

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI**

**CERTIFICATE**

This is to certify that the thesis entitled **Synthesis and Characterization of Surfactant Foams for Remediation of Contaminated Soil and Detergent Formulation** and submitted by **Mr. R. Arun Karthick** ID No **2014PHXF0405P** for award of Ph.D. of the Institute embodies original work done by him/her under my supervision.

Signature of the Supervisor

Name in capital letters: **Dr. PRADIPTA CHATTOPADHYAY**

Designation: **Assistant Professor**

Date:

Signature of the Co-Supervisor

Name in capital letters: **PROF. BANASRI ROY**

Designation: **Associate Professor**

Date: