

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT
M.Sc. (I.T.) [Five Years Integrated Course]
M.Sc. (Information Technology)
1st Semester Syllabus

Effective From July-2003

Paper No : 704
Paper Title : Operation Research.

[L : 4, P : 0 Hrs]

1. Linear Programming

- 1.1 Formulation of L.P.P.
- 1.2 Solution Methods
 - 1.2.1 Graphical Method
 - 1.2.2 Simplex Method
 - 1.2.3 Two Phase Method
 - 1.2.4 Big-M Method

2. Special cases of L.P.P.

- 2.1 Transportation Problem
- 2.2 Assignment Problem

3. Job Sequencing

- 3.1 Processing n jobs through 2 machines
- 3.2 Processing n jobs through 3 machines
- 3.3 Processing 2 jobs through m machines
- 3.4 Processing n jobs through m machines

4. Inventory Problem

- 4.1 Introduction to Inventory
- 4.2 Deterministic Inventory models
- 4.3 Dynamic Inventory models

5. Network Analysis

- 5.1 PERT
- 5.2 CPM

Main Readings :

- 1. Hiller F.S. & Liberman G.J. - Introduction to Operations Research, 2nd Edn. - Holand Day Inc. London, 1974
- 2. Tara H.A. - Operation Research, 3rd Edn. - McMillan Publishing Company, 1982

Supplementary Readings :

- 1. Beightler C.S. & Phillips D.T. - Foundation of Optimization - Prentice Hall, 1979
- 2. McMillan claude Jr. - Mathematical Programming, 2nd Edn. - Wiley Series, 1979
- 3. Gillett B.G. - Introduction to Operation Research - A Computer oriented Algorithmic approach - McGrow Hill Book Comp., 1976
- 4. N.S. Kambo - Mathematical Programming Techniques. - East-West Press, New Delhi, 1991