FUNCTIONAL AND REGRESSION TESTING AUTOMATION TOOL ON IOS
863. FUNDAMENTALS OF COMPUTING - AN APPLICATION FOR ANDROID PLATFORM

864. FUNDS PORTFOLIO MANAGEMENT
865. FUTURE AIR NAVIGATION SYSTEM (FANS) SOFTWARE CORE COMPONENT FOR DUAL NETWORK AIRCRAFT
866. FUZZY KEYWORD SEARCH OVER ENCRYPTED DATA IN CLOUD COMPUTING.
867. GAP FIT ANALYSIS & SOLUTIONS IN MICROSOFT ERP (STANDARD PACKAGE) IN PRINTING PRESS
868. GAS MANAGEMENT SYSTEM
869. GCOV, LCOV, NCOV: CODE COVERAGE TOOLS AND INFRASTRUCTURE
870. GENE EXPRESSION DATA CLUSTERING USING POINT SYMMETRY DISTANCE
871. GENERATE BANNERS USING CREATIVE LIBRARIES
872. GENERIC FETCH MODULE FOR FETCHING FILES FROM NETWORK ELEMENT (NE) AND ELEMENT MANAGEMENT SYSTEM (EMS)
873. GENERIC FRAMEWORK FOR ANALYZING ERRORS IN A DATA CENTER
874. GENERIC FRAMEWORK FOR FILE MAINTENANCE IN EBANKING
875. GENERIC INTERFACING SYSTEM
876. GENERIC IO SERVICE FOR TRANSACTION PROTOCOLS
877. GENERIC REPORTING TOOL FOR PERFORMANCE RESOURCE UTILIZATION IN CLOUD COMPUTING
878. GENERIC STOCK EXCHANGE SIMULATOR FOR AUTOMATED TESTING
879. GIS BASED C4I SYSTEMS: PERSPECTIVE AND CHALLENGES
880. GIS BASED RSD ANALYSIS FOR ENERGY POTENTIAL BASED ON BIOMASS GROWTH- A UNIQUE APPROACH ANALOGOUS TO RAY TRACE.
881. GOLF COURSE IN A BOX
882. GOOFY FACE - A SMART PHONE APPLICATION
883. GPU ACCELERATED HIGH PERFORMANCE INFRASTRUCTURE FOR GRID COMPUTING.
884. GRAPHICAL REPRESENTATION OF INTRUDER AIRCRAFT IN PERSPECTIVE VIEW
885. GROWING FROM PLATFORM TO CLOUD MANAGEMENT ERA.
886. GSM DRIVE TEST ACTIVITY REDUCTION USING ALTERNATE SOFTWARE TOOL
887. HALLMARK – BUSINESS PROCESS INTEGRATION
888. HANDOVER DECISIONS IN SMALL CELL NETWORKS USING USAGE PREDICTION MODEL
889. HANDWRITTEN DIGIT RECOGNITION
890. HARDWARE RESOURCE MONITORING TOOL FOR PERFORMANCE TESTING
891. HARDWARE VIRTUALIZATION FOR METROLOGY TOOLS
892. HEALTH CARE NETWORKS - TRANSACTIONAL AND ANALYTICAL DATA PROCESSING
893. HEALTH SERVICES APP IN ANDROID PLATFORM.
894. HEALTHCARE CLAIM STATUS MANAGEMENT
895. HEALTHCARE INSURANCE MANAGEMENT - AN INTRANET WEB APPLICATION
896. HELPPPOINT CLAIM SERVICE
897. HIERARCHICAL ARCHITECTURE FOR OPENFLOW-BASED SOFTWARE DEFINED NETWORKS (SDN)
898. HIERARCHICAL CLUSTERING OF BINARY OBJECTS
899. HIGH AVAILABILITY PLATFORM USING OPENSANF FRAMEWORK
900. HIGH PERFORMANCE BALANCED HASH DATABASE FOR MULTI-CORE NETWORK APPLICATIONS
901. HIGH PERFORMANCE SCALABLE CORE NETWORK PACKET SIMULATOR (LTE/3G/2G/EHRPD) FOR MOBILE NETWORKS
902. HIGH SPEED SERIAL LINK INTER PROCESSOR BUS PROTOCOL ON AURIX™ MICROCONTROLLER
903. HIGHLY ROBUST LSB AUDIO STENOGRAPHY BY SLICING TECHNIQUE
904. HISTOGRAM-BASED FOREGROUND OBJECT EXTRACTION
905. HOSTING APPLICATION ON CLOUD.
906. HR ANALYTICS
907. HR DASHBOARD DEVELOPMENT
908. HTML5 BASED WEB CONFERENCING
909. HTTP FRAMEWORK TO MIX STATICALLY TYPED LANGUAGE & DYNAMIC TYPED LANGUAGES
910. HTTP TUNNELING OF CLIENT REQUEST IN A DOTNET APPLICATION
911. HUMAN RESOURCE ANALYTICS

912. HYBRID AGILE TEST TRANSITION MODEL (HATTM)
913. HYDRAULICS SIMULATION FOR ASPEN FLOWSHEETS
914. IBERIA AUTOMATED REPORTING
915. ICE FULL APPLICATION FUNCTIONALITY
916. IDENTIFICATION & MODELING OF VULNERABILITIES AND ZERO KNOWLEDGE TRUST FRAMEWORK FOR SCADA SYSTEMS
917. IDENTIFYING CLOUD SECURITY ISSUES AND RECOMMENDING WAYS TO OVERCOME THEM WITH THE AID OF CRYPTOGRAPHIC TECHNOLOGY
918. IDLE WORKSTATION CYCLE HARVESTING
919. IG-XL DSIO VIRTUAL SERIAL SITES SHARING
920. IMAGE ENHANCEMENT SOFTWARE
921. IMAGE FUSION
922. IMAGE UNDERSTANDING AND COMPUTER VISION
923. IMPLEMENTATION AND TESTING OF DUAL CELL HSDPA CALL ON WCDMA RNC
924. IMPLEMENTATION OF ARINC 840 PROTOCOL FOR CDM APPLICATIONS
925. IMPLEMENTATION OF AUTOMOTIVE GATEWAY UNIT USING AUTOSAR 3.0 BSW
926. IMPLEMENTATION OF CENTROIDDING AND SCHEDULING ALGORITHM IN RADAR SYSTEM
927. IMPLEMENTATION OF DYNAMIC MEMORY MANAGER FOR ULTRA LOW COST MOBILE PHONES
928. IMPLEMENTATION OF GLOBAL TEXT TELEPHONY IN IMS CLIENT
929. IMPLEMENTATION OF INTERCEPTING WEB AGENT WEB-TIER SECURITY PATTERN
930. IMPLEMENTATION OF ONLINE MIGRATION CONFIGURATION CHECK TOOL FOR ONLINE MIGRATION IN THE PROCESS CONTROL INDUSTRY
931. IMPLEMENTATION OF SDSR AND COMPARING ITS CHARACTERISTICS WITH DSR
932. IMPLEMENTING CHANGE MANAGEMENT TO DRIVE PRODUCT & ROCESS IMPROVEMENTS IN AREAS OF NEW PRODUCT DEVELOPMENT, MAINTENANCE RELEASES AND OPERATIONAL INITIATIVES
933. IMPLEMENTING CONFIDENTIALITY IN MICROSOFT AZURE STORAGE
934. IMPLEMENTING FRAMEWORK FOR B2C E-BUSINESS WEBSITES USING RESPONSIVE WEB DESIGN.
935. IMPLEMENTING HTML5 IN SAP LANDSCAPE
936. IMPLEMENTING HYBRID TEST AUTOMATION FRAMEWORK ARCHITECTURE FOR SIEBEL CRM APPLICATIONS
937. IMPLEMENTING MULTIPLE OPENFLOW FLOW TABLES FOR HP NETWORK SWITCHES
938. IMPLEMENTING SCSI-3 PERSISTENT RESERVATION FOR AN OPEN SOURCE ISCSI ENTERPRISE TARGET (IET)
939. IMPORTANCE OF SOA IN HEALTHCARE
940. IMPROVE REPORTING AVAILABILITY EXPERIENCE
941. IMPROVE THE PERFORMANCE OF RBMT (ENGLISH TO HINDI MT SYSTEM) USING STATISTICAL MODELING & LINGUISTIC KNOWLEDGE
942. IMPROVED DRIFT DETECTION METHOD
943. IMPROVEMENTS IN QA TESTING PROCESS IN A SOFTWARE DEVELOPMENT ORGANIZATION
944. IMPROVING MEDICATION SAFETY THROUGH BARCODE SYSTEM.
945. IMPROVING PERFORMANCE IN DATA WAREHOUSING PROJECTS
946. INCIDENT COUNTERMEASURE AND RESPONSE AGAINST VULNERABLE DISTRIBUTED TRANSACTION COORDINATOR IN CLOUD COMPUTING
947. INSTANT CAPACITY ON DEMAND AND GLOBAL WORKLOAD MANAGEMENT ON HP SUPERDOME 2 SERVERS WITH DYNAMIC CORE FEATURES
948. INSTANT MESSAGING USING SESSION INITIATION PROTOCOL (SIP)
949. INSURANCE PRICING MODEL
950. INTEGRATE NETWORK CODING TO MULTIPATH TCP FOR THE BETTER THROUGHPUT
951. INTEGRATED SOFTWARE QUALITY METRICS TRACKER
952. INTEGRATED TEST FRAMEWORK FOR HMI APPLICATIONS IN AUTOMOTIVE INFOTAINMENT AND NAVIGATION SYSTEMS
953. INTEGRATED WEBMETHODS PORTAL

