TRIPURA UNIVERSITY

(A Central University)
Suryamaninagar-799022

Syllabus

OF

Economics
(Major & General)

Semester – IV

2014

SEMESTER-IV (Hons. Course)

GROUP-A: MATHEMATICAL ECONOMICS 50 Marks

Unit-I: Basic Mathematical Tools for Economics

1.1 Matrix Algebra-Concepts of matrix and properties, Matrix operations; Concepts of determinants-Inversion of matrix, Rank of matrix, Linear equations, Solution of Linear equations by using inversion and by using Crammers Rule.

1.2 Differential Calculus- Simple derivative, partial derivative, conditions for optimization, differential equations (both homogeneous and non-homogeneous)

1.3 Integral Calculus- Definite integration, infinite integration, Integration by parts.

Unit-II: Mathematical Applications in Economics

2.1 Demand-Supply equilibrium for one commodity and two commodity market, Elasticity of demand, utility maximization- slutsky's equation

2.2 Production function- Properties of production function, types of production function, elasticity of substitution, cost function, derivation of AC, AVC, AFC, MC and its relation.

2.3 Profit function- Equilibrium under perfectly Competitive market and monopoly market. Equilibrium under Price discriminating monopolist and multi-plant monopolist.

GROUP B: BASIC STATISTICS **50 Marks**

Unit III: Descriptive Statistics - I

3.1 Variable and attribute - Discrete and Continuous variable- Primary and Secondary data- Collection of primary data- Formation of Table and charts and diagram- line diagram, Bar diagram, Histogram, Pie-chart.

3.2 Frequency distribution- different concepts- Problem of missing frequencies.

3.3 Measures of Central Tendency- Arithmetic mean- Geometric mean and Harmonic mean- Median and Mode.

Unit IV: Descriptive Statistics-II

4.1 Measures of Dispersion- Range, Mean deviation, Quartile deviation-Standard deviation- Coefficient of Variance.

4.2 Correlation and Regression- Scatter diagram-Pearson and correlation coefficient -Rank correlation coefficient- Regression and its properties.

4.3 Moments- Central order moments-Skewness and Kurtosis -Moment generating functions.

Reading List:

1. Chiang, Alpha and Kevin Wainwright (2005), Fundamental Methods of Mathematical Economics, McGraw-Hill
2. Handerson J. & R.E. Quandt – Microeconomic Theory: A Mathematical Approach, McGraw-Hill, New Delhi
3. E. Silberberg – The Structure of Economics: A Mathematical Approach McGraw-Hill, New Delhi
4. Srinath Barua – Basic Math and its Economic Application
5. Tarra Yamni – Mathematical Economics
6. Joydeb Sarkel &Anindya Bhukta – An Introduction to Mathematical Techniques for Economic Analysis, Book Syndicate Private Ltd.
7. S.P. Gupta- Statistical Method, S. Chand
8. Gupta & Kapoor- Fundamentals of Applied Statistics, S. Chand
9. N.G. Das- Statistical Methods,
10. Goon, Gupta, and Dasgupta- Fundamentals of Statistics, The World Press
11. Salvator, D. – Mathematics and Statistics, Schaum Series, Tata- McGraw-Hill

Semester –IV (Pass Course)

ECP-4: Development Economics **100 Marks**

Unit-I: Meaning of Development

Indicators of Development. Growth vs. Development. Human Development Approach. Stages of Economic Growth-Rostow and Marx.

Unit-II: Development Models

Lewis and Nurkse Models in Labour Surplus Economy. Balanced and Unbalanced Growth.

Unit-III: Trade and Development

Trade as an Engine of Growth. Foreign Investment- Role of FDI and Foreign Aid in Economic Development

Unit-IV: Planning and Development

Rationale for Planning. Market Failure and Government Intervention. Sustainable Development-Concept and Indicators.

Reading List:

1. AP. Thirlwa - Growth and Development,
2. M.P. Todaro – Economic Development in the third world, London: Longman
3. Debraj Roy- Oxford University Press Development Economics
4. Misra & Puri –Development Economics