PAPER 2.11 : Operations Research

UNIT-1:

Introduction to operations research: Meaning, Models and Techniques. Linear programming: Definition, mathematical formulation of linear programming models, graphical and simplex methods for both maximising and minimising, duality

UNIT-2:

Transportation and Assignment problem, Investment analysis and Break –Even analysis.

UNIT-3:

Game Theory: Concept of two –persons zero sum game, pure and mixed strategy games, saddle point, odds method and dominance methods for solving mixed strategy game.

Data Envelopment Analysis: Meaning and application of DEA (elementary)

UNIT -4:

Queuing Theory: Single chain analysis Replacement Theory: Replacement of assets with deteriorates with time, replacement of assets which fail suddenly. Simulation

UNIT -5:

Network Analysis: application of PERT and CPM Network drawing, calculation of Floats, Project crushing. Inventory Management

Suggested Readings:
Agrawal, N.P.: Quantitative Techniques, Ramesh Book Depot, Jaipur.
Gupta P.K. and Hira D.S. :Operation Research, S. Chand &Company, New Delhi
Kapoor, V.K. : Operations Research,Sultan Chand & Sons, New Delhi
Kothari, C.R. : An Introduction to Operations Research, Vikas Publishing House
Vohra, N.D. : Quantitative Techniques in Management, Tata McGraw Hill, New Delhi

Paper 2.12: Dissertation

Candidate shall write a dissertation under supervison of the faculty member appointed by the principal. Hence this option shall not be available for non-collegiate candidates.