

# Declaration

## UNDERTAKING

I declare that the form and content of the thesis are original and have not been submitted, in part or full, for any other degree/ diploma of this or any other University or Institution.

Signature

Name of Research Student: Ms. VANDANA JITENDRA SATAM

Date:

## CERTIFICATE

Certified that this dissertation/ thesis is a bonafide record of work done by Ms. Vandana Jitendra Satam during the Period January 2014 to July 2019 at the Department of Electronics and Communication, Usha Mittal Institute of Technology Recognized Institute of SNDT Women's University, Mumbai. It is submitted in partial fulfilment of the requirements for Ph.D. Degree in Electronics and Communication.

Signature

Guide: Dr. SHIKHA NEMA

Date: