

M.Com. Part II
Statistics : Paper III (Principal Subject)

(To be made effective From , June - 2007]

Course Contents

Unit I : Demography :

25%

Meaning of demography, history and growth of demography, measures of population growth. common measures of growth rate. growth curves- logarithmic, exponential, Gompertz and logistic curves.

Life tables-scope, importance and limitations of life tables, Different methods of construction of life table, abridge life tables numerical examples to illustrate these methods.

Population projection: methods of projection, study of simple models for population projections.

Unit II : Statistics Quality Control :

25%

Sampling Inspection plans-product versus lot control. Double sampling plan for attributes and its uses. Sequential Sampling plans- sampling inspection plans for variables- single sampling plans when the quality characteristics of lots is normally distributed with known and unknown standard deviation with upper and/or lower limit specified OC, ASN, ATI and AOQ of the above plans and their calculation for specified value of parameter.

Concept of total quality management, Introduction to just-in time (JIT), Quality circles production. Idea of Taguchi approach to quality management.

Unit III : Simulation :

25%

Philosophy, development and implementation of simulation modeling, Examples of simulation modeling. Uniform distribution and its importance to simulation. Generation of random numbers. Properties of uniformly distributed numbers. Methods of composition method. Simulation from Binomial. Poisson, Normal and Chi-square distributions. Simulation languages & their comparison.

Unit IV : Market Research :

25%

Definition of market research-scope, problem formulation. Cost value and round off. Use of EMV and EVPI approach. Research design, data collection. Univariate and bivariate analytical tools and methods applied to market research problems including case studies. Bayesian approach to problems to market research.

Books for Reference :

1. Ramkumar R. (1986) : Technical Demography, Wiley Eastern
2. Pathak K.B & Ram R. (1992) : Techniques of Demography Analysis, Himalaya Pub.
3. Bhende A.A. & Kanitakar T. (1985) : Principles of population Studies, Himalaya Pub.
4. Presat R. (1978) : Statistical Demography, Methew and Co.
5. Browker and Goode : Sampling inspection plans for variables.
6. Duncan A.J. (1965) : Quality Control and Industrial Stastics, B.O. Tarapurwaland sons.
7. Ratani R.T. : Statistical Quality Control (in Gujarati), Gujarat Granth Nirman Board.
8. Duncan And Smith : Industrial Statistics & Quality Control
9. Berry G.C. : Market Research, McGraw Hill.
10. Davar R.S. (1982) : Modern Marketing Management, Progressive Corporation Pvt. Ltd.
11. King : Quantitive Analysis for Market Management
12. Philips Kotlar : Scientific Marketing Management
13. Ravindran. Philips & Solberg : O.R. - Principles & Practice, (2nd Ed.), John Wiley & soub.
14. Hillier and Lieberman : Operation Research