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|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Programme Name | Master of Commerce                                                                                                                                                                                                             |
| Semester       | Second                                                                                                                                                                                                                         |
| Paper No       | 2.32                                                                                                                                                                                                                           |
| Course Code    |                                                                                                                                                                                                                                |
| Course Name    | Econometrics (Paper - 1)                                                                                                                                                                                                       |
| Course Type    | Elective Course                                                                                                                                                                                                                |
| Effective from | DECEMBER 2011                                                                                                                                                                                                                  |
| Objective      | To present a clear, simple and systematic and comprehensive explosion of the methods, principles and techniques of statistics in various discipline with special reference to commerce, management and economics and business. |

| Unit No. | Topic No. | Content                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Hrs . | Marks W + % | Credit |
|----------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------|--------|
| 1        | 01        | <p>Sampling Techniques</p> <p>Simple random sampling with and without replacement, stratified random sampling, systematic sampling.</p> <p>Obtain Mean and Variance. Derivation of the inequality variance of mean of optimum <math>\leq</math> variance of mean of Proportional <math>\leq</math> variance of mean of random.</p> <p>Proportional and optimum allocations with fixed sample size only.</p>                                                         | 15    | 25          | 01     |
| 2        | 02        | <p>Sampling and non sampling Errors</p> <p>Sample selection and sample size determination - Stein's method, Linear and Circular Systematic sampling, Cluster sampling, Two-stage sampling Description of these methods and estimation of mean and variance.</p> <p>Varying probability sampling, probability proportional to sample size with replacement - Description and estimation of mean &amp; variance without proof, Double sampling - only description</p> | 15    | 25          | 01     |
| 3        | 03        | <p>Mathematical Economics</p> <p>Mathematical functions of demand and supply, price - elasticity of demand and supply, cost functions, average revenue and their relationship with elasticity of demand. Market equilibrium.</p>                                                                                                                                                                                                                                    | 15    | 25          | 01     |
| 4        | 04        | <p>Monopoly Problems</p> <p>Effect of taxation and subsidy on market equilibrium. Edgeworth's Paradox, Partial elasticity of demand, Engel's law, Income elasticity of demand, Formulation of production function, Elasticity of substitution for two input factors of production.</p> <p>Input-Output analysis - Leontiefs static open and closed system models, importance in inter-industry relations.</p>                                                       |       |             |        |

**References :**

1. Allen R.G.D : Mathematical Economics
2. Allen R.G.D. : Mathematical Analysis for Economists
3. Henderson & Quandt : Micro Economic Theory
4. Cochran W.G. (1984) : Sampling Techniques (Wiley Eastern)
5. Murthy M.N. (1964) : Sampling theory and methods: Statistical Publishing Society Calcutta
6. Johnston J (1984) : Econometric Methods (3rd Edition ) McGraw Hill
7. Gujarati O. (1979) : Basic Econometrics, McGraw Hill
8. Jaiswal M.C.(1984) : Economic Statistics , (Gujarati) Granth Nirman Board
9. Mody R.J. : Mathematical Economics (Gujarati)
10. Gajjar A.V. & Patel S.S. : Statistics (Gujarati)
11. Goon, Gupta and Dasgupta (1984) : Fundamentals of Statistics Vol. II ( World Press)
12. Sudman S. (1976) : Applied Sampling Academic Press.

**Note :** One Question from each unit with internal options. 60 % for examples and 40 % for theory weightage compulsory for each question. And each question should contain two or three sub-questions.