

DECISION MODELLING - II

Non-Linear Programming: Unconstrained univariate optimization problems: Bisection method & Newton's method; Unconstrained multivariate optimization: Gradient search method; Constrained optimization: Kuhn Tucker conditions, Quadratic and Separable Programming methods

Dynamic Programming: Principle of Optimality, Concepts of state and stage, Solution of Discrete Problems through Backward Dynamic Programming, Multi-stage Dynamic programming problems

Queuing Theory: Markov Process - Description of state, Transition probability matrix, Birth and Death process, Markovian and Semi-Markovian Single-channel and Multiple-channel queues, Queuing Networks

Discrete-event Simulation: Time-flow mechanisms, Random number and Random variate generation, Simulation of queuing, inventory and industrial problems

Books:

1. Operation Research: An Introduction, Taha H A, PHI
2. Operation Research, Phillips, Rabindran and Solberg, John Wiley & Sons
3. Introduction to Operation Research, Hiller F S and Lieberman G J