B.COM. SEMESTER – 6

7	Elective – 5	Advance Statistics - 6

Name of the Course: **Advance Statistics - 6**
Course credit: **03**
Teaching Hours: **45 (Hours)**
Total marks: **100**
Distribution of Marks: **70 Marks semester end examination**
30 Marks Internal assessments (CCA)

Objectives:
To equip students with the various statistical tools

Unit	Content	No. of Lectures
1	**DEMAND AND SUPPLY & MONOPOLY PROBLEM:** - Definition of demand of commodity and supply of commodity - Demand law and supply law, demand curve and supply curve, assumption underlying the law of demand and supply - Demand and supply function, total revenue function and cost function - Elasticity of a function, price elasticity of demand and supply. Elasticity of cost function, method of determine the price elasticity of demand - Average revenue, marginal revenue, average cost , marginal cost, condition for total revenue , maximization and total cost minimization, total revenue curve - Relation between price elasticity of the demand, average revenue and marginal revenue, uses of price elasticity of demand - Meaning of monopoly and characteristic of monopoly - Profit function, problem of maximization of profit - Monopoly and production of two commodities - Effect of taxation on monopoly - Examples	**13**
2	**PRODUCTION FUNCTIONS:** - Definition of production function and its properties - Various production functions - Maximization of the profit with illustrations - Average production and marginal production - Homogeneous production function and elasticity of productivity	**12**

	- Euler's theorem with proof - Cobb-Douglas production function - Maximization of production function subject to cost function - Examples	
3	**UTILITY FUNCTIONS:** - Concept of Utility, Utility index, marginal Utility - Utility function and its properties - Indifference curves, standard forms of utility function - Maximization of Utility, compensated demand function, Utility function on basis of income and Leisure - Examples	**10**
4	**INPUT OUTPUT ANALYSIS:** - Meaning input –output analysis and assumption of input output analysis - Construction of input output analysis table for two or three industries (Leontief's open system) - Matrix of technical coefficients - Merits and Demerits of input output analysis - Examples of determining total production of each of the industries if the final demand changes	**10**
	Total Lectures	**45**

Suggested Readings and Reference Books:

1. Statistics By D.S. Sancheti and V.K. Kapoor
2. Fundamentals of mathematical statistics By V.K.Kapoor and S.C.Gupta
3. Fundamentals of Statistics By S.C. Srivastva and SangyaSrivastava
4. Statistical methods By S.P.Gupta
5. Practical Statistics By S.C.Gupta
6. Business Statistics By R.S.Bhardwaj

Note: Latest Editions of the above books may be used.