

SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar
Programme & Subject : B.Sc (CA & IT) – M.Sc (CA & IT) Dual Degree
Semester - 4

US04SIIT22 : Operations Research - II
(w.e.f June 2020)

Credits : 2 **Exam Duration : 2hrs**
Lectures per week : 2
All units carry equal weightage.

Unit	Description in detail	Weightage
I	Introduction to Assignment Problem Mathematical formulation of AP. Hungarian method for finding optimal solution to AP. Unbalanced AP.	25%
II	Elements of game theory: two person zero sum game concept Saddle point, game without saddle point. Mixed strategies (without proof) Graphical solution of 2 X n and n X 2 games.	25%
III	Job sequencing: introduction. Solution of Johnson's algorithm for solution of sequencing. Problem with n job through 2 machines and n job through 3 machines.	25%
IV	Project management by PERT and CPM. Introduction to PERT and CPM. Advantages and Assumption. Rules for network construction. Critical path calculation, Total float, Free float.	25 %

Basic Text & Reference Books:

1. Taha H. A. : Operations Research, Macmillan, New York (1987)
2. Sharma S.D. : Operations Research. Kedar Nath Ram Nath & Co. Meerut , 1988-89.
3. Gillett B. E.: Introduction to Operations Research - a computer oriented algorithmic approach, McGraw-Hill, 1976
4. Bronson Richard : Operations Research, Schaum's outline Series, 1983.
5. Kapoor V K : Problems and solutions in Operations Research, Sultan Chand & sons, 1996.