

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

**CERTIFICATE**

This is to certify that the thesis entitled "**Energy-Efficient Circuit Design for Energy-Autonomous IoT Systems Using Emerging Non-Volatile Memory**" submitted by **Ms. Kanika Monga**, ID No. **2017PHXF0027P** for award of Ph.D. of the Institute embodies original work done by her under my supervision.



(Signature of the Supervisor)

**Dr. Nitin Chaturvedi**

Assistant Professor, Dept. of EEE

Birla Institute of Technology & Science, Pilani

Pilani - 333031 (Rajasthan) INDIA