

B.A. Semester:- V Course 510 (D)

ECONOMIC INVESTIGATION

Preamble

The main objective of this paper is to train the students to use the techniques of mathematical and statistical analysis, which are commonly applied to understand and analyze economic problems.

Unit :-1 Set Theory

Concepts of sets, Types of sets, Universal set, Union of sets, Intersection of sets, Difference of sets, Venn diagram, Simple illustrative examples.

Unit:-2 Probability

Classical and statistical definition of probability , Addition and multiplication theories on probability (with proofs based on Venn diagram), Simple illustrative examples.

Unit:-3 Limit and differentiation.

Meaning of limit, $x \rightarrow \infty$, $x \rightarrow -\infty$, $x \rightarrow 0$, $x \rightarrow a$, Limit of a function, Rules of limit, Simple illustrative examples.

Meaning of differentiation, Rules of derivatives, Simple examples.

Unit:- 4 Applications of simple derivatives.

Applications of derivatives to economic problems – Elasticity of demand – Total, marginal and average cost and revenue, Maxima and Minima of a function of two variable, illustrative examples for economic application in perfect competition, monopoly and monopolistic competition.

Basic Reading:

1. Mehta-Madnani, Mathematics for Economics, Sultan Chand & sons, New -Delhi
2. R.S.Bhardwaj, Business Statistics, Excel Books, New -Delhi.
3. Das M.N. , Statistical Methods and Concepts, New Age International, Delhi.
4. Gupta, S.P., statistical methods, S. Chand and Co., Delhi.
5. Kalimantan, K.P., Applied Econometrics, Oxford & IBH. Delhi.
6. Mehta, B.C. and Mehta, A.C. ,Fundamental Econometrics, Himalaya Publishing house, Bombay.
7. Simpson, G and Kafka, Fritz. , Basic Statistics, Delhi.
8. Srivastava, U.K. at all. , Quantitative Techniques for Managerial Decision, New Age International, Delhi.