ACKNOWLEDGEMENT

From the depth of my heart, I express my deep sincere gratitude to the Almighty for the Blessings, He had bestowed upon me to do this work.

I am immensely pleased to place on record my profound gratitude and heartfelt thanks to my supervisor, Dr. Noor Shahina Begum, Professor, Department of Studies in Chemistry, Bangalore University, for her guidance during my research who suggested the problem, extended all facilities and provided inspiring guidance for the successful completion of my research work. I deem it as my privilege to work under her able guidance. She has supported me throughout this work with her patience, motivation, enthusiasm, and immense knowledge, sensitivity, generous advice and suggestions necessary for me to proceed through the doctoral program and complete my thesis. I attribute the level of my degree to her encouragement and effort and without her this thesis, too, would not have been completed or written. Her appropriate supervisory interventions have contributed immensely to the production of this thesis.

I am greatly indebted to Prof. K.N. Mahendra, Prof. M. Farooq Ahmed, Prof. N.H. Manjunath and Prof. N. Ramachandra Swamy, for facilitating my research in their capacities as former Chairmen, DOS in Chemistry, Bangalore University. I am very thankful to Prof. K. R. Nagasundara, Chairman, DOS in Chemistry, Bangalore University, for his co-operation, support and the kindness they have shown me on various occasions for their support, guidance and helpful suggestions. Their guidance has served me well and I owe them my heartfelt appreciation. They never failed to support me and were always patient and loving. They are an asset to the department and I will miss them tremendously.

I would like to express my indebtedness to Dr. I. M. Khazi, Professor, Department of Chemistry, Karnatak University, Dharwad, for his help, invaluable assistance and intellectual inputs towards making this work possible.

My special thanks are due to all the referees, outstanding researchers themselves, who reviewed my published work and offered constructive criticism which bettered the quality of my work.
At this Juncture, I would like to express my sincerest appreciation to my parents whose selfless sacrificial life and their great efforts with pain and tears and unceasing prayers has enabled me to reach the present position in life. I am forever indebted to my father Late Alhaj Mohammed Shafiulla and my mother Alhajiya Mrs. Shaheen Taj who planted the seed of idea to do research and their encouragement in attaining my goal and who experienced all of the ups and downs of my research. My mother has been a source of strength to me throughout my life. I owe her everything and wish I could show her just how much I love and appreciate her. Completing this work would have been all the more difficult without her support and Guidance.

I also thank my grandparents, Alhaj Syed Mohyuddin Saheb and Alhajiya Mrs. Zahedunnisa, my brother Mr. Alhaj Mohammed Azamthulla, my sisters Alhajiya Mrs. Arjumand Bano, Mrs. Rumana Bano, my nieces Mahek Nayaab, Syeda Tazmeen and my nephews Mohammed Shahyaan, Syed Suhaan for their endless love, prayers and encouragement. Their love provided my inspiration and was my driving force. They never failed to support me and were always patient and loving. I will always be grateful that they never stood in my way and always appreciated my choices. I hope that I have made them proud.

Finally I take this opportunity to acknowledge and thank my brother-in-laws, Alhaj Dr. Siddiq Ahmed, Mr. Syed Mohiuddin, and my sister-in-law Mrs. Shabnam for their enthusiasm and encouragement throughout my research work.

My deepest gratitude goes to my beloved Husband Mr. Mohamed Ziaulla. His invaluable help of constructive comments and suggestions throughout the experimental and thesis works have contributed to the success of this research. His determination in helping me whose love, care, kindness and encouragement allowed me to finish this journey. Words cannot express how grateful I am to be in his life and how much this work was enhanced and made easier by him being in mine. I could never have done this without his validation and support.

I do thank my in-laws, Alhajiya Mrs. Naseemunissa and Alhaj Mr. Mohamed Sirajuddin for their unconditional support. I would like to also thank my sisters-in-law Mrs. Thabassum Parveen, Mrs. Noor Aisha, Mrs. Noor Jahan, my brothers-in-law Mr. Mohamed Zakaulla Mr. Syed Abu Sayeed Mohammed, Mr. Mohamed
Aboobakkar and nieces Ruqaiyah Zahara, Rabiya Zainab, Afreen Javeria for their constant support and encouragement.

I would like to express my appreciation and deep indebtedness to the Management of “INDIAN ACADEMY GROUP OF INSTITUTIONS” the institution which has nurtured me and helped me to grow for the unstinting support, benevolence, assistance and indulgence. I am grateful to the Founder Dr. T. Somasekhar for his inspiration and guidance. It is my privilege to thank my principal Mrs. Shanthi Sangamitra for her constant support and encouragement. I wish to thank all members of the staff of Chemistry Department for their kind co-operation at various stages of my work.

In my daily work I have been blessed with a cheerful group of friend’s Mrs. Kusuma, Mahera, Stella for their constructive comments and suggestions. Last but not the least, I would like to thank my fellow students Farveez Ahmed, Vasundhara, Nikhath fathima, Nagarajiah and Krishnamurthy for their pleasant association and help in various forms. I thank all my fellow research scholar friends for those good days. Finally, I thank all those who have helped me directly or indirectly in the successful completion of my thesis.

Afshan Banu