954. INTEGRATING TEXT ANALYTICS WITH LINKED LIFE CYCLE DATA IN JAZZ PLATFORM FOR SMARTER ANALYTICS IN SOFTWARE DEVELOPMENT LIFE CYCLE
955. INTEGRATION – DESIGN PATTERNS & PARADIGMS
956. INTEGRATION OF A RELATIONAL DATABASE WITH AN ECG DEVICE
957. INTEGRATION OF CATALOGUE ITEM FROM EXTERNAL FILE (IN XML, CSV, ODS, SIMPLIFIED TAB FORMATS) INTO A SUPPLIER SYSTEM USING SPRING BATCH API
958. INTEGRATION OF MESSAGING SERVICES WITH ISERVICEHUB
959. INTEGRATION OF SW ISP ALGORITHMS ON INTEL XMM2231/2251 PLATFORMS
960. INTEGRATION OF WORKMEN DETAILS WITH WORK ORDER MANAGEMENT
961. INTEGRATION VERIFICATION TESTING AUTOMATION TOOL
962. INTEGRATION WORKFLOW MANAGER
963. INTELLIGENT CONTROL PANEL
964. INTELLIGENT INCIDENT MANAGEMENT SYSTEM
965. INTELLIGENT INFRASTRUCTURE MANAGEMENT SERVICE
966. INTELLIGENT NEWS READER
967. INTELLIGENT SECURITY SYSTEM FOR AUTOMATED AND WIRELESS CONTROL OF DOOR/WINDOW LOCKS
968. INTELLIGENT VIDEO ANALYTICS – VIDEO CONTENT SEARCH BASED ON MOTION DETECTION
969. INTER CLOUD PHOTO MIGRATION TOOL
970. INTERACTIVE SET TOP BOX
971. INTERACTIVE TOOL FOR EXAMINING THE NETWORK ELEMENTS IN A NETWORK
972. INTER-AIRCRAFT COMMUNICATION AND STUDY ON AVIONICS DATALINK APPLICATIONS
973. INTERFACE VIDEO AUDIO CONFERENCING (I-VAC)
974. INTERNAL PENETRATION TESTING
975. INTIMATEME
976. INTRA-DEPARTMENT PRODUCT MOVEMENT IN RETAIL BUSINESS
977. INTRANET PEER-TO-PEER CACHING TO OPTIMIZE INTERNET BANDWIDTH USAGE
978. INVENTORY MANAGEMENT IN PHARMACY USING WEB SERVICES
979. IOS APP PROTOTYPE FOR CREO SKETCH
980. IPV6 BASED CYBER SECURITY
981. IPV6 BASED INTERNET SECURITY IMPLEMENTATION IN SERVICE PROVIDER NETWORKS
982. ISSUE TRACKER
983. ISSUE TRACKING APPLICATION
984. ISSUES IN CROSS WALKING METADATA STANDARDS: CATALOGUING METADATA.
985. IT INVENTORY MANAGEMENT
986. IVR BASED BANKING SOLUTIONS
987. JAVA NETWORK LAUNCHING PROTOCOL
988. JD EDWARDS ENTERPRISEONE APPLICATION PACK FOR ORACLE ENTERPRISE MANAGER GRID CONTROL
989. JEE FRAMEWORK ENABLED AUTOMOBILE BUSINESS AUTOMATION
990. JOB PROCESSING CONSOLE FOR WINDOWS
991. JOURNALING FOR BLOCK BASED VOLUME REPLICATOR
992. JPEG-HDR ENCODER
993. K- CONTENT BASED IMAGE RETRIEVAL (K-CBIR)
994. KEYBOARD-LESS INFRASTRUCTURE DEPLOYMENT(KID)
995. KINDLEIZER FOR THE INTERNET
996. KNOWLEDGE CONNECT
997. LANDSLIDE MONITORING AND PREDICTION SYSTEM WITH WIRELESS SENSOR NETWORK
998. LAYER2 VIRTUAL PRIVATE NETWORK IMPLEMENTATION IN ISP NETWORK
999. LCD INTERFACE FOR HARDWARE DIAGNOSTICS
1000. LDAP BASED AUTHENTICATION OF SUBSCRIBER
1001. LEARNING BASED FACE RECOGNITION SYSTEM UNDER VARYING POSE-FROM FRONT TO PROFILE

1002. LEGACY APPLICATIONS MIGRATION TO SHAREPOINT
1003. LEVERAGING MANET FOR UBIQUITOUS, SECURED & PAPERLESS BANKING
1004. LIFE SCIENCES CORPORATION EMAIL/EXCHANGE
1005. LIGHT WEIGHT VIEWER FOR COLLABLAND BASED ON OPENGL
1006. LIGHTWEIGHT SERVICE BUS
1007. LIMITING CELL RESELECTION IN MOBILE TERMINAL TO IMPROVE PERFORMANCE.
1008. LINEARIZATION OF TIFF
1009. LLVM BACKEND FOR AVR
1010. LOAD BALANCING IN WEB SERVER USING CHORD AND DHT
1011. LOAD SIMULATOR USING LOAD RUNNER- SHUTTLE SYSTEM
1012. LOCALIZATION, MAPPING & TRACKING OF MOBILE DEVICES
1013. LOCATION BASED SERVICES TO MOBILE SUBSCRIBERS
1014. LOCATION TRACKING AND SHARING APPLICATION
1015. LOG BASED LEARNING FOR LINUX MACHINES
1016. LOG MANAGEMENT SOFTWARE USING OPENSOURCE SYSLOG SERVER WITH CASSANDRA DATABASE
1017. LOG METRIC AGENT FOR ORACLE FINANCIAL SERVICES ANALYTICAL APPLICATIONS INFRASTRUCTURE
1018. LOSS REPORTING APPLICATION FOR INSURANCE CLAIMS
1019. LYRICS APPLICATION FOR SYMBIAN HANDSETS
1020. MAINFRAME ARCHITECTURE – SECURITY AND PERFORMANCE – IN IT INDUSTRY
1021. MANAGEMENT INFORMATION SYSTEM FOR BANKING
1022. MANAGEMENT OF MULTIDIMENSIONAL ATTRIBUTES IN PRODUCT INNOVATION AND PRODUCT MANAGEMENT.
1023. MANAGING MOBILE APPS DATA THROUGH DATA WAREHOUSING
1024. MANAGING TRADE COMPLIANCE FOR IMPORT ITEMS
1025. MARKET FOREST
1026. MARSHALLING BLOCKS
1027. MDX QUERY ANALYZER
1028. MEDICAL APPOINTMENT SYSTEM FOR ANDROID
1029. MEDICINE DISTRIBUTION SYSTEM (MEDDIST)
1030. MEDIKASSIST
1031. MEGA ACE PERFORMANCE TUNING
1032. 'MEP' METRICS-ESTIMATION-PROCESS CONTROL
1033. MESSAGE QUEUING IN MESSAGE SERVER WITH RETRY POLLER
1034. MESSAGE SCHEDULER
1035. METHOD AND APPARATUS TO VALIDATE TEST SCENARIOS IN FUNCTIONAL AND SYSTEM TEST LIKE TESTING
1036. METHODE PROJECT MANAGEMENT TOOL
1037. METRIC CHAT BOT
1038. MICROCONTROLLER BASED UNDERACTUATED ROBOTIC HAND
1039. MIGRATION OF A COLDFUSION SITE TO SHAREPOINT 2010 USING METALOGIX MIGRATION MANAGER
1040. MIGRATION OF SOURCE CODE ACROSS VERSION CONTROL SYSTEM
1041. MIGRATION TO IP V6- STRATEGIES AND PROCEDURES FOR AIR INDIA LTD.
1042. MIGRATION TOOL
1043. MIGRATION UTILITY TO UPDATE DATABASE
1044. MINE MY INBOX
1045. MINIMIZING MEMORY CONSUMPTION BASED ON ETL TECHNOLOGY USING MESH ALGORITHM.
1046. MINING THE WEB: DISCOVERING KNOWLEDGE FROM DATA
1047. MINTSERVER
1048. MITIGATING THE FURTIVE ATTACKS IN WASN USING SADEC MECHANISM
1049. MITIGATION OF MEMORY SAFETY VULNERABILITIES

