Acknowledgement

The author expresses with gratitude for the motivation and enthusiasm imbibed during this research work from the Supervisor Dr. S. Rajasekaran and indebted for the expertise and acumen provided by him in all research activities.

The author expresses his sincere thanks to the Management of PSG College of Technology and Prof. Dr. P. Radhakrishnan, former Principal, Prof. Dr. S. Vijayarangan, Principal for providing the necessary facilities to carry out this research work. Also, he expresses his thanks to Dr. J. V. Ramaswamy, Head, Department of Civil Engineering for his encouragement throughout the work.

The author expresses his abysmal thanks to Prof. V. Sivakumar, Principal, Sri Vasavi College, Erode for his kind encouragement and all needful helps rendered during the research work.

The author expresses his thanks to the authorities of University Grants Commission for the grant of Teacher Fellowship under Faculty Development Programme to carry out this project under full-time for two years duration during IX Plan period.

While the author expresses his thanks to all faculty members of Department of Civil Engineering, he is especially indebted to Dr. G. Sankarasubramanian, Asst. Prof. for his moral support, criticism on the work and to Dr. K. Elangovan, Lecturer for his kind gesture to make use of other computer resources and useful suggestions. The author expresses his special thanks to Dr. G.A Vijayalakshmi Pai, Senior Lecturer, Department of Mathematics and Computer Applications, since her advice and constructive suggestions were quite useful to make the report more relevant.
Also, he expresses his thanks to Prof. K. Natarajan, Head and other colleagues of Department of Computer Science, Sri Vasavi College, Erode for their kind gesture. Also, the author expresses his thanks to Prof. K. Narayanan, Head, Department of English for his help during the report writing.

The author wishes to thank Mr. S. Anandakumar, Mr. R. Balakrishnan, Research Associates for their technical support during the project.

The author also expresses his thanks to M/s. Sigma Computers for their professional expertise in the preparation of this report.

Finally, while the author dedicates any fruitful outcome of the work to the memory of his Father, his sincere thanks are due to all family members, especially to his Wife and Daughter for their encouragement and abundant patience on his absence during the project.