

## CHAPTER I

### INTRODUCTION

The main purpose of this thesis is to study the structure of  $J$  - rings and pre -  $J$  - rings .

Chapter II is concerned with some elementary definitions and results in abstract algebra and set theory which are mostly well - known and are needed in the sequel.

Chapter III contains the properties of  $J$  - rings.

Chapter IV gives the structure theory of  $J$  - rings

Chapter V gives the proof that every  $p$  - ring is isomorphic to a subring of direct sum of fields  $\mathbb{Z}_p$  and classifies subrings of finite direct sums of these fields.

Chapter VI gives not only the structure of pre -  $J$  - rings but also the structure of pre -  $p^k$  - rings.