1050. MIZORAM GOVT. EMPLOYEES MANAGEMENT INFORMATION SYSTEM (MGE-MIS)
1051. MLEACH : AN APPROACH FOR PROLONGING THE LIFE TIME OF WSN
1052. MOBILE AGENTS AND SECURITY
1053. MOBILE APP FOR RESOURCE MANAGEMENT AND BUDGET CONTROL SYSTEM
1054. MOBILE APPLICATION FOR ENTITY COMPLIANCE MANAGEMENT USING .NET MVC, JQUERY MOBILE AND WCF RESTFUL SERVICE
1055. MOBILE BASED MEDICAL DIAGNOSIS SYSTEM
1056. MOBILE BASED VEHICLE ENQUIRY SYSTEM
1057. MOBILE BMS (BUILDING MANAGEMENT SYSTEM)
1058. MOBILE CORE BANKING DATA MANAGEMENT APPLICATION
1059. MOBILE CUSTOMER SELF SERVICE
1060. MOBILE DATA SYNCHRONIZATION
1061. MOBILE DEVICE MANAGEMENT FOR HAND-HELD SYMBIAN DEVICES .
1062. MOBILE EDUCATION CLOUD
1063. MOBILE ENABLEMENT OF ENTERPRISE APPLICATIONS ACROSS MOBILE PLATFORMS
1064. MOBILE MESSAGE GENERATION TOOL (MMGT)
1065. MOBILE PROJECT MANAGEMENT
1066. MOBILE SOCIAL NETWORKING APPLICATION
1067. MOBILE TEST METRICS REPORTER CLIENT
1068. MOBILE THEFT MONITORING
1069. MOBILE-E-SERVICES-SERVER
1070. MODEL DRIVEN ARCHITECTURE DESIGN FOR ON-BOARD SOFTWARE
1071. MODELING AND SIMULATION OF IMAGE PROCESSING ALGORITHMS USING NEURAL NETWORK
1072. MODELING OF THE PRESSURE USED IN DENOXTM SYSTEM
1073. MODERN METHODS OF ENTERPRISE SERVICE INTEGRATION
1074. MODERNIZED QUANTUM FISCAL ADVISOR
1075. MODULAR PROGRAMMING
1076. MPEG-2 TRANSPORT STREAM PACKET ANALYZER
1077. M-TUNES
1078. MULE SOA IMPLEMENTATION
1079. MULTI CHENNAL APPLICATION
1080. MULTI MODAL CITY TRANSPORT INFORMATION SYSTEMS - APPLICABILITY OF GRAPH DATABASES
1081. MULTICHANNEL NETWORK VIDEO RECEIVER COMPLIANT TO ONVIF STANDARDS
1082. MULTICHANNEL VIDEO SURVEILLANCE SYSTEM
1083. MULTI-CLIENT SUPPORTED SERVER FRAMEWORK
1084. MULTIVENDOR TRANSMISSION NMS INTEGRATION IN OSS SERVER –GSM NETWORK
1085. MY-ERECEIPTS – MOBILE APPLICATION DEVELOPMENT
1086. MYPOI'S (POINT OF INTEREST) IN CAR NAVIGATION SYSTEMS
1087. NATIVE GO CONNECTOR FOR MYSQL DATABASE SERVER
1088. NET-SNMP BASED LLDP SUBAGENT FOR HP NETWORK DEVICE.
1089. NETWORK ACCESS CONTROL AUTOMATION FRAMEWORK
1090. NETWORK CENTRIC OPERATIONS : AN IMPLEMENTATION PERSPECTIVE
1091. NETWORK INCIDENT TRACKER
1092. NETWORK MANAGEMENT SOLUTION FOR VIRTUALIZATION TECHNOLOGIES
1093. NETWORK PVR BASED ON HLS (HTTP LIVE STREAMING)
1094. NETWORK SECURITY ACCESS VIA BIOMETRIC METHODS
1095. NETWORK SECURITY FOR INDUSTRIAL AUTOMATION SYSTEMS INTEGRATION WITH IT/BUSINESS NETWORK
1096. NETWORK TRAFFIC DETECTION AND ANALYSIS
1097. NETWORK TRAFFIC GENERATOR
1098. NETWORK-AWARE RATE ADAPTATION IN 802.11N

1099. NIMBLE
1100. NO OPTION TO TRACK ON T1 INTERFACES
1101. NOSQL DATABASES
1102. NOSQL DESIGN PATTERNS
1103. NOSQL FOR AN OLTP HIGH VOLUME APP: REFERENCE ARCHITECTURE AND DEMONSTRATION
1104. NOTIFICATION AND APPROVALS USING SOA
1105. NXDBCOMMUNICATOR COMPONENT
1106. OBJECT ORIENTED 3D SCENE GRAPH FOR WEB USING WEBGL
1107. OBJECT TRACKING ROBOT
1108. OBJECTIVE MEASUREMENT OF "SOFTWARE APPLICATION QUALITY"
1109. OCAP RI – HOME NETWORKING EXTENSION
1110. OCCURRENCE MANAGEMENT FOR FLIGHT SAFETY ON ENTERPRISE GOVERNANCE COMPLIANCE PLATFORM
1111. ODT RECORDER
1112. OFFERING APPROPRIATE PRODUCTS TO CUSTOMERS USING THE NEXT BEST ACTION
1113. OFFLINE SETTINGS TOOL
1114. OFFLINE SOLUTION FOR BUSINESS CONTINUITY
1115. OLAP IN ENTERPRISE WEB APPLICATION
1116. ONLINE AUCTION
1117. ONLINE BLOOD BANK MANAGEMENT SYSTEM
1118. ONLINE CALL SUCCESS RATE MONITORING TOOL
1119. ON-LINE CLASS-ROOM RESERVATION SYSTEM FOR BITS-PILANI HYDERABAD CAMPUS
1120. ONLINE KNOWLEDGE & APPRAISAL SYSTEM
1121. ONLINE LIBRARY MANAGEMENT SYSTEM: DESIGN AND IMPLEMENTATION
1122. ONLINE NEWS NAVIGATOR
1123. ONLINE PORTAL FOR LEAN SIX SIGMA PROJECTS
1124. ONLINE RECRUITMENT SYSTEM (ORS) FOR TCS
1125. ONLINE REPORT MANAGEMENT AND APPLICATION OF SIX SIGMA
1126. ON-SITE ASSIGNEE REPORTING REPOSITORY
1127. OPC UNIFIED ARCHITECTURE CLIENT DEVELOPMENT
1128. OPEN SOURCE WEB SERVER ADMINISTRATION: USER AND APPLICATION MANAGEMENT
1129. OPEN STORAGE PLUG-IN
1130. OPERATING SYSTEM ALGORITHMS SIMULATOR
1131. OPERATING SYSTEM VIRTUALIZATION: FUTURE SERVERS, FROM HARDWARE TO SOFTWARE
1132. OPTIMIZATION OF AUDIO DECODING AND IMAGE DECOMPRESSION FOR CITRIX RECEIVER FOR ANDROID
1133. OPTIMIZATION OF CORE NETWORKS
1134. OPTIMIZATION STRATEGIES FOR DATA WAREHOUSE
1135. OPTIMIZED CONNECTIVITY WITH ASYNCHRONOUS SYSTEM WITH PING ALGORITHM USING WEBSHERE COMMERCE SERVER
1136. OPTIMIZING BIG DATA USING HADOOP & HIVE TABLES IN CLOUD COMPUTING
1137. OPTIMIZING ROADM BASED FILTER PLACEMENT ALGORITHM WITH FUTURE NETWORK EXPANSION FOR METRO DWDM APPLICATION SPACE
1138. OPTIMIZING TESTING CYCLE TIME FOR PRIVATE BANKING APPLICATION
1139. OPTMAN - ORACLE OPTIMIZER MANAGER
1140. ORACLE AND PERL PARALLEL PROCESSING SUBSYSTEM FOR DATA WAREHOUSING APPLICATION
1141. ORDER MANAGEMENT WEB PORTAL BASED ON SIEBEL E-BUSINESS SOLUTION
1142. OS ROOT CAUSE ANALYZER SYSTEM
1143. OSLC INTEGRATION OF SUBVERSION WITH A CHANGE MANAGEMENT SYSTEM FOR TRACKING CHANGESETS
1144. OUT BOUND CALL (VAS)
1145. OVERLAY NETWORK GATEWAY IMPLEMENTATION USING NVGRE AND OPEN FLOW

