SUMMARY OF THE DISSERTATION

The present dissertation deals the study of some special classes of sequencing models which is very important and useful in area of production scheduling etc. The project contains 5 chapters as a whole.

Chapter 1 is introductory which gives the idea of basic and development of production scheduling problems. In this chapter we have discussed difference between scheduling and sequencing. Various performance measure, terminologies are introduced. Brief surveys of scheduling problems given by various researchers are also given.

Chapter 2 deals with the different methods used in scheduling. In this chapter we have studied various techniques used to solve different types of production scheduling problems such as Branch and Bound technique, Heuristic approach, Meta heuristic approach etc.

Chapter 3 deals with Two and Three stage flow shop unicriteria scheduling problems along with different parametric constraints. In this chapter concept of equivalent job for a job block, transportation times, set up times are taken along with general flow-shop scheduling problems. In this chapter the objective is to find optimal schedule of jobs which minimize the make span and average flow time while dealing with different above mentioned parameters.
Chapter 4 deals with the study of two machine general flow shop problem in which the processing time of the jobs is associated with probabilities, under some restrictive rental policy including equivalent job-block criteria. The objective of the study is to find an algorithm to minimize the rental cost of the machines under specified rental policy. The numerical examples are discussed to demonstrate the algorithm.

Chapter 5 deals with the bicriteria problem in scheduling under specified rental policy. Our objective is to obtain optimal schedule to minimize the total elapsed time subject to minimization of the total rental cost of the machine. In our study we have considered the rental policy in which machines are taken on rent as and when they are required and are returned as and when they are no longer required.

At the end a bibliography is being mentioned.