ADVANCED OPERATIONS RESEARCH TECHNIQUES (AORT)

Name of Course	Semester	Core/Elective/Allied/Practical/Project	Course/Paper Code	Course/Paper Title	Credit	Internal Marks	External Marks	External Exam Time Duration
B.B.A.	VI	Elective	19BBA609	Advanced operations research techniques	3	30	70	2 ½ Hours

COURSE OBJECTIVES

The objective of this paper is to familiarize the students with advanced techniques of operations research.

COURSE CONTENT

Unit - 1	PERT and CPM
	- Presentation of an activity - Arrow Diagram - Using a Dummy Activities & its logic - Network - Determination of ES,EF,LS and LF: Critical path - Total, free & independent floats - Distribution of project duration, Probability of completion duration of the project
Unit - 2	Sequencing Problem
	- Introduction - Assumption - Algorithm for solving sequencing problem - Processing n jobs through 2 machines - Processing n jobs through 3 machines - Processing n jobs through 4 machines
Unit-3	Assignment methods
	· Introduction · Hungarian assignment method · Some typical examples · Travelling salesman problem
Unit – 4	Replacement Theory
	- Replacement Policy for Equipment which deteriorates gradually - Replacement of items that fail suddenly - Group replacement policy

REFERENCES

- Operations Research Theory and Applications (2nd edition): J K Sharma (Macmillan India)
- Operations Research Techniques for Management: V.K. Kapoor (Sultan Chand & Sons)
- Operations Research: Kanti Swarop, P.K. Gupta & Man Mohan (Himalaya Publication)
- Quantitative Techniques in Management: N.D. Vera (TATA McGraw Hill)