- 1146. PACKAGE REPOSITORY MANAGEMENT & MIGRATION
- 1147. PARALINGUISTIC PROFILING USING SPEECH RECOGNITION
- 1148. PARAMETER BASED OPTIMIZATION FOR CLOUD COMPUTING
- 1149. PARAMETERIZATION OF A FINITE ELEMENT SOLVER DECK IN ALTAIR'S HYPERMESH
- 1150. PATTERN DEDUCTION IN RETAIL SECTOR BASED ON APRIORI ALGORITHM
- 1151. PATTERN RECOGNITION USING ROUGH-FUZZY SETS.
- 1152. PAYROLL MANAGEMENT SYSTEM
- 1153. PCI-DSS: AN IMPLEMENTATION PLAN FOR SASKEN
- 1154. PEL-PARTITION EXCHANGE LOAD
- 1155. PEOPLESOFT MOBILE APPLICATION
- 1156. PEOPLESOFT SELF SERVICE APPROVALS ON BLACKBERRY
- 1157. PEOPLESOFT SELF SERVICE NOTIFICATIONS
- 1158. PERFORMANCE ANALYSIS OF AODV ROUTING PROTOCOL IN HETEROGENOUSLY POWERED MANET
- 1159. PERFORMANCE BENCHMARKING OF HIGH DEFINITION VIDEO CONFERENCING SOLUTION BASED ON ANDROID
- 1160. PERFORMANCE EVALUATION AND OPTIMIZATION TECHNIQUES OF DESIGNING ORACLE DB SCHEMAS AND QUERIES FOR DATAWAREHOUSE
- 1161. PERFORMANCE IMPROVEMENT OF WMI DISCOVERY IN CA CONFIGURATION AUTOMATION
- 1162. PERFORMANCE ISSUES AND ALTERNATIVE APPROACHES IN APPLICATIONS BUILT ON BMC REMEDY PLATFORM
- 1163. PERFORMANCE STATISTICS AND PROVISIONING GUIDANCE IN ONCOMMAND SYSTEM MANAGER
- 1164. PERFORMANCE TESTING OF CUSTOMER INSIGHT USING JMETER
- 1165. PERFORMANCE TUNING AND MIPS OPTIMIZATION IN LEGACY CLIENT APPLICATION
- 1166. PERFORMANCE TUNING OF JAVA ENTERPRISE APPLICATION SERVING ENVIRONMENT WITH CASE STUDY OF IBM WEBSHERE APPLICATION SERVER V7.0
- 1167. PERFORMANCE TUNING OF ORACLE APPLICATIONS AND DATABASE
- 1168. PERIODIC EXECUTION FRAMEWORK FOR TEST SUITES
- 1169. PERSON RECOGNITION FOR THE VISUALLY IMPAIRED
- 1170. PERSONAL EXPENSE ASSISTANT WITH WEBPRO
- 1171. PERSONAL HEALTH MONITOR THROUGH CLOUD COMPUTING PHENONMENON
- 1172. PERSONAL VIDEO RECORDER FOR SET-TOP BOX
- 1173. PERSONALIZED WEB COMMUNITY DIRECTORY
- 1174. PERVASIVE ELECTRONIC MEASUREMENT ENVIRONMENT: CHALLENGES, APPLICATIONS
- 1175. PHLOGIT! – PHOTO LOGGER
- 1176. PHOTO ORGANIZER
- 1177. PIC WEB SERVER
- 1178. PKG-NOTIFY
- 1179. PLATFORM ABSTRACTION LAYER FOR MULTICORE PROCESSORS
- 1180. PLATFORM INDEPENDENT FRAMEWORK FOR INTEGRATION OF CD DECKS TO VEHICLE INFOTAINMENT SYSTEMS
- 1181. PLUG-IN FOR INTERNET EXPLORER
- 1182. PNOC ON PNOC
- 1183. POD FOR RAM AND PERFORMANCE OPTIMIZATION
- 1184. POLYGON MESH TOPOLOGY ENCODER AND DECODER
- 1185. PORTING OF MULTIPLE VISION BASED DRIVER ASSISTANCE SYSTEMS ON SINGLE MULTI-CORE PROCESSOR
- 1186. POTENTIAL MAPPING FOR IT-ENABLED PRODUCTS FOR STATE BANK OF INDIA KERALA CIRCLE
- 1187. POWER MANAGEMENT FOR NONSTOP SERVERS
- 1188. PRACTICAL WIRELESS NETWORK CODING
- 1189. PREDICTIONS COMPUTATION OF VERTICAL PROFILE IN FLIGHT MANAGEMENT SYSTEM
- 1190. PREEMPTION THRESHOLD SCHEDULING BASED AUTOMOTIVE RTOS
- 1191. PREFERENCE ENGINE FOR CUSTOMIZING USER INTERFACE

