ACKNOWLEDGEMENTS

At the very outset I would like to thank, the **ALMIGHTY GOD** for raining his continuous blessing on me. I show gratitude of respect for **Mahamana Pandit Madan Mohan MalaviyaJi**, the founder of the Banaras Hindu University, for creating this glorious temple of learning.

I express my sincere gratitude and indebtedness to my venerated teacher and Supervisor **Dr. Suresh C. Gupta** for his expert supervision, constant encouragement and persistent support which made it possible to conduct the research work smoothly and successfully. He always stood behind me, whenever needed. It is with immense gratitude that I acknowledge the support and help of RPC members **Prof. D. Singh (Electrical Engineering), Prof R. B. Mishra (Computer Science and Engineering) and Prof. P. K. Jain (Electronics Engineering)** whose guidance was in luential in accomplishing the research work.

I am sincerely thankful and grateful to **Prof. R. Mahanty**, Head, Department of Electrical Engineering, Indian Institute of Technology, Banaras Hindu University and **Late Prof. J. P. Tiwari** (Former Heads) for allowing me to use the facilities in the department to carrying out my research work and for their kind help during the course of my study.

I shall remain thankful to the RPC members and all my respected teachers **Prof**. S. K. Nagar, Prof. A. K. kapoor, Prof. D. N. Vishwakarma, Prof. R. K. Pandey, Prof. R. K. Srivastava, Prof. R. K. Mishra, Late Prof. R. S. Gorayan, Dr. R. K. Saket, Dr. M. K. verma, Dr. (Mrs.) Kalpana Chaudhary, Dr. Manish Kumar, Dr. S. K. Singh, Dr. R. K. Singh, Mr. V. N. Lal, Mr. J. C. Pandey and Ms. Sobhita Meher for their continuous co-operation and valuable suggestions during my research work. Ministry of Human Resource Development (MHRD), Government of India, New Delhi is gratefully acknowledged for providing inancial support as senior research fellowship (JRF/SRF/TASHIP) during the tenure of my research work.

I pay my sincere thanks to all the departmental non-teaching staff Mr satish Singh , Mr R. yadav, Mr. Nand Lal, Mr. K. P. Sharma and Mr. L. P. Patel for their assistance and co-operation throughout my research work.

My special thanks to my big brother **Mr. Deepak kumar** for his help, suggestion and continuous support. My thanks also go to all departmental colleagues and to all my Ph.D. seniors and juniors for their presence and support.

Last but not the least; words are incapable of expressing the depth of one's feeling. I am at this juncture facing such a dif iculty being incapable to ind the correct words which could aptly express my heartfelt and immense gratitude to my beloved PARENTS (Dr. Jagat Narayan Srivastava and Mrs. Pushpa Srivastava) and my Sister (Ms. Shikha Srivastava and Ms. Priyanka Srivastava) who had been the great pillars of my life. They always stood beside me through good times and bad times, through suffering and happiness. Without them, I would never have been succeeded in achieving such a prestigious position.

Date:

Place: Varanasi

(Ashutosh Srivastava)