Acknowledgements

This thesis is the end of my journey in obtaining my Ph.D. I have not traveled in a vacuum in this journey. This thesis has been kept on track and been seen through to completion with the support and encouragement of numerous people including my well wishers, my friends, colleagues and my family. At the end of my thesis I would like to thank all those people who made this thesis possible and an unforgettable experience for me. It is a pleasant task to express my thanks to all those who contributed in many ways to the success of this study and made it an unforgettable experience for me.

Words are not enough to express my deep sincere gratitude towards Dr. Kanak Saxena, the renowned Professor and Head of the Department of Computer Applications in Samrat Ashok Technological Institute as well as my Guide for her contribution throughout the span of my PhD. programme, for her patience, motivation, enthusiasm, and immense knowledge. I am privileged with her gamut of experience and acumen to improve not only my technical skills and thought process but also for enlightening my spirit optimistically towards the work. I cannot forget her indelible support to my research. Her guidance helped me in all the time of research and writing of this thesis. I could not have imagined having a better advisor and mentor for my PhD study. This work would not have been possible without her guidance, support and encouragement. Under her guidance I successfully overcame many difficulties and learned a lot. Her unflinching courage and conviction will always inspire me, and I hope to continue to work with her noble thoughts. It is to her that I dedicate this work. It has been really a memorable experience to work under her supervision.

It is my duty to acknowledge my deep sense of gratitude to all those who had given their cooperation and support in completing the present study.
I also extend my thanks to Banasthali University, especially to Prof. Aditya Shastri, Vice Chancellor of the University, for giving me an opportunity to accomplish the work.

I owe my special thanks to my friends Geeta Bhatia, Kiran Burman, Shivani Neb, Sushma Chawla, Uma Singh, Dr. Jaya Dwivedi, Rajneesh and Dr. Rajani Chauhan for moral support and help in completing this study successfully. Special thanks also to Shri. Umesh Banodha for his constant support throughout the research work. I acknowledge with gratitude the great support to all of my colleagues.

It’s my fortune to gratefully acknowledge the support of some special individuals. Words fail me to express my appreciation to my guide’s parents Dr. Surya Prakash Saxena and Smt. Asha Saxena who not only gave me the feeling at home but also constantly motivated me with their support and generous care.

I am deeply indebted to my father Shri Gopal Chandra Banerji, mother Smt. Sadhana Banerji, my brother Subhashis Banerji, my sister-in-law Dr. Rajshree Banerji for constant support and motivation, my sister Deepali Mukerji, my brother-in-law Shri Purnojyoti Mukherji, my loving daughter Alpana and, my nieces Shreya, Parul and Vasudha for lifting me uphill in this phase of life. I owe everything to them. Words fail me when it comes to express my feelings towards my family members. Words fall short to express that it is they who have been the very source of inspiration, motivation and encouragement to me throughout the period of work. It is their moral support alone that has enabled me in my effort.

GEETALI BANERJI