ACKNOWLEDGMENTS

I would like to express my deep sense of indebtedness to Dr. K.G. Bhattacharyya, Professor, Department of Chemistry, Gauhati University, for his constant guidance and supervision in preparing this thesis.

I am very grateful to Dr. P. Goswami, former Director and Dr. K. Baruah the present Director, Institute of Advanced Study in Science and Technology, Khanapara, Guwahati for giving me the opportunity to carry out the work at the Institute. Dr. Goswami during whose tenure this work was completed was a constant source of encouragement to me.

I am thankful to Dr. H.K. Das, Professor and Head, Department of Chemistry, Gauhati University for kind permission to do this work in the Department.

I humbly express my sincerest gratitude to Dr. L.C. Kagti, Honorary Professor of Resource Management and Environment, IASST, Khanapara and Dr. H.P. Borthakur, Head, Soil Science Department, Assam Agriculture University, Jorhat for their valuable help and kind encouragement throughout the progress of the work.

I am greatly indebted to Dr. M.K. Kalita Secretary, IASST for his constant encouragement and help in carrying out work.

I am also grateful to Dr. S. Deka, Assistant Professor of Resource Management and Environment, IASST, for his various advices and suggestions during the course of the work.

I am thankful to Ms. L.B. Mahanta, Junior Programmer, Computer Science Division, IASST, for extending a helping hand in statistical analysis and as well as graphical representation for this thesis.

I offer my sincere and hearty thanks to my mother Mrs. S. Devi for her constant inspiration and support without which this work would not have been possible.

I also extend my thanks to Mr. Munindra Singh, Console Operator, IASST, for typing the thesis nicely and with patience.

Date: 28.2.96

Arundhuti Devi
(ARUNDHUTI DEVI)
Institute of Advanced Study in Science and Technology, Khanapara
Guwahati - 781 022