Subject Code : SMJ1:2

THEORY OF GAMES AND DECISION MAKING.

UNIT – I

Mathematical formulation of conflict decision problems as a game, extensive and normal forms of a game.

UNIT – II

Finite games and linear programming the minimax theorem and the value of a game, Optional strategies, finite games of perfect information.

UNIT – III

Games with an infinite number of moves, games of tinning, games of sequences generation and prediction – differential games, management games for decision making under conditions of completion and uncertainty.

UNIT – IV

Games against nature, theory of utility functions, complete class theorems for decision function.

UNIT – V

Baysian decision functions, Optimality criterion, multiple decision rules, sequential decision problems – Application to statistical inference, acceptance sampling, control theory and problems in "Economics".

Books for Reference:

1. Introduction to the theory of games – J.D.Braveman, McGraw Hill Book Co.
2. Games of Strategy – Theory and applications, M.Dresher Prentice Hall Co.,
3. Linear Programming and Decision Making – A.S.Narang, Sultan Chand Co.,
4. Operations Research – Gupta, Kantiswarup and Manmohan Sultan Chand Co.,