

SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar
Programme & Subject : B.Sc (CA & IT) – M.Sc (CA & IT) Dual Degree
Semester – 3

US03SIIT22 : Operations Research - I
(w.e.f June 2020)

Credits : 2

Exam Duration : 2hrs

Lectures per week : 2

All units carry equal weightage.

Unit	Description in detail	Weighting (%)
I	Operations Research (OR). ➤ History, meaning and application of OR. ➤ Introduction to LPP, General and standard form of LPP. ➤ Solution of LPP using Graphical Method.	25%
II	Solution of LPP using simplex method and Big-m method, Duality in LPP (concept only)	25%
III	Transportation problem ➤ Introduction ➤ Mathematical model of Transportation problem ➤ Initial basic feasible solution by North-west corner rule, Least-cost method, Vogel's approximation method.	25%
IV	Modified Distribution Method for finding Optimum Solution of TP, Unbalanced TP, Degenerate and non- Degenerate TP.	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.