Acknowledgement

I would like to express my deep and sincere gratitude to Dr. Sanjib Kumar Datta, Head and Associate Professor, Department of Mathematics, University of Kalyani under whose supervision the entire thesis has been carried out. I owe a lot to him for offering me valuable suggestions for corrections and improvement of the thesis and above all for sufficiently sharing his valuable time with me from his busy schedule.

I also express my heartiest gratitude to Dr. Tanmay Biswas for offering me valuable suggestions and corrections towards the improvement of the whole thesis.

Also I am thankful to the infrastructural support provided by the Department of Mathematics, University of Kalyani and as well as the Department of Mathematics, University of North Bengal.

I would like to thank my parents, my sister Rinki and my wife Smiritikana for their momentous encouragement and inspiration during the preparation of this thesis.

I also wish to thank all the faculty members of the Department of Mathematics, University of Kalyani especially Prof. I. Lahiri; also all the faculty members of the Department of Mathematics, University of North Bengal especially Prof. M.K. Bose, Dr. D.P. Dutta, and Dr. S. De Sarkar as well as those of Department of Mathematics, Siliguri College especially Dr. Goutam Biswas for their mental support. I am also thankful to my colleagues of Barabilla High School, Uttar Dinajpur especially Mr. Ashiruddin who has extended their support and helped me a lot at various point of time during this period.

I warmly thank my fellow research scholars especially Mr. Samten Tamang, Assistant Professor, Department of Mathematics, University of Kalyani, Mr. Dilip Pramanik, Assistant Professor, University of North Bengal and Mr. Sudipta Kumar pal for their hearty co-operation in different ways.

I am also thankful to the respected teachers of my Schools, College and University who have taught me and made the foundation based on which I could be able to do this research work.

I must also thank to the authors of various papers and books which have been consulted during the preparation of the thesis. I will remain ever grateful to those who helped me in giving my research work a good finish. The author is also responsible for any possible errors and shortcomings, whatever it may be in the thesis despite the best attempt to make it immaculate.

Dated : August 08, 2013
Kalyani, Nadia. (Manab Biswas)