

## **PREFACE**

An attempt to apply the queueing theory in Inventory Analysis is done in this thesis. This is because the Inventory Management systems consist of various number of interacting factors and it is desired that the mathematical analysis would provide the best way of reaching the goal in the complex environment. Inventory problems become complicated when Stochastic Models are considered. In real life situations Static Inventory Models and their solutions are not so helpful to cope with the situations. Almost all practical problems of Inventory consists of some interacting factors which suffer from uncertainties. To solve these type of problems, various methods and tools of Mathematics have been applied. One of such methods is queueing approach to penetrate. Development of Steady State Equations and their solutions with the help of generating functions, Laplace Transformation etc. are used by my predecessors. This theses is dealt with a completely new method in applying the Partial Difference Equation Theory to solve a system of Steady State Equations involved in these particular field for analysis.