I. DETERMINISTICS INVENTORY MODELS: 25%

Introduction, Types of inventory costs involved in inventory problems, concept of Economic order quality (EOQ), EOQ models with uniform demand and with / without shortages.

II. PROJECT EVALUATION AND REVIEW TECHNIQUE (PERT) AND CRITICAL PATH METHOD (CPM): 25%

Introduction, Basic steps in PERT/CPM Techniques. Applications of PERT/CPM techniques, Network diagram representation, Rules of drawing network diagram. Time estimate and critical path in network analysis. Advantages & disadvantages of network techniques.

III. THEORY OF ESTIMATION : 25%

Problems of inference, concepts of statistic, parameters, Estimator.

Point estimation, properties of a good estimator (Unbiaseness, consistency and efficiency). Method of maximum likelihood. (for the parameters of Binomial, Poisson, Normal and Exponential distributions).

Interval estimation, concepts of confidence interval and confidence coefficient. Confidence interval for the parameters of Binomial, Poisson and Normal distributions for large samples only.

IV. BUSINESS FORECASTING & THEORY OF FINITE DIFFERENCES: 25 %

Definition, objects, steps in business forecasting general assumptions in forecasting, uses & limitations.

Difference tables, Methods of interpolation, Extrapolation, Divided differences. Newton's and Lagrange's methods. Simpson's one third and three-eight formulas.

BOOKS RECOMMENDED:

1. H.A.Taha:Operations Research, Macmillan Publishing Co., 1999.
2. Gass, S.I.: Linear Programming and Applications, McGraw Hill, 1975.

3. Goon A.M.Gupta M.K. &Das Gupta B.: Fundamentals of Statistics; World Press, Calcutta, 1991.

4. Ethance D.N. (1986): Fundamentals of Statistics, Kitab Mahal, Allahabad.

5. H. Freeman ; Mathematics for Actuarial Students.

6. Richardson C.N.: An Introduction to the Calculus of Finite Differences.

7. Agarwal B.L: Basic Statistics, Wiley Eastern Limited, New Age international limited.

8. Sharma S.D.: Operation Research, Kedar Nath Ram Nath & Co. Meerut.

9. Kapur & Saxena: Mathematical Statistics, S.Chand & Co. New Delhi.

10. S.C. Gupta and Indra Gupta: Business Statistics, Himalaya Publishing House.

11. S.P. Gupta: Statistical Methods, Sultan Chand & Sons.

12. Anitha H.S.: Operations Research for Management, Mangal Deep Publication, Jaipur.

13. P.K. Gupta and Manmohan: Operations Research & Statistical Analysis, Sultan Chand & Sons publishers, New Delhi.

14. N.P. Agarwal: Operations Research, Indus Valley Publications, Jaipur – New Delhi.

15. C.M.Chikkodi, B.G. Satya Prasad: Business Statistics, Himalaya Publishing House.

16. M.C. Shukla & S.S. Gulshan: Statistics theory & Practice.

17. S.P. Gupta: Advanced Practical Statistics, S.chand & Co, Ltd, New Delhi.

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