- 1192. PRESCRIPTION MONITORING PROGRAM (PMP)
- 1193. PRIVATE CLOUD SOLUTION POWERED BY VMWARE VIRTUALIZATION
- 1194. PRIVATE VLANS SUPPORT ON QFX3500 SWITCHES
- 1195. PROCESS MONITORING FOR SERVICE ORIENTED ARCHITECTURE USING AN AUTOMATED TESTER
- 1196. PRODUCT MIGRATION
- 1197. PRODUCTION AUTOMATION FRAMEWORK FOR SHIP BUILDING CAD SYSTEM
- 1198. PRODUCTION LINE TOOL FOR USB BASED DEVICES
- 1199. PROGRAM EXECUTION TRACKER
- 1200. PROGRESS REPOSITORY
- 1201. PROJECT ASSESSMENT-POST MORTEM ANALYSIS
- 1202. PROJECT BILLING
- 1203. PROJECT MANAGEMENT 'CATALYST' FOR SOFTWARE PROJECTS
- 1204. PROJECT MANAGEMENT OFFICE PORTAL
- 1205. PROJECT PROGRESS MONITORING CUM DOCUMENT MANAGEMENT SYSTEM
- 1206. PROJECT RELEASE MANAGEMENT
- 1207. PROJECT TRACKING AND REPORTING APPLICATION
- 1208. PROJECT TRACKING SYSTEM
- 1209. PROMOTING A COMPLETE SUITE OF PRODUCTS ON OPEN SOURCE UNIX PLATFORM TO SMALL AND MEDIUM SIZED ORGANIZATIONS
- 1210. PROTOCOL SOLUTION
- 1211. PROVIDING CIRCUIT RESILIENCY USING LINK AGGREGATOR IN A MULTI SERVICE ROUTER
- 1212. PSEUDO WIRE (IP-IW) TERMINATION ONTO L3 INTERFACE
- 1213. PSEUDO-ENGLISH TEST CASE GENERATION
- 1214. PUBLIC AUDITING WITH PRIVACY-PRESERVING FOR DATA STORAGE SECURITY IN CLOUD COMPUTING
- 1215. PULL FULFILLMENT SUBSCRIPTION PROCESS – IB'S CONTRACT LINES CREATION PROCESS FROM THE BATCH IN ORACLE EBS
- 1216. PUSH-VOD END USER APPLICATIONS FOR SETTOP BOXES
- 1217. PYTHON INSTANT AUTOMATION ENABLER
- 1218. QA PROCESS & TRAINING INVOLVED ON REGRESSION TESTING IN AN AGILE BASED PROJECT RELEASES
- 1219. QOS BASED NETWORK SELECTION FOR 4G
- 1220. QOS ENFORCEMENT AND TRAFFIC FLOW CONTROL BASED ON DPI
- 1221. QUALITY AND STANDARDS CHECK MACHINE FOR COBOL (QSCMC)
- 1222. QUERY PLANNING FOR CONTINUOUS AGGREGATION QUERIES OVER A NETWORK OF DATA AGGREGATORS
- 1223. QUOTATION SERVICE IMPLEMENTATION FOR INSURANCE PRODUCTS
- 1224. RADIO INTERFACE LAYER (RIL) VERIFICATION TEST SUITE
- 1225. RAILSTOP ALARM:A GPS BASED APPLICATION FOR HANDHELD ANDROID DEVICES
- 1226. RAPTOR SUPERVISOR AGENT - SNMP HANDLER
- 1227. REAL APPLICATION CLUSTERS(RAC) FOR HIGH AVAILABILITY
- 1228. REAL FIELD SIMULATOR FOR SET TOP BOX TEST AUTOMATION
- 1229. REAL TIME MULTI-PROTOCOL GATEWAY
- 1230. REALLOCATION OF DISCOUNTS IN PHARMA INDUSTRY FOR REVENUE MANAGEMENT
- 1231. REAL-TIME BUSINESS ACTIVITY MONITORING FOR VMWARE USING CETAS AND APACHE HADOOP (BIG DATA ANALYTICS)
- 1232. REAL-TIME DATA INTEGRATION USING CHANGE DATA CAPTURE (CDC) FRAMEWORK
- 1233. REAL-TIME SERVICE PROVISIONING INTERFACES (BSS/OSS) SUPPORT IN PACKETWARE TELEPROVISION
- 1234. RECORDYOURDAY
- 1235. REDEMPTION ON DEMAND/PAYMENT OPTION
- 1236. REDUNDANCY ELIMINATION IN WIRELESS SENSOR NETWORKS

- 1237. REGIONAL CARRY
- 1238. REGIONAL LANGUAGE CHARACTER RECOGNIZER FOR MOBILE DEVICES
- 1239. RE-HOST ONLINE INTEREST RATE APPLICATION FROM HOGAN PLATFORM TO VSAM/CICS ENVIRONMENT
- 1240. REMOTE CONNECTORS FOR SET-TOP RESERVATION
- 1241. REMOTE MOBILE MANAGEMENT
- 1242. REMOTE SECURITY SYSTEM
- 1243. REMOTE SET-TOP BOX CONTROLLER
- 1244. REMOTE VITAL SIGNS MONITOR
- 1245. REPORT ANALYTIC TOOL
- 1246. REPORTING SOLUTION FOR BANKS APPLICATION
- 1247. REPSYS (RETAIL PRICE PLANNING SYSTEM)
- 1248. REQUIREMENT ANALYSIS AND IMPLEMENTATION OF HIGH AVAILABILITY AND SECURED NETWORK
- 1249. REQUIREMENTS FEEDBACK MANAGEMENT TOOL
- 1250. RESEARCH AND DEVELOPMENT ON MAKING LEGACY APPLICATIONS MOBILE COMPATIBLE
- 1251. RESEARCH WORK ON IDENTIFYING/INVENTING AND ENHANCING A COST EFFECTIVE GOOGLE PACKAGE PROCESS FOR ANDROID PRODUCTS
- 1252. RESILIENCE ENGINEERING FOR HEALTHCARE SERVICE APPLICATIONS
- 1253. RESOURCE ENUMERATION AND MONITORING FOR CLOUD BASED INFRASTRUCTURE
- 1254. RESOURCE ORIENTED FRAMEWORK FOR LARGE SCALABLE NETWORK SYSTEMS.
- 1255. REST APIS FOR ENHANCED CATALOG NAVIGATION AND BETTER USER EXPERIENCE IN IBM WEBSHERE COMMERCE
- 1256. RESUME PARSER
- 1257. RETAIL EXPERT
- 1258. RETAIL REVENUE MART USING DATA WAREHOUSING APPLICATION TELECOMMUNICATION INDUSTRY
- 1259. RE-USABLE PERFORMANCE TESTING FRAMEWORK FOR RATIONAL ENGINEERING LIFECYCLE MANAGER.
- 1260. REVIEW AND COMPARISON OF VARIOUS LOAD BALANCING ALGORITHMS FOR WEBSERVERS
- 1261. RGRUNDLAG (INVESTOR'S PROFILE MANAGEMENT APPLICATION)
- 1262. RISK MANAGEMENT OF CLOUD COMPUTING SECURITY ISSUES
- 1263. RMT – "RESOURCE MANAGEMENT TOOL" AUTOMATING RESOURCE ALLOCATION PROCESS
- 1264. ROHC FOR REAL TIME DATA OVER 4G WIRELESS NETWORKS
- 1265. ROLE-BASED ACCESS CONTROL FOR GRID DATABASE SERVICES USING THE COMMUNITY AUTHORIZATION SERVICE.
- 1266. ROOT CAUSE ANALYSIS
- 1267. ROOT CAUSE ANALYSIS UTILITY FOR BUG REPORTING TOOL
- 1268. ROSA (RECORDS MANAGEMENT, STORAGE OPTIMISATION AND ARCHIVAL)
- 1269. RULE BASED DECISION MAKING AND KNOWLEDGE MANAGEMENT
- 1270. RUNTIME CLASS RELOADER FOR JAVA USING INSTRUMENTATION API AND BYTECODE MANIPULATION
- 1271. SAILPOINT IDENTITYIQ ORACLE IDENTITY MANAGER PROVISIONING INTEGRATION MODULE
- 1272. SALES ANALYTICS BI REPORTS
- 1273. SALES MADE EASY (SME)
- 1274. SALES REPORTING AND ANALYSIS TOOL
- 1275. SAP ACCESS MANAGEMENT
- 1276. SAP TRANSPORT OVER-TAKER CHECK USING ABAP REPORTING
- 1277. SATCOM AIS NETWORK MANAGEMENT SYSTEM (SANMS) SOFTWARE DEVELOPMENT
- 1278. SCALABILITY OF NETWORK INTERFACE MANAGEMENT THROUGH MEMORY/ PROCESSING OPTIMIZATIONS
- 1279. SCALABLE ARCHITECTURES FOR WEB BASED E-BUSINESSES
- 1280. SCALABLE SCHEDULING OF UPDATES IN STREAMING DATA WAREHOUSES
- 1281. SCHEDULED JOB SERVER FOR ERP

