ACKNOWLEDGEMENT

I take this opportunity to express my deep sense of gratitude to Prof. T. R. Joshi, Head, Applied Physics Department, Faculty of Technology & Engineering who has been my mentor and guide. His constant advice and valuable guidance has made it possible to complete the present work.

I am highly indebted to Prof. R. V. Joshi, Professor Emeritus, for his keen interest throughout the present investigations.

I gratefully acknowledge the co-operation and helpful discussions I had with Dr. L.H.H. Prasad, Applied Physics Department.

It is a great pleasure to express my grateful thanks to Dr. S. D. Soman, Dr. C. M. Sunta and Dr. K.S.V. Nambi for experimental facilities provided at the Health Physics Division, B.A.R.C., Bombay. I am also thankful to Dr. S. P. Kathuria, Health Physics Division, B.A.R.C., Bombay, for his valuable suggestions during the different phases of the work.

It is a pleasure to gratefully acknowledge the help rendered by Dr. A. K. Nehate and the constant encouragement during the work.

I am grateful to Shri Subhash H. Mehta, Principal, Sanskar Vidya Vihar, Baroda for his valuable help during my work.

I am highly grateful to Shri S. G. Chaudhari, for his extensive help during my thesis work.

I wish to express my sincere thanks to Dr. K. V. R. Murthy, Dr. M. Shrinivas, Shri I. A. Shaikh, Shri Y. H. Gandhi, Shri R. Manmohan, Shri S. N. Patil, Miss Neera Traceler, Miss Bhavna Thakkar, Shri P. K. Dasgupta and Shri Purohit for their friendly co-operation.
The help of non-teaching staff of the Applied Physics Department is also gratefully acknowledged.

I owe my success to my wife Neeta without whose inspiration, encouragement and the help, the present work would not have been possible.

Sudhir R. Chaudhari.