ACKNOULEDGEMENT

I am grateful to my research guide Dr.C.S.Shalgaonkar, Lecturer in Physics, Shivaji University, Kolhapur, for his invaluable guidance and encouragement throughout the work. I, therefore, place on record my grateful thanks to him.

It is a pleasure to thank Dr.R.N.Patil, Head of the Department of Physics, for making available the laboratory facilities to pursue this work.

I am also indebted to the Vice Chancellor Prin.K.Bhogishayana of the Shivaji University, Kolhapur, for financial assistance during the time of this work.

I must sincerely thank, the Principal Dr. V. D. Patil, Balwant College, Vita and Principal N.G. Waman, Shrigonda College, Shrigonda, for their constant encouragement.

I should like to express my thanks to Dr.R.D.Lawanger, Mr.S.B.Kale for their experimental help and many informal discussions.

No words are adequate to express my heartiest gratitudes to my parents, without whose active encouragement, this thesis would have never seen the light of the day.

Finally I thank Mr. Patil, for nest and careful typing of the manuscript.

Kolhapur.

Jack Fol 1