- 1282. SCHEDULING OF PRECEDENCE GRAPHS IN SOFT REAL TIME SYSTEMS
- 1283. SCHEMA FOR SELECTING SOFTWARE TESTING TECHNIQUES IN AUTOMOTIVE DOMAIN
- 1284. SCURO DB MIGRATION FROM MS ACCESS TECHNOLOGY TO BUSINESS OBJECTS (DATA WAREHOUSE) PLATFORM
- 1285. SEAMLESS ILOGISTICS
- 1286. SEAMLESS NAVIGATION
- 1287. SECTION BASED FEATURE RECOGNITION ON STL
- 1288. SECURE AUTHENTICATION FOR REST SERVICES USING HASH BASED MESSAGE AUTHENTICATION CODE
- 1289. SECURE MESSAGE TRANSMISSION IN E-BUSINESS APPLICATIONS USING BIZTALK
- 1290. SECURE STORAGE OF SATELLITE IMAGES USING VISUAL CRYPTOGRAPHY
- 1291. SECURED AND STABLE ROUTING FOR MOBILE AD HOC NETWORKS
- 1292. SECURED VOIP ENCRYPTION WITH VPN
- 1293. SECURING DNS USING CRYPTOGRAPHY
- 1294. SEGMENTED ORDER TO LEVEL FOR SMALL FORMAT STORES
- 1295. SELENIUM BASED AUTOMATION FRAMEWORK
- 1296. SEMISTRUCTURED DATA MANAGEMENT TOOL
- 1297. SENDMAIL MAIL FILTERS BASED ON SENDER AND RECEIVER INFORMATION
- 1298. SENTIMENT ANALYSIS FOR ENTERPRISE PLANNING
- 1299. SENTIMENT ANALYSIS FOR HOSPITALITY
- 1300. SERVER CONSOLIDATION VIA VIRTUALIZATION OF OPERATING SYSTEMS.
- 1301. SERVER MONITORING AND REPORTING TOOL (SMART)
- 1302. SERVER PUSH FOR MOBILE WEB APPS
- 1303. SERVICE AGGREGATION FRAMEWORK
- 1304. SERVICE DELIVERY PLATFORM
- 1305. SERVICE FAILURE PREDICTABILITY INDEX CALCULATION AND RISK ASSESSMENT
- 1306. SERVICE TESTING AUTOMATION FRAMEWORK
- 1307. SET-TOP BOX RACK MANAGEMENT SYSTEM
- 1308. SHADOW LITE IMPLEMENTATION
- 1309. SHARED REGISTRATION OPTIMIZATION
- 1310. SHORT MESSAGE SERVICE (SMS) NOTIFICATION SERVICE FOR REDHAT CLUSTER SUITE (RHCS)
- 1311. SIGTRAN IMPLEMENTATION
- 1312. SIM CARD FILE STRUCTURE CLONING TOOL
- 1313. SIMPLE TEXT BASED INFORMATION RETRIEVAL ENGINE
- 1314. SIMULATED FIELD ENVIRONMENT IN TELECOM NETWORK TESTING.
- 1315. SIMULATED PHONES CONFIGURATION PORTAL
- 1316. SIMULATOR DEFICIENCY MANAGEMENT SYSTEM (SDMS)
- 1317. SINGLE PORTAL FLEXIBILITY FOR BANKING APPLICATIONS
- 1318. SIRCH (SAMSUNG INTERACTIVE REMOTE CONTROL FOR HOSPITALITY)
- 1319. SITE COLLECTION TOOL
- 1320. SITE CONFIGURATION MANAGEMENT
- 1321. SITUATIONAL AWARENESS & ANALYSIS SYSTEM(SAAS)
- 1322. SIX SIGMA PROJECT FOR OVERALL TEST CYCLE TIME REDUCTION
- 1323. SMART AUTOMATION OF MEDICAID SERVICES (SAMS) E-BUSINESS
- 1324. SMART COMMUNITY ON LAMP
- 1325. SMART FRAMEWORK FOR UI DEVELOPEMENT
- 1326. SMART GMO WORKBENCH
- 1327. SMART MEDICARE
- 1328. SMART MOBILE MARKETING - TRANSFORMING CUSTOMER S IN-STORE EXPERIENCE
- 1329. SMART MOBISecure
- 1330. SMART NETWORK DEVICES DESIGN
- 1331. SMART SEARCH

- 1332. SMART SLOT
- 1333. SMARTSEC MOBILE BANKING
- 1334. SNMP NETWORK SIMULATOR
- 1335. SNMPV3 IMPLEMENTATION FOR DIAMETER(PCRF) SERVER
- 1336. SOCIAL APP ON OCAP MIDDLEWARE
- 1337. SOCIAL NETWORKING
- 1338. SOCIAL SEGMENTATION
- 1339. SOFT KEYBOARD
- 1340. SOFTWARE ARCHITECTURE AND ITS IMPLEMENTATION
- 1341. SOFTWARE BASED TWO-FACTOR AUTHENTICATION
- 1342. SOFTWARE DEVELOPMENT KIT FOR DEVELOPING APPS ON OXPD ENABLED PRINTERS
- 1343. SOFTWARE DEVELOPMENT KIT FOR INFORMATICA APPLICATION ADAPTERS ADOPTING OSGI
- 1344. SOFTWARE DEVELOPMENT LIFE CYCLE
- 1345. SOFTWARE EFFORT ESTIMATION TOOL
- 1346. SOFTWARE FOR ESTIMATING EFFECTIVE PRICE FOR A USED VEHICLE
- 1347. SOFTWARE QUALITY ASSURANCE & CONTROL IN AGILE PROJECTS
- 1348. SOFTWARE TESTING OF INTEGRATED INCIDENT HANDLING SYSTEM FOR ORGANIZATIONS' BETTER SERVICE MANAGEMENT.
- 1349. SOFTWARE TESTING PARADIGM FOR CLOUD BASED REMOTE SENSING APPLICATION
- 1350. SOLIDCORE MEMORY PROTECTION EXPLOITATION SUITE
- 1351. SOLUTION FOR TRANSPORT ENGINEERING AND FOLLOW-UP INFORMATION
- 1352. SOLVENCY II
- 1353. SPACE VECTOR PULSE WIDTH MODULATION (SVPWM) CONTROL OF 3-PHASE INDUCTION MOTOR
- 1354. SPECIALBILL CONVERSION PROJECT
- 1355. SPECIFICATION OF AN INTELLIGENT KNOWLEDGE MANAGEMENT SYSTEM FOR AN ACADEMIC INSTITUTION
- 1356. SPEECH INTEGRATION IN WEB BROWSERS
- 1357. SPEECH TUTOR
- 1358. SPEND DATA CLASSIFICATION FOR IMPROVED ANALYSIS
- 1359. SPEND/SUPPLIER ANALYTICS METRICS IN SUPPLIER RELATIONSHIP MANAGEMENT
- 1360. SPI HANDLER AND DRIVER
- 1361. SPSA (SUPPLIER PRODUCT SUPPORT AGREEMENT):
- 1362. SSH SUPPORT ON VXWORKS-6.2
- 1363. STEGANOGRAPHY
- 1364. STEGANOGRAPHY FOR ANDROID PHONES
- 1365. STEREO MATE
- 1366. STICKS (SMART TICKET CHECKING SYSTEM)
- 1367. STOCK ANALYSIS TOOL
- 1368. STOCK TRANSACTIONS ANALYTICS AND REPORTING
- 1369. STORAGE AREA NETWORK FOR OPERATION X (SANFOX)
- 1370. STORAGE NETWORKS
- 1371. STRATEGIC IT GOVERNANCE THROUGH SOFTWARE ENGINEERING AND MANAGEMENT PRINCIPLES
- 1372. STUDY AND EVALUATION OF FUTURE ETHERNET BASED IN-CAR NETWORK
- 1373. STUDY OF FEASIBILITY OF CO-EXISTENCE OF NOSQL WITH RELATIONAL DATABASES, AND ITS APPLICATION IN VARIOUS DOMAINS
- 1374. SUMMARY CACHE BASED PROXIES
- 1375. SUPERBOT BASED AUTOMATION FRAMEWORK FOR SWT JAVA APPLICATION
- 1376. SUPPLIER CONTRACT MANAGEMENT FOR PURCHASING APPLICATION
- 1377. SUPPORT FOR RTP MULTIPLEXING FOR FEMTOCELLS
- 1378. SUPPORT FOR SNAPSHOT IN HADOOP DISTRIBUTED FILE SYSTEM (HDFS)
- 1379. SWAYAM: AN INNOVATIVE ELECTRONIC GAMING MACHINE UTILITY

