

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.

SYLLABUS FOR B.Sc. (MATHEMATICS)

SEMESTER – VI

Elective Generic – 6001

(Operations Research – II)

Effective from June 2022

Marks : 70 (20 internal + 50external)

(2 Hours / Week - Credits :2)

Unit 1:

Transportation problem, methods for finding initial basic feasible solution, Solution of Transportation problem by MODI method, Unbalanced Transportation problem.

Unit 2:

Assignment problems, The Hungarian method, Balanced & Unbalanced Assignment problems.

Unit 3:

Competitive Games, Two-person zero-sum game, Maximin and Minimax principle, Saddle points and the value of the game (based on pure strategies), Mixed strategies,

Unit 4:

Solution of Games with Saddle point, Game without saddle points, Dominance rule, Solution of $m \times 2$ and $2 \times n$ Games using graphical method.

The syllabus is covered by the following reference books:

1. J. K. Sharma : Operations Research: Theory & Applications, McMillan India Ltd., 1998.
2. Kanti Swaroop, P. K. Gupta & Man Mohan : Operations Research, S. Chand & Sons, New Delhi, 1998.
3. G. Hadley : Linear Programming, Narosa Publishing House, New Delhi, 1995.
4. S. D. Sharma: Operations Research, Kedarnath Ramnath & Co.
5. P. M. Karak : Linear Programming, New Central Book Agency Pvt. Ltd. Calcutta.
6. K. V. Mittal & L. Mohan : Optimization methods in O.R. and System Analysis, New Age International Publications.
7. Goel & Mittal : O.R., Pragati Prakashan, Meerut.

Dr. K. V. Mittal