

III semester B.B. A., LL.B (Hon's)

Quantitative Techniques for Management

Unit-I

Introduction: Meaning and definition of quantitative techniques, linkage between business decision making and quantitative techniques, different quantitative techniques, areas for application of quantitative techniques in business.

Unit-II

Linear programming: Meaning and objectives of linear programming, application areas, assumptions of linear programming, application of linear programming technique for profit maximization and cost minimization problems, graphic and simplex methods, duality and post-optimality analysis.

Unit-III

Transportation technique: Meaning and objectives, areas for application, formulation of transportation problems, steps involved in finding the optimal solution, methods of obtaining initial solution, methods of testing optimality of feasible solution, unbalanced transportation problem, degeneracy in transportation problem.

Unit-IV

Assignment technique : Meaning and objectives, areas of application, peculiarities of assignment problems, methods solving an assignment problem, complete enumeration method, simplex method, transportation method, and Hungarian method, constrained assignment problem, unbalanced assignment problem, assignment problem and minimization case, travelling salesman problem.

Unit-V

Techniques for project cost management: Drawing an arrow network and numbering the events, estimation of jobs, duration and concept of critical path and probability consideration, assumptions in PERT analysis, crashing a network and determining of project cost trade off, scheduling a network with various constraints like manpower, equipment, etc.

Reference Books:

1. G.V.Shenoy, U.K.Srivastav and S.C.Sharma, Operations Research for Management, Wiley Eastern Ltd., New Delhi.
2. Levin and Kark Patrika, Quantitative Approaches to Management, TMH, International edition, Singapore.
3. N D Vohra, Quantitative Techniques for Management, TMH, New Delhi.
4. Leonard W.Hein, the Quantitative Approaches to Management Decisions, PHI, New Delhi.
5. R.W. Miller Schedule, Cost and Profit with PERT, McGraw Hill Books Co., New York.
6. Maurice Ssieni, Arthur Yespan and L.Friedman, Operations Research: Methods and Problems, John Wiley and Sons, London.