I am extremely grateful to Dr.(Mrs.) S. P. Anjali Devi for her valuable guidance at every stage of this thesis. Her constant encouragement and persistent efforts to instill interest in the subject have been of immense value to me.

I extend my thanks to Dr. M. R. Raghavachar, Head of the Department of Mathematics, Bharathiar University for his constant encouragement and help. I sincerely thank all the respected professors of the department - Dr. P. Kandaswamy, Dr. K. Balachandran and Dr. E. K. Ramasami for their help.

I am extremely thankful to Dr. R. Venkatesal, Managing trustee, SNR Sons charitable trust and Dr. K. Md. Zachariah, Principal, Sri Ramakrishna Engineering College, Coimbatore for granting permission to continue my research and their unfailing encouragement and help. I thank Dr. V. K. R. Jeyasing, Former Principal, Karunya Institute of Technology and Dr. C. Daniel Yesudian, H.O.D, Science and Humanities Department, Karunya Institute of Technology for granting permission to undergo the research in the beginning. I thank wholeheartedly my department colleagues Dr. T. G. Srinivasalu, Mr. K. Thirugnana Sambandam, Mrs. I. P. Nisha and Mr. D. Senthil Kumar for their support throughout. My immense thanks are due to Dr. Srinivasan Potti, Dr. S. Murali Krishna, Mr. S. Suresh Prabhu and Mr. K. Smiles of Sri Ramakrishna Engineering College for their suggestions.

I take this opportunity to thank sincerely Dr. P. Ganesan and Miss I. Rani of Anna University, Madras, Prof. P. Ragurajan of Government Arts College, Coimbatore, Dr. A. Ebenezer Jayakumar of Government College of Technology, Coimbatore and Mr. S. Sriram of Indian Institute of Science, Bangalore for their valuable help in the continuous literature survey and suggestions. I take pride in thanking my research colleagues Mr. K. Shailendhra, Mr. M. Thiagarajan, Ms. S. Jothimani, Ms. S. Meena, Mr. K. Sundaravadi, Mr. R. Parimelazhagan, Ms. M. Padmavathi and Ms. R. Uma for their morale support.
I sincerely thank my beloved wife Mrs. C. S. Rani Asir and daughter Ms. Blessie A. Winsha for their constant encouragement and specially for their tolerance and adjustment throughout the period of my research.

My sincere thanks are due to Ms. P. R. Lakshmi, Mr. P. Anand of ‘Webnet’, 80, East Lokamanya Street, R.S. Puram, Coimbatore, for neatly typing the materials, Mrs. T. Suganthi of ‘Sakthi Jana’, P.N. Pudur, Coimbatore, for her excellent typing of captions, Mr. R. Solaiappan for his neat drawing and ‘Vasanthi Printers’ for their good binding of this thesis.

Above all, I thank my Lord God Almighty because “I am what I am because of Him.”

(A. Alwyn Asir)