



AMITY UNIVERSITY

RAJASTHAN

*on recommendation of the Academic Council
has conferred upon*

Bhagyashri Naruka

the degree of

Doctor of Philosophy
(Computer Science and Engineering)

on the thesis titled :

**"Optimization of Engineering Design Problems
Using Variants of Shuffled Frog Leaping Algorithm"**

having completed in the year 2020 in witness whereof

the Seal of the University is hereunto affixed.

Given on this 25th day of January, 2020.

Registrar

K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)



Neha K.
Registrar

Arun Patel
President

Arun K. Chandra
Chairperson