

### ACKNOWLEDGEMENT

It is a great pleasure of mine to express my utmost feelings of gratitude and respectful acknowledgement of immense help and invaluable guidance rendered to me by Dr. H. S. Desai, Reader in Physics, M. S. University of Baroda, Baroda. Dr. S. K. Shah, Head in-charge, Physics Department, faculty of Science, M. S. U., Baroda has kindly allowed me to use all facilities at his disposal for which I am very much thankful to him.

How can I forget my fellow-students, Mr. N.S. Rao and Mrs. Chandrababha who have done a lot of work for me ! My sincere thanks are due to them.

I also thank my colleagues, the Principal and the management of M. B. Patel Science College, Anand, for their co-operation and encouragement.

I wish to thank the heads of the following institutions for allowing me to be availed of the facilities at their disposal;

- \* Computer centres of M. S. University, Baroda and Sardar Patel University, Vallabh Vidyanagar.
- \* Department of Physics as well as Chemistry, Sardar Patel University, Vallabh Vidyanagar.

I also wish to thank Professor S.P. Khare, Department of Physics, Institute of Advanced Studies, Meerut University, Meerut (U.P.), Dr. A. N. Tripathi, Department of Physics, University of Roorkee, Roorkee (U.P.) and Dr. A. S. Ghosh, Indian Association for the Cultivation of Science, Calcutta for suggestions and discussions.

My special thanks are due to Dr. A.R. Jani Physics Department, S. P. University, Vallabh Vidyanagar, for his constant encouragement and help. I thank Mr. Salvi for a neat typing and Mr. Nanavati for careful drawings.

Anand.

Kamalnayan N. Joshipura.