

ACKNOWLEDGEMENT

All the praise and thanks be to God, the Almighty, who guided and aided me to bring-forth this thesis to the light!

I am pleased to record my sincere gratitude to **Dr. T.S. AVINASHILINGAM**, the Founder and First Chancellor and Padmashri **Dr. RAJAMMAL P. DEVADAS**, Former Chancellor, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for the opportunity to pursue my Research study in this temple of learning.

I am grateful to late **Dr. P. R. KRISHNAKUMAR**, Former Chancellor, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for providing all facilities necessary for the study.

My special debt of gratitude to **Dr. S. P. THYAGARAJAN**, Chancellor, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for providing the opportunity and exposure to the world of knowledge.

My sincere gratitude to **Dr. PREMAVATHY VIJAYAN**, Former Vice Chancellor, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for providing the opportunity and exposure to the world of knowledge.

I express my sincere thanks to **Dr. V. BHARATHI HARISHANKAR**, Vice Chancellor, Avinashilingam Institute for home science and Higher Education for women for her constant encouragement throughout the research work.

My special thanks to **Dr. S. KOWSALYA**, Registrar, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for administrative support and for providing adequate help required to carry out the work.

I express my deep sense of gratitude to **Dr. G. P. JEYANTHI**, Former Director (Research and Consultancy), Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for her commendable advice and guidance in each and every process involved in doing the research work in a successful manner and my thanks to **Dr. P. LALITHA**, Dean In-charge, Research and Consultancy for her support.

I extend my immense thanks to **Dr. K. MANIMOZHI**, Controller of Examinations, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for the continuous help to carry out this research program successfully.

I acknowledge my profound thanks to **Dr. K. UDAYA CHANDRIKA**, Former Dean, School of Physical Sciences and Computational Sciences, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for her continual support, creditable advice and inspiring suggestions for shaping my research work.

My humble gratitude to **Dr. G. PADMAVATHI**, Professor, Dean, School of Physical Sciences and Computational Sciences, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for her excellent support and guidance during my research work.

My sincere thanks to **Dr. P. JEYALAKSHMI**, Professor and Head(Retd), Department of Mathematics, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for her guidance and every process involved in doing the research work in a successful manner.

My deep sense of gratitude to **DR. N. BALAMANI**, Assistant Professor and Head In-charge, Department of Mathematics, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for her commendable advice and guidance in each and every process involved in doing the research work in a successful manner.

I express my heart-felt thanks and sincere gratitude to my guide **Dr. A. R. SUDAMANI RAMASWAMY**, Professor, Department of Mathematics, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for her guidance, lively discussion, her patience, and sacrifice for the successful completion of my thesis, enthusiastic support given throughout my research period. I render my indebtedness and great deal of heartfelt appreciation to my beloved guide for her keen interest, benevolent concern and untiring efforts without which this work would not have been shaped up and completed at all.

I extend my gratitude to all the **STAFF MEMBERS OF THE DEPARTMENT OF MATHEMATICS**, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for their help and encouragement and who were responsible for the good finish of this dissertation.

Last but not least, I owe my special thanks to my beloved **MOTHER, HUSBAND, SONS** and **WELL-WISHERS**, who helped me by providing full strength, support and encouragement to complete my project successfully. Without their relentless support, prayer and understanding throughout the period of my research it would have been impossible for me to complete this thesis.

Yavana Priya. R