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**SEMESTER VI**


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**4 Papers****Total 100 x 4 = 400 Marks****I. ECONOMICS SPECIFIC (DSE 3):**

(Credits: Theory-05, Tutorial-01)

**Either Group 'A' or 'B'****Marks : 25 (MSE: 1Hr) + 75 (ESE: 3Hrs)=100****Pass Marks (MSE + ESE) =40****Instruction to Question Setter for  
Mid Semester Examination (MSE):**

There will be **two** group of questions. **Group A is compulsory** and will contain five questions of **very short answer type** consisting of 1 mark each. **Group B will contain descriptive type** six questions of five marks each, out of which any four are to answer.

**End Semester Examination (ESE):**

There will be **two** group of questions. **Group A is compulsory** and will contain two questions. **Question No.1 will be very short answer type** consisting of ten questions of 1 mark each. **Question No.2 will be short answer type** of 5 marks. **Group B will contain descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

**DSE 3A. ELEMENTARY ECONOMETRICS****Theory: 75 Lectures; Tutorial:15 Lectures****Course Description**

*This Course provides a comprehensive introduction to basic econometric concepts and techniques. It covers statistical concepts of hypothesis testing, estimation and diagnostic testing of simple and multiple regression models.*

**Course Outline****1. Nature and Scope of Econometrics****2. Statistical Concepts**

Normal Distribution; ( $\chi^2$ ) chi-sq, t- and F – distribution; estimation of parameters; properties of estimators; testing of hypotheses: defining statistical hypotheses; distributions of test statistics; testing hypotheses related to population parameters; type I and II errors; power of a test; tests for comparing parameters from two samples.

**3. Simple Linear Regression Model: Two Variable Case**

Estimation of model by method of ordinary least squares; properties of estimators; goodness of fit; tests of hypotheses; scaling and units and units of measurement; confidence intervals; Gauss-markov theorem; forecasting.

**4. Multiple Linear regression Model**

Estimation of parameters; properties of OLS estimators; goodness of fit – ( $R^2$  and adjusted  $R^2$ ) partial regression coefficients; testing hypotheses-individual and joint; functional form of regression models; qualitative (dummy) independent variables.

**5. Violation of Classical Assumptions; Consequences, Detection and Remedies**

Multicollinearity; heteroscedasticity; serial correlation.

**6. Specification Analysis**

Omission of a relevant variable; inclusion of irrelevant variable; tests of specification errors.

Session 2019-22 onwards

**Basic Readings:**

- Jay L. Devore, probability and Statistics for Engineers. Cengage Learning, 2010.
- John. E freund, Mathematical Statistics, Prentice Hall, 1992
- Richard J. Larsen and Morris L. Marx, an Introduction to Mathematical Statistics and its Applications, Prentice Hall, 2011.
- D.N. Gujarati and D.C. Porter, Essentials of Econometrics, McGraw Hill 4<sup>th</sup> edition, International Edition, 2009.
- Christopher Dougherty, Introduction to Econometrics, Oxford University Press, 3<sup>rd</sup> edition, Indian edition, 2007

**OR****DSE 3B. AGRICULTURAL PROBLEMS OF INDIA****Theory: 75 Lectures; Tutorial:15 Lectures****1. Rural Economy of India**

Structure of Indian economy; place of agriculture in rural economy; composition of the Indian rural economy; Farm sector and non-farm sector; diversification of agriculture; agriculture and allied activities ( Fisheries, horticulture, floriculture); in India; its growth, problems and state policies, cattle wealth of India and dairying; rural industrialization : food processing and agro based industries; development of rural infrastructure.

**2. Development of Agriculture**

Role and important of agriculture in economic development: linkages between the agriculture sector and the non agriculture sector, changing nature of linkages; agricultural recourses in India: land utilization cropping pattern; irrigation in India, command area development and flood control; trends in agriculture growth and agriculture productivity; pattern of agricultural development: regional variation Agrarian relations, Land reforms and Agricultural Labor in India Agrarian relations, historical evolution. Land reforms program during post independence in India; Agricultural labor, characteristics and problems.

**3. Technological Changes in Agriculture**

Technological in agriculture; traditional techniques and practices; HYV seeds – fertilizer, water technology (green revolution); sustainable agriculture; emerging trends in agricultural technology; dry land farming; use of bio-technology techniques.

**4. State and Agriculture**

Agriculture finance in India; importance; types of requirements; sources; non-institutional and institutional; existing rural credit delivery system (multiagency approach); agricultural marketing in India; markets and marketing functions, channels of distribution of various commodities, regulated market and warehousing; role of cooperatives in agriculture.

Agriculture planning in India: decentralized planning and indicative planning; incentives in agriculture; price and non-price incentives; input subsidies; agriculture Price policies (APP), Nature of demand and supply of agricultural products, need for state intervention; objectives of APP instruments and evaluation; food security in India and public distribution system.

**Basic Readings:**

- Dutt, R. KPM Sundharam: Indian Economy
  - Mishra, S.K.& V.K. Puri: Indian Economy
  - Govt. of India: Economic Survey
  - Mishra & Puri: Bhartiya Arthashastra
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