Birla Institute of Technology and Science, Pilani – Hyderabad Campus Semester I, 2022-23 BITS F225: ENVIRONMENTAL STUDIES Mid Semester Examination (Open Book) Date: 03.11.2022 Marks: 50 Duration: 90 Min

Student Name:

Student ID

Read the instructions carefully

- 1. Must write your name and ID in the indicated space over question paper and answer sheet
- 2. Mark your answers legibly in the space given in the indicated box at the end.
- 3. No overwriting is allowed.
- 4. Use only pen to tick (section 1 and 2)/write (section 3) in the respective boxes
- 5. There is negative marking (0.25) for MCQs and MSQs (with more than one answers).
- 6. Marks will not be awarded unless all the correct answers are chosen for the MSQs.

Section 1

Multiple choice Questions (MCQs) 24 X 0.5 = 12M (Negative marking (0.25) for MCQs)

- 1. The popular magazine published by the Centre for Science and Environment:
 - a. Down to Earth
 - b. Me and my earth
 - c. Indian Forester
 - d. The times of biodiversity
- 2. Mandate of Zoological Survey of India was:
 - a. Study of endogenous species in India
 - b. Systematic survey of fauna in India
 - c. Study of biodiversity in India
 - d. Study of birds in India
- 3. The majority of the available fresh water on the earth comes from
 - a. Lakes
 - b. Rivers
 - c. Ground water
 - d. Icecaps and Glaciers
- 4. Which of these are not considered as criteria air pollutants?
 - a. Ozone
 - b. Lead
 - c. Carbon monoxide
 - d. Mercury
- 5. Minamata is caused by
 - a. As
 - b. Cd
 - c. Pb
 - d. None of them

- 6. The term BOD stands for
 - a. Biochemical oxygen demand
 - b. Benthic oxygen demand
 - c. Bacterial oxygen demand
 - d. Bacterial oxygen decomposition
- 7. Which of the following particle cannot pass through human skin?
 - a. α (alpha)
 - b. β (beta)
 - c. u (gama)
 - d. None of the above
- 8. Which of the following is the full form of ESA?
 - a. Ecological System Assessment
 - b. Ecologically Sensitive Area
 - c. Ecological Sound Area
 - d. Ecologically Sensed Area
- 9. Extinction of some species occurs due to changes in land use and seriously affects the ecosystem. Such species are called?
 - a. Endangered species
 - b. Keystone species
 - c. Common species
 - d. Rare species
- 10. In ecological succession, the intermediate developmental phase is known as
 - a. Ecesis
 - b. Climax
 - c. Serel
 - d. Nudation
- 11. Plants convert energy from the sunlight into_____ for their growth.
 - a. Inorganic substance
 - b. Chemical particle
 - c. Organic matter
 - d. Energy component
- 12. _____ break down dead organic material into smaller particles and finally into simpler substances that are used by plants as nutrition.
 - a. Primary consumers
 - b. Carnivores
 - c. Producers
 - d. Detrivores
- 13. Morphine is derived from?
 - a. Velvet bean
 - b. Opium poppy
 - c. Pineapple
 - d. Mint
- 14. Which of the following is a water bird sanctuary known for the Siberian Crane?
 - a. Kanha
 - b. Ranthambore
 - c. Gir Sanctuary
 - d. Keoladeo National Park

- 15. _____ among the following is the hotspot of biodiversity in India.
 - a. Gangetic plain
 - b. Sunderbans
 - c. Eastern ghats
 - d. Western ghats

16. Forest core zone and National Parks are classified under ______ category/ies of protected areas under ______ respectively

- a. I and II
- b. I only
- c. II and III
- d. Il only

17. The ______ is the only home of the wild ass in India.

- a. Gir
- b. Little Rann of Kutch
- c. Ladakh
- d. Thar

18. Which of the following includes the soil component in Earth's Resources?

- a. Geosphere
- b. Lithosphere
- c. Mesosphere
- d. Stratosphere
- 19. Which is <u>not</u> a secondary pollutant a. Methane
 - a. Methan
 - b. ozone
 - c. Sulphur trioxide
 - d. Nitrogen dioxide

20. Which plant-based food production is largest contributor of greenhouse gas?

- a. Rice
- b. Wheat
- c. Sugarcane
- d. Phytoplankton

21. Which of the following is not a threat to biodiversity?

- a. Habitat loss
- b. Poaching of wildlife
- c. Man-wildlife conflict
- d. Declaration of bioreserves

22. Vector borne disease spread depends on

- a. Water purity
- b. Rainfall pattern
- c. Polluted air
- d. Health of the host
- 23. How many national parks are there in India?
 - a. 59
 - b. 69
 - c. 79
 - d. 89

24. Beej Bachao Andolan is

- a. An initiative of villagers in Tehri district for ex situ conservation
- b. A movement pioneered by the farmers of West Bengal
- c. A government initiative for seed bank generation
- d. A movement started under the leadership of Medha Patekar

Section 2

Multiple select questions (MSQs) (1 X 18 = 18M)

There is negative marking (0.25). Marks will not be awarded unless all the correct answers are chosen for the MSQs.

