Acknowledgement

On the completion of this important work, I look backward into the memory lane and try to see how this has been possible. I realized that it has been mainly possible not only because of my input but also due the support from teachers, motivators, admirers and supporters, who contributed directly or indirectly without any self interest. Thus at this point of writing the thesis, I feel that it is my sacred duty to acknowledge the contribution of these open hearted, loving and respected personalities.

Determination is an important prerequisite to achieve good goals in one’s life. Without proper guidance, the same cannot be achieved smoothly. Here, I avail the opportunity to express my deep sense of gratitude and thanks to my guide Dr. Surendra S. More, for suggesting me the present research problem and extending his immense help and cooperation all through the work. His deep rooted knowledge, masterly approach, keen observations, positive criticism and silent inspiration motivated me a lot while completing this work.

I specially thanks to Dr. J. S. Mohite, Principal, Yashawantaro Chavan Mahavidyalaya, Tuljapur and Dr. A. R. Shitre, Head, Department of Physics, Yashawantaro Chavan Mahavidyalaya, Tuljapur for moral support and constant encouragement.

I sincerely thank to Honorable Mr. Satish Chavan, MLC Aurangabad, Mr. Sanjay P. Nimbalkar, Management Council Memehr, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, Dr. D. R. Mane, Director, Higher Education Pune, Dr. A. D. Mohekar, Dean, Faculty of Science, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad for their useful suggestions and help whenever I had asked for it.

I would like to express my gratitude to Prof. Dr. K. M. Jadhav, Prof. Dr. M. D. Shirsat and all teaching and non-teaching faculty members of Physics Department, for their cooperation in one way or the other. I wish to record my thanks and gratitude to them for his valuable suggestions and encouragements at various stages of the work.
I would like to pay my indebtedness to Dr. Sagar Shirsath, who remains always a source of inspiration and help. His deep sense of appreciation and dedication to research has been a constant source of inspiration to me. I also want to mention my thanks to Dr. R. H. Kadam, Dr. A. B. Kadam, Dr. R. V. Kathare, Dr. V. B. Kawade for cooperation and generous support during my research.

I want to thank to the most important person in my life, my husband Dr. Maheshkumar L. Mane. You gave me the most unconditional love that could exist, you always trusted me no matter what, and supported me when I most needed it. All the triumph I have made in my life I owe it to you. Thank you for everything, and remember that you will always be in my heart.

Finally but not less important, I am deeply grateful to my beloved family members, their love for me and providing me encouragement at every step of life. I wish to record my deep feelings and gratitude towards my nephews Aaryan and Arnav for their love and affection. I am really gratified to my son Mayank who missed me very much whenever he wanted me with him; actually his sacrifices are far above my words.

Last, but certainly not least, the continual encouragement and direct and indirect support of my friends is deeply and sincerely appreciated.

Varsha C. Chavan