Acknowledgements

First and foremost, it would be a great pleasure for me to express my sincere gratitude and indebtedness to my supervisor Prof. Shri Ram for the inestimable help I have received from him in the course of my research work. I have always been benefitted from his critical judgements, perceptive comments, constant encouragement and a friendly atmosphere provided by him. Besides this, he was always ready to be helpful in all sorts of my problems, both-academic as well as as others. It would have been difficult for me to complete this thesis in the stipulated time, without his close association, invaluable help and continuous support and co-operation. Of my indebtedness to him, I can make no adequate acknowledgement.

I have been very fortunate during my Ph.D. to have the chance to tap the fountain of knowledge of my co-superviser Prof. L. P. Singh. I am profoundly grateful to him. I would like to express my sincere gratitude to Prof. S. K. Pandey, for his valuable inputs, suggestions and affectionate attitude.

I would like to express my sincere thanks to Prof. Om. P. Singh , Head, Department of Mathematical Sciences, Indian Institute of Technology (BHU) for providing me the requisite facilities to carry out my doctoral work and willing to help me with suggestions and encouragement whenever I needed.

I would also like to express my appreciation to RPC members Prof. B. N. Dwivedi, Department of Physics and Dr. Subir Das, Department of Mathematical Sciences, Indian Institute of Technology (BHU), for their stimulating help and criticism. It is desirable to express my sincere thanks to Prof. T. Som, Prof. R. Srivastava, Prof. P. K. Panda, Dr. S. Mukhopadhyay, Dr. Rajeev and other faculty

members of the Department of Mathematical Sciences for their valuable suggestions and encouragement.

I am grateful to all the office staff of the department and the authorities of Indian Institute of Technology (BHU), Varanasi for their kind help during the period of my stay to complete the thesis work.

My sincere thanks are due to Dr. Mohd. Zeyauddin, Dr. M. K. Verma and Mr. M. K. Singh for their keen interest in the work, timely guidance, affectionate help and helpful discussions during my research work.

I am extremely thankful to my friends Sana P. Ansari, Sarita Yadav, Hitesh Rajput, Dr. Sushama Singh, Priyanka, Vandana Tiwari, Bharati Kumari, Shailendra Tiwari, Navin Jha, Chandrashekher Singh, Ghanshyam Prasad and Dr. Somnath Maiti for their support, cooperation and sincere help in many ways.

My parents have been my best mentors, preparing me for life in its various aspects. There are no words to express my gratitude for all the selfless efforts they made. I would also take this opportunity to thank my in-laws for their blessings and encouragement in all aspects of my life. I would like to thank my sisters and brothers for their love, moral support and encouragement.

Words fail to express my immense appreciation for my loving husband Mr. Kuldeepak Singh, who has been a constant source of priceless love, moral motivation and emotional support to me during the period of my research.

Date........

Place: Varanasi   (Savita Chandel)