Acknowledgement

It is good fortune and matter of pride and privilege for me to have the esteemed supervisor Dr. (Mrs.) Alveera Mehdi, Associate Professor, Department of Mathematics, Aligarh Muslim University, Aligarh, who offered the unflinching encouragement and support at outset of the work and thereafter. The guidance and encouragement have been very constructive and required extreme hard work most of the times, perhaps all the time. I shall never be able in all my life to repay for all that I have gained from her. I was providential to get a life term opportunity to work under her knowledgeable supervision.

I express my heartfelt gratitude to Dr. Fazal Mehdi, Professor, Department of Mathematics, Aligarh Muslim University, Aligarh, who always been a source of inspiration and guidance to me. It is only his personal influence and boundless support that enabled me to complete the work in the present form.

I am immensely grateful to Dr. Muntaz Ahmad Khan, Professor and Chairman, Department of Applied Mathematics, Aligarh Muslim University, Aligarh, for providing me all possible departmental facilities.

With pleasure, I express my thanks to Dr. Rafiquddin, Associate Professor, General Studies Department, Jubail University College, Jubail, Kingdom of Saudi Arabia. During the whole research he was very inspirational for me and I learnt a lot from him.

I am also thankful to Dr. Mohd. Imdad, Professor, Department of Mathematics, AMU, Aligarh, Dr. Masud Anwar Alavi, Professor, Department of Arabic, AMU, Aligarh, Dr. Huzoor H. Khan, Professor, Department of Mathematics,
AMU, Aligarh and Dr. N.U. Khan, Assistant Professor, Department of Applied Mathematics, AMU, Aligarh, who enabled me not only to accomplish this huge task but also filled in me the courage to overcome the odds of life.

I thankfully acknowledge my research colleagues Dr. Mohd. Yahya Abbasi, Dr.(Mrs.) Sabah ARK Naji, Mr. Fahad Sikander and Mrs. Firdousi Begum for their valuable suggestions, encouragement and never ending support.

Sincere thanks are due to my seniors and research fellow workers Mr. Sadique Ali, Dr. Mohd. Asif, Dr. Naeem Ahmad, Mr. Sayed Mohd. Abbas, Mr. Shafeeq Ahmed, Mr. Idriss Ahmad Khan, Dr. Mohd. Hasan, Dr. Rifaqat Ali, Mr. Ghiasuddin for their moral support and timely help extended to me whenever desired.

Thanks are also due to my friends Dr. Shah Alim Siddiqui, Dr. Mohd. Faisel Siddiqui, Dr. Mohd. Shamim, Dr. Abdule Haseeb, Dr. Waseem Ahmad Khan, Dr. Safiul Islam Ansari, Messrs. Malik Rashid Jamal, Shuja Haider Rizvi, Asim Ali, Mohd. Sayeed, Mohd. Shamim, Kashif Ali, Waseem Raza Naqvi with whom I shared all my academic burdens.

I would like to express my deep sense of indebtedness to my esteemed father Late Ahmed Hasan, for his most cordial and helpful role in my academic endeavour. His countless blessings, deep love and affection always worked as a hidden power behind every thing I did. I hope that this work makes you proud.

Words fall short in describing the pains taken by my beloved mother Mrs. Mohd. Nishan during the whole tenure of the work. Without her constant blessings, affection and the faith she showed in me, this work would not have taken this form.

I would like to express my special thanks to my brothers Messrs. Mehmood Hasan, Mohd. Alam, Masroor Hasan, Makhdoom Hasan, Abul Hasan, Shamsul Hasan and Ilyas Hasan and my sisters Mrs. Asma Bi, Mrs. Husna Bi and Mrs. Moazzma Bi and my sisters in-law specially Mrs. Nigar Sultan, Mrs. Adeeba Noor and Mrs. Rubby Hasan and my brothers in-law for their love, support and encouraging words.
during the long years of my education.

I am deeply grateful to University Grant Commission, New Delhi for providing me financial assistance in the form of Research Fellowship.

I express my indebtedness of my glorious institution Aligarh Muslim University, Aligarh and my homage to its founder Sir Syed Ahmad Khan.

Lastly, I offer my regards and blessings to all of those who supported me in any respect during the completion of the thesis.


(Ayazul Hasan)
Department of Applied Mathematics,
Faculty of Engineering and Technology,
Aligarh Muslim University, Aligarh – 202002, India.