

ECONOMICS
COURSE NO.ECO-102:
QUANTITATIVE TECHNIQUE-I

Unit I: Sets and Relations.

- a. Functions: Types and its Application in Economics.
- b. System of Equations.
- c. Inequalities in market equilibrium.

Unit II: Number System.

- a. Uses of Numbers.
- b. Axiomatic properties of real number and completeness.
- c. Complex number, Geographical representation of Complex number.
- d. Analytical Geometry.
- e. Application of straight lines, points and lines.
- f. Slope of the line curve.
- g. Distance and Sections formulas.
- h. Parabola, Circle, Iso-Profit and Iso-Cost.

Unit III: Differentiation.

- a. Rules of Differentiation.
- b. Marginal Revenue, Average Revenue, Total Revenue.
- c. Marginal Cost, Average Cost, Total Cost.
- d. Maxima and Minima, Profit Maximisation.
- e. Integration: Rules of Integration.
- f. Consumer and Producer Surplus.

Unit IV: Matrix and Determinants.

- a. Types of Matrix.
- b. Solution of simultaneous equation through Cramm's Rule.
- c. Matrix Methods.

Unit V: Linear Programming.

- a. Concepts and Formulation.
- b. Solution of linear Programming through graph.
- c. Input-Output Analysis.

READING LIST:

1. Book No.9010001335/Mathematics and Statistics for Economics by G.S.Monga. Publishers-Vikas Publishing House Pvt.Ltd. ISBN-97-881-269-0982-8.