I submit my Ph. D. thesis entitled "SOME TOPICS OF SPECIAL INTEREST IN THE THEORY OF GRAPHS" with a deep sense of fulfilment and boundless joy. Submission of this work was indeed a great task but it became possible with blessings of almighty GOD, motivation and guidance of research guide, help of fellow researchers, support of colleagues and family members as well as best wishes of all near ones and dear ones.

At this juncture I am very much thankful to my research supervisor, Dr. S. K. Vaidya, Professor, Department of Mathematics, Saurashtra University - Rajkot, who has not only encouraged me but also provided all scholarly guidance and wholehearted support through out this work. I bow down my head for his wonderful guidance, support and constructive criticism. I am also thankful to Dr. D. K. Thakkar, Head of the Mathematics Department, Saurashtra University - Rajkot and other staff members for extending their valuable support.

I owe special thanks to my co-researchers Dr. N. A. Dani, Dr. P. L. Vihol, Dr. D. D. Bantva, Dr. N. B. Vyas, C. M. Barasara, N. J. Kothari, R. M. Pandit, Rakhimol Isaac and M. S. Shukla who worked as catalysts during my research journey. I also feel proud for their extraordinary help, fruitful suggestions, motivation and moral support.

I have referred many books and good number of research articles on the topic during my research endeavour. I am thankful to all those authors. Moreover I extend my deep sense of gratitude towards the anonymous referees and editors of various journals for their critical reading and constructive suggestions for the improvement of quality of our research papers.

I am also thankful to Commissioner of Technical Education (Government of Gujarat) who allowed me to pursue my research study. The Principal, Government Polytechnic, Rajkot sincerely deserves gratitude for his support. I am very much thankful to
all my colleagues (present and past) of Government Polytechnic, Rajkot and V. V. P. Engineering college, Rajkot for their endless motivation and support during my research journey.

I have been blessed with a series of excellent teachers and mentors throughout my career, the interest in mathematics grew up due to their efforts and expert teaching. I extend deep sense of gratitude towards all the teachers of Kotak Science college, Rajkot, Department of Mathematics, M. S. University of Baroda, Vadodara and Department of Mathematics, S. P. University, V. V. Nagar.

I owe my huge debt of thanks to my parents and wife for their, moral support and encouragement, motivation they have provided and care they have taken. My daughter Darshi also deserves heartfelt love for providing peaceful environment to realize the dream.

At last I convey my sincere thanks to all those who have provided their kind support but I have missed to mention here.

Above all, I offer my heartiest regards to "GOD" for giving me the strength and enough inspiration which led to realize the dream.

Nirav H. Shah