- 1380. SYMANTEC ONLINE SERVICE TO ACTIVATE NORTON PRODUCTS (ANTIVIRUS)
- 1381. SYSTEM FOR ELECTRICAL AND SPATIAL EQUIVALENCE CHECKING IN CIRCUITS
- 1382. SYSTEM PROFILER FOR ANDROID
- 1383. SYSTEMIC QUALIFICATION OF DATA ACCESS OVER IPV6 ON A HIGH AVAILABLE UNIFIED STORAGE SYSTEM
- 1384. T24 MODEL BANK SELF CONTAINED VERSION (SCV)
- 1385. TARIFF AND VENDOR MANAGEMENT
- 1386. TEAMCENTER PLM HEALTH MONITORING SYSTEM
- 1387. TECHNIQUES FOR PREDICTING FUTURE CAR MARKET DEMAND USING DATA MINING
- 1388. TELE-EDUCATION LEARNING SYSTEM
- 1389. TEST AUTOMATION FOR CRUISE CONTROL SUBSYSTEM SPECIFICATION
- 1390. TEST AUTOMATION FRAMEWORK FOR ANDROID DEVICES
- 1391. TEST AUTOMATION FRAMEWORK FOR ORACLE ASR(AUTO SERVICE REQUEST)
- 1392. TEST AUTOMATION FRAMEWORK FOR SYSTEMS MANAGEMENT SOFTWARE
- 1393. TEST AUTOMATION FRAMEWORKS
- 1394. TEST DRIVEN DEVELOPMENT
- 1395. TEST FRAMEWORK FOR AUTOMATED TEST EXECUTION AND SCREEN CAPTURE
- 1396. TEST FRAMEWORK FOR ONLINE VIDEO SERVICE
- 1397. TEST PLAN AUTOMATION : BLACK BOX TESTING BY INTEGRATING TEST CODE WITH APPLICATION SOFTWARE
- 1398. TESTING IN THE CLOUD - EXPLORING THE FEASIBILITY WITH A PROTOTYPE
- 1399. TEXTURE MAPPING
- 1400. THE INTEGRATED APPROACH TO REVERSE ENGINEERING OF LEGACY SYSTEM
- 1401. THEME TV
- 1402. THERMAL RECORDER INTERFACE FOR FETAL MONITORING SYSTEM
- 1403. THESAURUS BASED TERM RANKING FOR KEYWORD EXTRACTION
- 1404. TIMESHEET TRACKING TOOL
- 1405. TISSUE PROCESSOR
- 1406. TO IMPLEMENT REPRESENTATIONAL STATE TRANSFER (REST) ARCHITECTURE IN SAGENT WEB SERVICES.
- 1407. TOOL FOR BUSINESS INTELLIGENCE, COGNOS 8 BI
- 1408. TOOL FOR FIELD ISSUE DEBUGGING
- 1409. TOOL FOR MEDICAL IMAGING 2D AND 3D VISUALIZATION.
- 1410. TOOL MATCHING AUTOMATION
- 1411. TOOL TO ASSIST, MANAGE AND MONITOR INFORMATION RISK ASSESSMENTS (TAMMIRA)
- 1412. TOPX PORTAL
- 1413. TOUCH BASED APPLICATION FOR FCR DASHBOARD IN DATA WAREHOUSING.
- 1414. TRACE-ME
- 1415. TRACK STEPHEN- A MOBILE TRACKING APPLICATION
- 1416. TRAFFIC MANAGEMENT IN MPLS NETWORK USING MODIFIED ANT COLONY OPTIMIZATION
- 1417. TRANSACTION PROCESSING ANALYSIS & FEASIBILITY STUDY OF RDBMS PRODUCTS FOR AN OLTP ENVIRONMENT
- 1418. TRANSCRIPTION WORKFLOW PLATFORM
- 1419. TRANSITION FROM IPV4 TO IPV6: DEPLOYMENT AND PERFORMANCE
- 1420. TRANSITION FROM MAPLE TO WEBKIT BROWSER IN DTV - COMPATIBILITY PROBLEMS AND SOLUTIONS
- 1421. TRANSLATING FORMAL KNOWLEDGE MODEL TO SOFTWARE MODEL IN KBE FRAME-WORK
- 1422. TRAVEL CARD PRODUCT LAUNCH
- 1423. TRAVEL MADE EASY
- 1424. TRAVEL SHOP
- 1425. TRAVELER SURVIVAL KIT
- 1426. TWEETPEEP (WEBCRAWLER FOR TWITTER)
- 1427. TWO WAY SECURE EXECUTION ENVIRONMENT CAS AND TV/STB PLATFORM

- 1428. TWO-TIER NETWORK ARCHITECTURE & CISCO IP TELEPHONY
- 1429. TYPE 2 SCD MANAGEMENT METHODOLOGY FOR FLAT FILES
- 1430. U.S.A MEDICAL PRESCRIPTIONS DATA MANAGEMENT
- 1431. UE QUEUED DURING CELL UPDATING PROCEDURE
- 1432. UEFI – PE/COFF IMAGE VIEWER
- 1433. UI BASED AUTOMATION TOOL FOR SOFTWARE APPLICATIONS
- 1434. UNIVERSAL CLOUD AWARE REST BASED PROTOCOL FOR DEVICES AND SERVICES
- 1435. UNSUPERVISED CLASSIFICATION OF POLARIMETRIC SAR IMAGES USING MULTI-SEED APPROACH
- 1436. UPGRADE AUTOMATION
- 1437. USE OF MACHINE LEARNING TECHNIQUE FOR CLASSIFICATION
- 1438. USER LEVEL PORTING OF KERNEL CODE TO EASE DEBUGGING
- 1439. USER-SPACE APPLICATION FAULT TOLERANCE
- 1440. USG-UNIFIED STRESS GENERATOR TO TEST FILE SERVERS
- 1441. USING C++ AMP (ACCELERATED MASSIVE PARALLELISM) TO OFFLOAD AUDIO PROCESSING TASKS (AUDIO ALGORITHMS) TO GPU IN WINDOWS 7 AUDIO STACK
- 1442. VALIDATION & VERIFICATION OF MIDDLEWARE INTERFACE FOR A GLOBAL RETAIL CUSTOMER
- 1443. VAS PRODUCT CATALOG MANAGEMENT IN ATG PLATFORM
- 1444. VEHICLE DIAGNOSTICS FOR READING OUT ERROR CODES AND ENVIRONMENTAL DATA.
- 1445. VIDEO ON DEMAND (VOD) APPLICATION FOR SET TOP BOX
- 1446. VIDEO SURVEY RESPONSE SYSTEM
- 1447. VIDEO TRACKING" A METHODOLOGY FOR VALIDATION OF DAS(DRIVER ASSISTANCE SYSTEM)
- 1448. VIRTUAL BRANCH COLLAPSE
- 1449. VIRTUAL GIFT CARDS
- 1450. VIRTUAL LAB MANAGER
- 1451. VIRTUALIZATION – A DOUBLE EDGED SWORD
- 1452. VISION SYSTEM FOR NIGHTTIME VEHICLE MONITORING AND TRACKING
- 1453. VLAB
- 1454. VMWARE VCENTER SUPPORT FOR OPENSTACK COMPUTE
- 1455. VOICE CALL AND SMS SCHEDULAR
- 1456. VOICE CALL INTERFACE
- 1457. VOIP CALLING AND BILLING PLATFORM
- 1458. VOIP VULNERABILITIES AND SOLUTIONS
- 1459. VSPHERE DISTRIBUTED SWITCH TEST AUTOMATION FRAMEWORK
- 1460. WAREHOUSE EMPLOYEES MANAGEMENT SYSTEM
- 1461. WAREHOUSE MANAGEMENT
- 1462. WAREHOUSE REPORTING AND ITS APPLICATION IN RETAIL SYSTEM
- 1463. WATERMARKING OF 3-D OBJECT
- 1464. WEALTH MANAGEMENT APPLICATION
- 1465. WEB APPLICATION DESKTOP INTEGRATION FOR STANDARD PURCHASE ORDERS
- 1466. WEB BASED CLIENT MANAGEMENT
- 1467. WEB BASED CORPORATE INVENTORY TRACKING AND MANAGEMENT SYSTEM
- 1468. WEB BASED DOCUMENT IMAGING SOLUTION
- 1469. WEB BASED EQUIPMENT MANAGEMENT USER INTERFACE FOR 1350OMS PRODUCT
- 1470. WEB BASED HUMAN RESOURCE MANAGEMENT SYSTEM VIA .NET FRAMEWORK
- 1471. WEB BASED VENDOR MANAGEMENT
- 1472. WEB ENABLED MANAGEMENT INFORMATION SYSTEM FOR NIELIT AIZAWL.
- 1473. WEB ENABLED RICH CLIENT APPLICATION FOR CONFIGURING RULES AND CONSTRAINTS TO VALIDATE CAD MODELS FOR MANUFACTURABILITY
- 1474. WEB HYPERCUBE –THE OLAP APPROACH FOR WORLD WIDE WEB
- 1475. WEB PORTAL FOR MANAGING SOFTWARE & HARDWARE DEVELOPMENT TOOLS
- 1476. WEB SERVICES BASED MANAGEMENT FOR SERVICE PROCESSORS IN IBM POWER SERVERS

