ACKNOWLEDGEMENTS

It is a matter of great pleasure and pride for me to express my deep sense of gratitude to my guide Dr. (Miss) K. Singh, for her meticulous attention, encouragement, constructive and critical evaluation and above all inculcating the value of hard work throughout the course of investigations.

I am highly thankful to Dr. S.S. Bhoga, Reader, Department of Physics, Nagpur University, Nagpur without whose help the thesis will not have taken the final shape.

I am grateful to Dr. B. H. Pawar, Professor and Head, and Dr. S. K. Omanwar, Ex-Head and Reader Department of Physics, Amravati University, Amravati for granting the permission for carrying out my work in the Department as well as at the Department of Physics, Nagpur University, Nagpur. I am equally thankful to Dr. V. B. Sapre, Ex-Head, Department of Physics, Nagpur University for granting the permission to work in the Department.

I express my sincere thanks to Hon’ble Mr. Vasantrao R. Dhotre, President, Shri Shivaji Education Society, Amravati and Mr. S. M. Wankhade, Principal, Shri Shivaji College, Akot for their kind permission and constant encouragement in carrying out this investigation.

I am very much thankful to the University Grant Commission, New Delhi, India for awarding me teacher fellowship under Faculty Development Programme Scheme in IX Plan Period.

My special thanks are due to my colleagues Mrs. S. Acharya, Mr. P. Ambekar, Dr. P. Khadakkar, Mr. R. Tiwari, Ms. J. Randhawa, Mr. A. Lad, Mr. S. Bansod and Mr. R. Joat for the extending their cooperation towards the completion of this work.

A special note of appreciation is due to Dr. Prakash, Librarian, TCS, Pune, Librarian, TIFR Mumbai, Librarian, IISc Banglore, Librarian, Nagpur University, Librarian of Amravati University, Amravati, for their help during literature survey.
It is a great pleasure to acknowledge the co-operation extended to me by all the members of teaching as well as non-teaching staff at Shri Shivaji College, Akot, Department of Physics, Amravati University, Amravati and Department of Physics, Nagpur University, Nagpur.

My sincere thanks are also due to all my friends and colleagues for inspiring me from time to time during the tenure of this work, specially Mr. S. Mangale, Mr. B. Mohod, Late Mr. R. Nichal, Mr. K. Bhuyar, Dr. S. Bhadange, Dean of Science Faculty, Amravati University, Amravati, Mr.V. Bhatkar and Dr. (Mrs.) N.Bhatkar, Mr. D. Thakare, Mr. Wasu, Mr. Tekade, Mr. L. Tarale and Mr. B. Fokmare.

I shall remain grateful to my father Mr. Vishwanathrao Govindrao Atkare and my mother Mrs. Chandrakala Atkare, as they are an incessant source of inspiration and support to me in any circumstances of stress and wariness. I am also thankful to my brothers Mr.Vivekanand and Mr.Premnand, sisters, and all family members, and relatives specially Mr. and Mrs. Prashant Korpe and Chi. Ajinkya.

I shall remain indebted to my wife Mrs. Kiran Atkare and my children Ashwinikumar and Neerja for their excellent co-operation, moral support, patience and constant encouragement in moments of stress and strain.

I am thankful to all those for extending their support directly or indirectly during the entire tenure of this work.

(D.V. ATKARE)