

A C K N O W L E D G E M E N T

I take this opportunity to express my heartiest gratitude to my respected and beloved teacher, Professor M. Dutta, Professor-in-Charge, Satyendranath Bose Institute of Physical Sciences and Professor, Centre of Advanced Study in Applied Mathematics, Calcutta University, for his continuous guidance and affectionate supervision during the preparation of this work.

I have great pleasure to convey my thanks to the University Grants Commission for the favour of awarding me Teacher Fellowship under the U.G.C. scheme of Faculty Improvement.

I acknowledge also my indebtedness to the Education Department, Government of West Bengal for sanctioning me the study leave for the requisite period, so that I could avail of the chance to proceed on with the research work undertaken.

Professor D.B. Dutta, M.A., Pro-Vice-Chancellor for Academic Affairs, Calcutta University, extended his hearty cooperation and advice in the official process of my research work for which I am grateful to him.

Dr. Smarajit Chakraborti, M.A., Ph.D., Development and Planning Officer, Calcutta University, also did a lot for me with sympathy for which I can not but express my gratitude to him.

-:: (ii) ::-

I am also indebted to Dr. Gouri Nag, Principal, Lady Brabourne College, Calcutta, for releasing me from my duties in the College at her earliest convenience in accordance with the study leave sanctioned by the Education Department, Government of West Bengal.

I convey my gratitude from the core of my heart to Mrs. Prativa Deb, Former Head of the Department of Mathematics, Lady Brabourne College, Calcutta, for her affectionate inspiration and encouragement for the higher studies, without which I could not even dare think of undertaking such an attempt at that time.

I express my cordial thanks to all the teachers of this Institute (SNBIPS-CU) who were always cooperating with their advice and suggestions, at the very moment I needed, during the preparation period of my research work.

I am also thankful to Dr. C.G. Chakrabarti of Department of Applied Mathematics, Calcutta University, who helped me much by allowing me to discuss with him about different relevant topics during the preparation of this work.

I express my cordial thanks to my friends and well-wishers who helped me in resolving different problems allied with the difficulties I had to face during the period of the research work.

-:: (iii) ::-

I express my thanks to Sri Ashis Chattopadhyay for taking the trouble of typing out this thesis with his best effort.

Above all, I humbly extend my gratitude to my parents, who from the very beginning of my early academic career, kindled the ambition of dedicating myself to search for knowledge and higher studies.

September,
1982.

Juthika Basu (Mrs. Sengupta)
JUTHIKA BASU (MRS. SENGUPTA)