ACKNOWLEDGEMENT

One could express the core of gestures with softest words so as I am finding myself in deep ocean of thoughts just to find the apt words to show indebtedness to all those who have contributed in their own special ways for the successful completion of this research work.

Firstly, I wish to express my profound sense of gratitude to GOD for his everlasting grace.

The precious gift of learning - a debt that is difficult to pay, only gratitude can be felt. Indeed, the words at my command are inadequate to express my deep sense of gratitude to my esteemed supervisor Dr. Anju, Assistant Professor, Department of Energy and Environmental Sciences, Chaudhary Devi Lal University, Sirsa, Haryana, for her initiation, constant encouragement, judicious support, suggestions and positive criticism at all stages of this work. Her indispensable guidance throughout my Ph.D. led me to believe that perfection is the ultimate prospect of success. Her knowledge, insightful reviews and perfectionist attitude always inspired me to do better than earlier and bring the best out of me as a student. Her helping attitude to bring six years of my research work into a presentable form is sincerely acknowledged.

I wish to express my thanks to Prof. S.K. Gahlawat, Prof. Deepti Dharmani and Prof. Raj Kumar Salar, successive chairpersons of the Department of Energy and Environmental Sciences, Chaudhary Devi Lal University, Sirsa for providing me the necessary facilities to carry out this work.

I also wish to place on record my exquisite thanks to Dr. Rani and Dr. M. K. Kidwai, Assistant Professors, Department of Energy and Environmental Sciences, CDLU, Sirsa, for their inspiring words and useful technical suggestions.

I would also like to extend my heartfelt thanks to Dr. Satyawan Dalal, Assistant Professor, Department of Public Administration, CDLU, Sirsa, for their encouragement and constant motivation.
I would also like to convey my thanks and best wishes to all the fellow students *Sneh lata*, *Shweta*, *Shekhar*, *Monika*, and *Seema* for their support and help.

I also take this opportunity to express gratitude, I'm greatly beholden and owe a deep sense of honor to my parents (Smt. Kamla Devi & Sh. Devi Lal) for their constant love, affection, and encouragement which they have bestowed upon me and their unfailing support throughout my carrier. Without my father's inspiration and cooperation this endeavor would not been a successful one.

A special thanks to my brother Mr. Sudesh Verma, and Sister-in-law Mrs. Kusum Verma for their care, assistance and unconditional support. Fond words of thanks to my in-laws and all other family members for their good blessings in my bright carrier.

Above all, I'm highly indebted to my husband, Mr. Prem Verma for his constant affection, scarifies and standing by me all the while, whenever needed, provide me the moral support required for the successful completion of my Ph.D. Last but not the least, I would like to thank my son, Vansh Verma who has always given me strength through his ever smiling face whenever I felt tired and distressing during this demanding journey. All may not be mentioned but none is forgotten.

*Savita Verma*