ACKNOWLEDGEMENTS

I express my deep and profound sense of gratitude to **Prof. A. S.**Vaingankar, for his invaluable guidance, constant encouragement and keen interest throughout the course of this work and also the encouragement received from him since my M. Sc. study.

My sincere thanks are due to Dr. S. R. Sawant, Professor and Head, Department of Electronics for providing me the laboratory facilities and necessary encouragement. The help and hand of cooperation extended by Dr. C. S. Shalgaonkar, Mr. A. B. Kadam, Dr. M. D. Uplane, Dr. P.N. Vasambekar, D. S. Mali and others, I express my sincere thanks to all of them

It is my pleasant duty to express my sincere thanks to all the teaching staff of Department of Electronics for their valuable suggestions and co-operation. I take this opportunity to express my thanks to my friends Dr. B. P. Ladgaonkar, Mr. A.Y. Lipare, Mr. T. J. Shinde, Mr. Prasanna Wiachal, the research scholars working in our team. I also thankful to, Prof. Godbole, Mr. A. S. Nalawade, Dr. Sangle and Mr. Anand Kakade for their invaluable help. I am thankful to all teaching and non-teaching staff of the Electronics Department for co-operation.

My sincere thanks are due to the President and Chairman of Rayat Shikshan sansha for granting me a one year leave to complete the work presented. I sincerely pay my thanks to **Prin. A. S. Mahadar**, Secretary, Rayat Shikshan Sanstha for his continuous encouragement. I thank **Prin. Dr P. N. Mane** for his

valuable cooperation. I also thank the teaching and non-teaching staff of Yashavantrao Chavan Institute of Science, Satara. My deep and sincere thanks are due to my colleagues of Electronics, Physics and computer Science Department.

My special thank are to the authorities of UGC, New Delhi for the sanction of one year 'teacher fellowship'. I also duly acknowledge the university authorities for cooperation.

I must thanks for the continuous encouragement received from the members of family of my guide through out my carrier. My thanks are due to my family members, Sou. Suvarna, Chi. Chetan, my mother and family of my brothers for continuous encouragement.

I dedicate this work in the memory of my father late. Shree Jagannathrao Nalawade.

B. J. Nalawade