## BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI

## **CERTIFICATE**

This is to certify that the thesis entitled "Design and Development of Time Synchronization, Localization and Task Allocation Schemes for Swarm and Multi-Robot Systems" and submitted by Ms. Meetha V Shenoy, ID No 2012PHXF0002G for award of Ph.D degree of the Institute, embodies original work done by her under my supervision.

Signature of the Supervisor

k.R. Surpama

Name in capital letters: K R ANUPAMA

Designation: PROFESSOR

Date: 25 06 2018

Signature of the Co-Supervisor

Afgrica.

Name in capital letters: NARAYAN MANJAREKAR

Designation: Assistant Professor

Date: 25 06 | 2018