

PREFACE

The thesis is incorporated with the results on fuzzy essential ideals, T-fuzzy essential ideals, rings and modules satisfying chain conditions on the fuzzy substructures, fuzzy honest and fuzzy superhonest submodules and fuzzy singular ideals. The materials presented in this thesis are organized into five chapters.

In the introductory chapter historical development of fuzzy set theory along with honest submodules, objective of the work and outcome of the results of the subsequent chapters are briefly presented.

Chapter 1 highlights some basic definitions and results available in the standard literature.

Chapter 2 deals with the study of essential fuzzy ideals and T-fuzzy essential ideals of a ring. Some parts of this chapter form the paper entitled "On fuzzy essential ideals of rings" published in "Advances in fuzzy sets and systems".

Chapter 3 is devoted to the study of rings and modules with chain conditions on the fuzzy substructures. Some parts of this chapter form the paper entitled "Fuzzy aspects of rings with chain conditions" published in "International journal of fuzzy mathematics and systems".

Chapter 4 is deals with the study of fuzzy aspects of honest and superhonest submodules of a module. Various characteristics of these substructures are studied in this chapter. Some parts of this chapter Presented in "Technical Session of North East Regional Conference of Mathematics", organized by AAM, Gauhati University and communicated to "International Journal of Algebra".

Chapter 5 deals with the study of fuzzy singular ideals of a ring and fuzzy singular Submodules of a module. These concepts are defined in terms of fuzzy points.