

# ***Certificate***



This is to certify that the thesis entitled, “**Development & Implementation of New Strategies for Parametric Optimization of Hybrid Communication Network**” submitted by **Ms. Sonal Jignesh Rane** in fulfillment of the degree of **DOCTOR OF PHILOSOPHY** in Electrical Engineering Department, Faculty of Technology & Engineering, The M. S. University of Baroda, Vadodara is a bonafide record of investigations carried out by her in the Department of Electrical Engineering, Faculty of Technology & Engineering, M. S. University of Baroda, Vadodara under my guidance and supervision. In my opinion the standards fulfilling the requirements of the Ph.D. Degree as prescribed in the regulations of the University has been attained.

March 2014

**Prof. Satish K. Shah**

Department of Electrical Engineering,  
Faculty of Technology & Engineering,  
The Maharaja Sayajirao University of  
Baroda, Vadodara – 390 001

**Head**

Department of Electrical Engineering,  
Faculty of Technology & Engineering,  
The Maharaja Sayajirao University of  
Baroda,  
Vadodara – 390 001

**Dean**

Faculty of Technology & Engineering,  
The Maharaja Sayajirao University of  
Baroda, Vadodara – 390 001