

# **PREFACE**

This thesis, "Structure and ideal theory of duo  $\Gamma$ -semigroups" submitted for the degree of Doctor of Philosophy in Mathematics of the Acharya Nagarjuna University, forms the research work done by me in the Department of Mathematics, Acharya Nagarjuna University under the guidance of Dr. A. Anjaneyulu, Reader and Head (Rtd), Department of Mathematics, VSR & NVR College, Tenali.

In the introductory chapter which also explains the origin of the present problem, the existing literature relevant to the work of the thesis, and a summary of main results of the thesis which forms the substance of chapters 1 to 5 are briefly presented.

The contents of section 1 and section 3 in chapter 1 are accepted for publication in "International Journal of Mathematical Sciences, Technology and Humanities" under the title 'Duo chained  $\Gamma$ -semigroups'.

The contents of chapter 3 are accepted for publication in "International eJournal of Mathematics and Engineering" under the title 'Prime  $\Gamma$ -ideals in duo  $\Gamma$ -semigroups'.

The contents of chapter 4 are accepted for publication in "International Journal of Mathematical Sciences, Technology and Humanities" under the title 'Primary decomposition in a  $\Gamma$ -semigroup'.

The contents of section 1 in chapter 5 are accepted for publication in "International Journal of Mathematical Sciences, Technology and Humanities" under the title 'Duo chained  $\Gamma$ -semigroups'.

The contents of section 2 in chapter 5 are accepted for publication in "International eJournal of Mathematics and Engineering" under the title 'Duo Noetherian  $\Gamma$ -semigroups'.

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