M.A. ECONOMICS 2010-11
SEMESTER – II
Paper – III
QUANTITATIVE TECHNIQUES FOR ECONOMICS

Unit – I

Total Differentiation, Application of Derivatives – Order Condition of Maximum and Minimum, Utility Maximization, Profit Maximization with Tax and Subsidy, Elasticity – Price, Income and Substitution.

Unit – II

Determinants and their Properties, Solution of Simultaneous Equations through Cramer's Rule and Matrix Method.

Unit – III

Concept of Sampling – Random and Non-random Sampling, Sampling and Non-random sampling error, Formulation of Statistical Hypothesis – Type-I and Type-II Error. Data Collection – Primary and Secondary Sources.

Unit – IV

Test of Significance – Parametric V/s Non-parametric Test, Parametric Test – Hypothesis Testing based on t, Z and F test.

Unit – V

Non-parametric Test – Hypothesis Testing based on x^2 (chi-square) and Sign Test. Concept of Qualitative Test, Likert Scale Technique, Concept of ANOVA.

Basic Reading List

1.   Allen, R.G.D. (1974) – Mathematical Analysis for Economists, Macmillan Press and ELBS, London.

2.   Chou, Y. (1975) – Statistical Analysis, Holt, Reinhart and Winston, New York.

3.   Croxton, Crowden and Klein (1971) – Applied General Statistics, Prentice Hall of India, New Delhi.

4.   Gupta, S. C. (1993) – Fundamentals of Applied Statistics, S. Chand and Sons, New Delhi.

5.   Handry, A. T. (1999) – Operations Research, Prentice Hall of India, New Delhi.

6.   Mehta Madnani (2008) – Mathematics for Economists, Sultan Chand and Company, New Delhi.

7.   Nagar, A. L. and R. K. Das (1993) – Basic Statistics, Oxford University Press, New Delhi.

8.   Speigal, M. R. (1992) – Theory and Problems of Statistics McGraw Hill Book Co., London.

9.   Yamane, Taro (1975) – Mathematics for Economists, Prentice Hall of India, New Delhi.

10ण   सुदामा सिंह, ओ. पी. सिंह एवं वाई. के. सिंह – अर्थशास्त्रीय गणित एवं प्रारम्भिक सांख्यिकी, राधा पब्लिकेशन, नई दिल्ली।

11ण   लक्ष्मीनारायण नाथूरामका – अर्थशास्त्र में गणित के प्रयोग, कॉलेज बुक हाऊस, जयपुर।

12ण   कैलाशनाथ नागर – सांख्यिकी के मूल तत्व, मिनाक्षी प्रकाशन, मेरठ।

13-   मेहता एवं मदनानी – अर्थशास्त्र में प्रारम्भिक गणित, लक्ष्मीनारायण अग्रवाल, आगरा।