

Acknowledgment

I would like to acknowledge the following for help, encouragement, and support during the preparation of this thesis. First, I thank God for giving me the endurance and perseverance to complete this work. I could not have completed this work without the continuous encouragement of my husband and the support of my father, my mother, and my sister which is extremely appreciated.

Special thanks and appreciation to Dr. Abdelrasoul Jabar Alzubaidi, for providing guidance during the preparation of this project, I sincerely thank him for his patient, motivation and valuable advices. I would like also to express my appreciation to the staff of Sudan University of Science and Technology, who taught me during Bachelor and Master years. Finally many thanks to the staff and management of Center of Engineering and Technical Studies for being pioneers in providing evening classes which enable me to study for M.Sc degree without suspending my employment.