- 1477. WEB SERVICES TEST AUTOMATION CUSTOMIZATION
- 1478. WEB TO MOBILE TRANSCODING
- 1479. WEB-BASED PATIENT REPORTING
- 1480. WEBPACK
- 1481. WI-FI DIRECT AND ITS APPLICATIONS
- 1482. WIMAX MAC LAYER IEEE STANDARD 802.16E MOBILE STATION SIDE
- 1483. WINDOWS MEMORY ANALYSIS
- 1484. WINDOWS REGULATOR ELECTRONIC WITH ANTI-PINCH MECHANISM.
- 1485. WIRELESS VIDEO SURVEILLANCE SYSTEM WITH PATTERN RECOGNITION
- 1486. WLAN DRIVER ON MAC OS X PLATFORM
- 1487. WOMENS PREVENTIVE CARE
- 1488. WORKFLOW ENGINE
- 1489. XR CONFIG GENERATOR TOOL
- 1490. ZERO DATA LOSS SOLUTION FOR BUSINESS CONTINUITY
- 1491. ZIGBEE BASED WIRELESS DATA ACQUISITION SYSTEM IN INDUSTRIAL AUTOMATION

STATEMENT OF DEGREES AWARDED

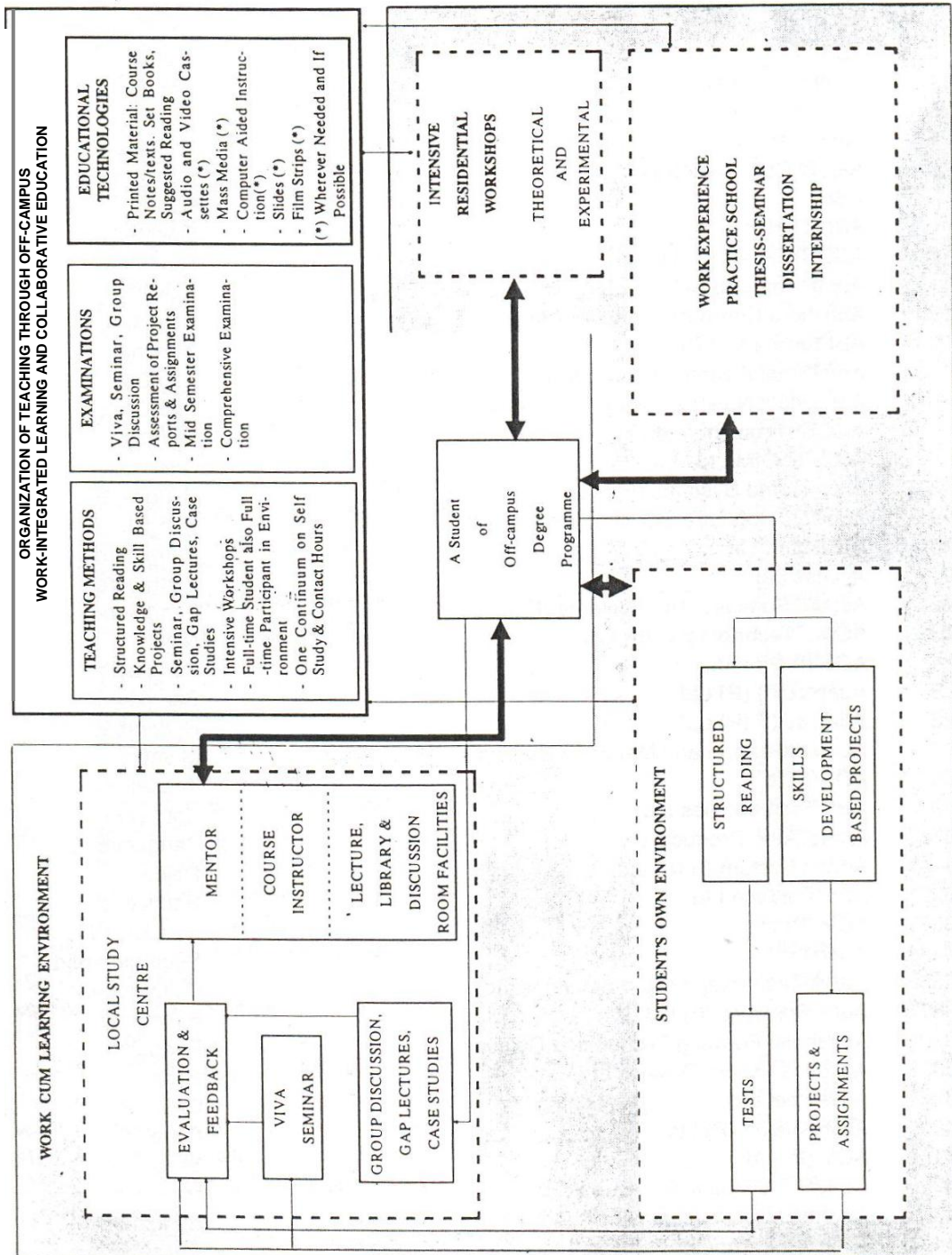
Degrees	No. of degrees	
	70 th Award (31.03.2012)	71 st Award (19.07.2012)
<i>A. Integrated First Degrees</i>		
<i>B.S.</i>		
Engineering Design	11(00)	11(01)
Engineering Technology	322(09)	276(08)
Information Systems	75(14)	29(04)
Manufacturing Engineering	-	41(00)
Marine Engineering	304(02)	13(00)
Nautical Technology	67(00)	33(00)
Optometry	40(28)	41(25)
Physician Assistant	-	9(09)
Process Engineering	34(01)	8(00)
<i>M.Sc.(Tech.)</i>		
Pharmaceutical Chemistry	-	34(05)
<i>Sub Total</i>	853(54)	495(52)
<i>B. Higher Degrees</i>		
<i>M.S.</i>		
Consultancy Management	6(00)	64(10)
Design Engineering	-	34(03)
Educational Systems Management	21(07)	-
Embedded Systems	-	23(06)
Engineering Management	21(01)	-
Manufacturing Management	173(07)	140(03)
Medical Laboratory Technology	-	3(02)
Microelectronics	-	25(01)
Pharmaceutical Operations & Management	43(04)	-
Quality Management	16(02)	120(24)
Science Communication	10(01)	-
Software Engineering	1751(1019)	209(64)
Software Systems	592(142)	636(149)
Systems Engineering	-	288(138)
Telecommunications & Software Engineering	36(06)	94(28)
<i>M.Phil.</i>		
Hospital and Health Systems Management	7(04)	40(14)
Optometry	-	7(06)
<i>Sub Total</i>	2676(1193)	1683(448)
Total	3529(1247)	2178(500)

Note: The numbers in brackets indicate number of female students.

**72nd AWARD OF DEGREES TO BE APPROVED BY THE 66th MEETING OF
THE BOARD OF GOVERNORS**

Programme	No. of Degrees
B.S. (Engineering Design)	2(000)
B.S. (Engineering Technology)	215(008)
B.S. (Information Systems)	56(014)
B.S. (Manufacturing Engineering)	2(000)
B.S. (Marine Engineering)	327(003)
B.S. (Nautical Technology)	47(000)
B.S. (Optometry)	35(026)
B.S. (Process Engineering)	97(000)
M.Sc.(Tech)(Pharmaceutical Chemistry)	35(019)
Sub Total	816(070)
M.S. (Consultancy Management)	4(000)
M.S. (Design Engineering)	2(000)
M.S. (Engineering Management)	57(000)
M.S. (Manufacturing Management)	141(005)
M.S. (Microelectronics)	55(006)
M.S. (Pharmaceutical Operations & Management)	5(000)
M.S. (Pharmaceutics)	36(007)
M.S. (Project Engineering & Management)	15(002)
M.S. (Quality Management)	12(004)
M.S. (Software Engineering)	1296(657)
M.S. (Software Systems)	535(138)
M.S. (Systems Engineering)	15(003)
M.S. (Telecommunications and Software Engineering)	12(001)
M.Phil. (Hospital & Health Systems Management)	6(002)
Sub Total	2191(825)
Total	3007(895)

Note: *The numbers in brackets indicate number of female students.*



A Schematic depicting Person-centred Approach to a Student's Programme of Study in the Off-campus, Education System under Work Integrated Learning Program viewed from the Student's stand-point