ACKNOWLEDGEMENT

It is a matter of great pleasure for me to submit my Ph. D. thesis in the subject of Mathematics. At this moment, I am thankful to almighty, God for all the opportunities, trials and strength that have been showered on me to complete not only my thesis, but also the whole process of obtaining Ph. D. degree.

I humbly express my sense of gratitude to work under the valuable guidance of Dr. D. K. Thakkar, Professor and Head, Department of Mathematics, Saurashtra University, Rajkot. I am thankful for his extended knowledge and encouragement during my research work in spite of his busy schedule. The work has been taken into the present shape due to his kind support and scientific aptitude. This study was impossible without him. I owe to him for his deep insight and critical outlook with positive attitude. He always guided and supported me to mould this research work a logical and mathematical way. I would like to thank the family of my guide to provide apt influence and homely environment for my research work and express my sincere gratitude to them.

I express my deep sense of gratitude to Dr. S. Visweswaran for providing me a valuable treatment to develop a habit for quality and precise work during my M. Phil. dissertation. I am extremely thankful to Dr. S. K. Vaidya, Dr. V. J. Kaneria and Dr. S. Ravichandran for valuable support and help during my study.

I would like to thank Dr. G. J. Vala (Principal, Government Engineering College, Rajkot) for his valuable helping attitude and support during my research work. I am also thankful to my colleague faculties and my friends Dr. Prakashishn Vihol, Dr. Devsi Bantva, Dr. Hardik Makadia and Dr. Tushar Pathak for encouragement.

I also express my sincere thanks to my cordial friends Dr. Ashish Prajapati, Prof. Amin Kothiya, Dr. Kirit Kalariya, Prof. Sanket Badiyani, Prof. Varada Dave, Prof. Jaydeep Parejiya, Prof. Sarman Patat and other research students of the department. I am also grateful to the non-teaching staff of the department and all my well wishers.

I would also like to thanks the anonymous referees and editors of various journals for their critical review and constructive suggestions for the improvement of quality of research papers.

I am highly indebted to my beloved parents, brother, sister and my wife who spared
me from the family responsibilities and encourages me for the betterment of the career. This work could not have been possible without their sincere and moral support. My lovely child Dixa and Vivan also deserve heartfelt thanks for providing peaceful environment to fulfil the dream.

B. M. Kakrecha