- 1. The direct effect(s) of deforestation include
 - a) Soil erosion
 - b) Flood
 - c) Global warming
 - d) Noise pollution
- 2. Which of the following is/are both greenhouse gas(es) and ozone depleting substance(s)?
 - a) CFC-11
 - b) CO₂
 - c) SO_2
 - d) N_2O
- 3. Which of the following element(s) may cause radioactive pollution:
 - a) Carbon-14
 - b) Carbon-12
 - c) Radium-226
 - d) Urenium-238
- 4. Which of followings are examples of aerosols where the dispersed phase is liquid, and the dispersing medium is a gas?
 - a) Fume
 - b) Fog
 - c) Mist
 - d) Smoke
- 5. Which of the following factors leads to Eutrophication?
 - a) Excessive use of fertilizers
 - b) Enhancement of self-purification capacity
 - c) Using alternatives (non-nitrogenous and non-phosphorus) to inorganic fertilizers and pesticides.
 - d) Discharge of waste water into water bodies
- 6. Sustainable Utilization means
 - a) The growth that satisfies current demands without jeopardising future generations' ability to fulfil their own needs.
 - b) Ensuring the proper utilizations and management of resources.
 - c) Proper and efficient use of renewable and non-renewable natural sources
 - d) Excessive use of natural product for the benefit of the entire biological community in an ecosystem.
- 7. Factors that threaten to reduce biodiversity
 - a) Bioinvasion
 - b) Overexploitation
 - c) Excessive elimination of pests
 - d) Food web
- 8. Which one(s) from the below list are <u>not</u> related to *in situ* conservation
 - a) Marine National Park in Gujarat
 - b) National bureau of plant genetic resources (NBPGR)
 - c) Beej Bachao Andolan
 - d) Bhagabatpur Crocodile Project, Sundarban

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- 9. Which is **<u>not</u>** true for 'Bhed Bhagao Andolan"
 - a) Involvement of local community of Kutch, Gujrat for the initiatives related to conservation and regeneration
 - b) started after the threat over biodiversity in Kailadevi Wildlife Sanctuary
 - c) regulate excessive pastoralism and subsistence agriculture
 - d) started under the leadership of Sunder Lal Bahuguna
- 10. Which of the following are drawbacks of Hydro-electric power?
 - a) Large area of land is required
 - b) Water flows from height to ground level
 - c) Water present in the reservoir is wasted
 - d) Silting of the reservoirs
- 11. Which of the following practices come under Integrated Crop Management?
 - a) Maintaining proper stocks of pesticides and fertilizers during the growing season
 - b) Using alternatives to inorganic fertilizers and pesticides
 - c) Using only drip irrigation for farming practices
 - d) Growing multiple varieties of crops
- 12. The Chennai flood during December 2015 killing more than 500 and destroying infrastructure worth Rs 500 crore was due to
 - a) a drain (small river) called Mithi, was clogged and marred by encroachments
 - b) encroachments of the wetlands like Pallikaranai lake
 - c) excessive rainfall
 - d) improper sewage treatment connected to Cooum, Adyar
- 13. Major components of "smog" are
 - a) Stratospheric ozone
 - b) Ground level ozone
 - c) Volatile organic compound
 - d) CO₂
- 14. Water hyacinth is related to
 - a) Bioinvasion
 - b) Eutrophication
 - c) Habitat loss
 - d) Indigenous plant of India majorly found in waterbodies of kerala
- 15. Places where Coral reefs are found in India
 - a) Wetlands of Assam
 - b) Andaman and Nicobar Islands
 - c) Sunderban Delta
 - d) Shallow areas near gulf of Kutch
- 16. Which is a non-Governmental institute that deals with environmental protection and conservation?
 - a) BNHS
 - b) BSI
 - c) ZSI
 - d) WWF-I
- 17. SP Godrej was one of India's greatest supporter of:
 - a) Conserving sacred groves
 - b) Study of mammals, birds, and insects
 - c) Wildlife conservation
 - d) Nature awareness program

- 18. Choose the correct statement (s) with regards to the reintroduction of Cheetah in India after being extinct for 70 years.
 - a) Cheetah was introduced in the Ranthambore National Park, Madhya Pradesh
 - b) Cheetah was introduced in the Kuno National Park, Madhya Pradesh
 - c) Cheetahs were relocated from Namibia
 - d) Cheetahs were relocated from Iran

Section 3

Fill in the blanks $(1 \times 20 = 20 \text{ M})$

- 1. In air pollution, SPM stands for _____
- 2. _____ considers the number of different taxonomic categories of the species present in a geographic region.
- 3. organism that feeds on nonliving organic matter.
- 4. The chemicals known to be major contributors of the acid deposition are _____ and _____.
- 5. The particulate matter which can penetrate alveolus in lungs is ______ and the one which can pass through the lungs is
- 6. The entire natural resources could be categorized to ______ and _____.
- 7. Slash-and-burn is basically a _____ method used to create a field called _____.
- 8. Globally accepted national 'hot spots' are in the forests of the and the_____.
- 9. A effect or chain reaction is the cumulative effect produced when one event sets off a chain of similar events.
- 10. _____ a man-made situation that worsens the effects of drought.
- 11. ______ is the most abundant element in the Lithosphere.
- 12. The pigmy hog, smallest wild boar in the world found in Sanctuary.
- 13. Extinction of Dodo was due to
- 13. Extinction of Dodo was due to _____. 14. The AQI (Air Quality Index), India ranges from _____ (least concern) to _____ (greatest concern).
- 15. _____ are a population or group of population with sharing characteristics and capable of breeding within the population.
- 16. ______ is the collection of organisms of a particular species, living in a given geographic area, or space.
- 17. Population size is controlled through the addition effect by _____ and _____, and through reduction of individuals by and
- 18. is the maximum rate at which a population could increase when birth rate is maximal and death rate is minimal.
- 19. The book 'Fall of a Sparrow' written by _____.
- 20. The atmosphere, hydrosphere and lithosphere are all connected through the

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