**CERTIFICATE**

Its gives me immense pleasure in certifying that the thesis entitled

**STUDY, ANALYSIS AND DESIGN OF ADAPTIVE SOFTWARE ALGORITHMS FOR APPLIED AUTOMATED SYSTEM DEVELOPMENT AND TESTING PATTERNS IN THE AREA OF HIGH PERFORMANCE RUN TIME DYNAMICSTORAGE IN NETWORK CLOUD ENVIRONMENT** and submitted

By **Vikas Kumar**, is based on the work research carried out under my guidance.

He/ She has completed the following requirements as per Ph.D. regulations of the University;

i. Course work as per university rules.

ii. Regularly presented Half Yearly Progress Report as by prescribed the University.

iii. Published/ accepted minimum of two research paper in a refereed research journal.

I recommend the submission of thesis as prescribed/ notified by the University.

**Date: Name and Designation of Supervisor/s**