## ACKNOWLEDGEMENT

I offer my humble and sincere thanks to my research guide Dr.M.B.Dongare for his invaluable guidance and keen interest in, my research work throughout the course.

I am very much thankful to Prof.R.N.Patil, Head of the Department of Physics, Shivaji University, Kolhapur for his encouragement and useful suggestions.

I am very much grateful to Dr.S.A.Patil who is kind enough in extending his helping hand whole-heartedly. Throughout the year, no work is carried out by me, in which his guidance and assistance is not sought. I must frankly admit here that I had to rely on him many a time. He assisted me at every step. This is the occasion for me to record here the debt I owe to him. Dr.S.R.Sawant and Dr.B.K.Chougule deserve special thanks for their help and encouragement.

I take this opportunity to extend my thanks to the teaching and non-teaching staff of the Department of Physics for their co-operation. I am thankful to my M.Phil. colleagues Sri.S.N.Patil V.M.Patil, M.G.Patil and research colleagues Shri.B.L.Patil and J.K.Nandgave for their co-operation.

Prof.C.K.Bhaskare, Dr.Satish Lotke and Shri.I.S.Jarali deserve the special thanks. E.T.D.C. Bangalore, I.I. Science, Bangalore, R.S.I.C. Nagpur University and U.S.I.C. Shivaji University, are the institutions to which I offer my sincere thanks. I thank Principal Dr.G.S.Nadagouda, S.S.Arts College and T.P.Science Institute, Sankeshwar, Principal S.B.Khodanpur(Retd.), Chairman and members of the Board of Management, S.D.V.S. Sangh, Sankeshwar and the Deputy Director of Collegiate Education, Dharwad for being instrumental in deputing me to the M.Phil. course. I also thank my colleagues in the college for their cheerful encouragement.

I am indebted to U.G.C. for providing me the financial assistance and acknowledge gratefully the facilities extended by Shivaji University Authorities to carry out this work.

I desire to record my thanks towards the members of my family for creating an environment which helped me to complete this task in time.

Finally, I thank Shri.V.B.Kademani for neat and accurate typing and Shri.Baraskar for tracing work.

B.V.BHISE.

Kolhapur.

Date: 27/8/1990