

# UNIVERSITY OF RAJASTHAN JAIPUR

# **SYLLABUS**

# M.A. ECONOMICS

# Semester Scheme

I & II Semester	2017-2018
III & IV Semester	2017-2018 & 2018-2019





Revised Syllabus of M.A. Economics (Semester Scheme) 2017-18 I/IV Semester and 2018-19 I/IV Semester

The Department of Economics offers four semesters full-time M.A. Degree Course having twenty four courses in all, out of which twelve courses are compulsory core courses and rest twelve elective core courses. Each paper of three hour duration with maximum 100 marks will fetch 6 credits.

**Note:** Each question paper shall consist of three parts. Part A shall contain 10 questions carrying two marks each. The candidate is required to answer each question in 20 words. Part B shall contain four questions carrying five marks each. The candidate is required to answer each question in 150 words. Part C shall contain three question (one from each module) with internal choice carrying 20 marks each.

## Courses for Semester - I

## **Compulsory Core Courses (CCC)**

Paper I (ECO 101) - Microeconomics Theory - I

Paper II (ECO 102) - Macroeconomic Theory - I

Paper III (ECO 103) - Mathematical Methods for Economics

## **Elective Core Courses (ECC)**

The candidate is required to select any three elective courses from the following:

Paper ECO A01 Environmental Economics - I

Paper ECO A02: Demography - I

Paper ECO A03: Agricultural Economics - I

Paper ECO A04: Industrial Economics - I

Paper ECO A05: Mathematical Economics - I

Paper ECO A06: Indian Banking System

Paper ECO A07: Mathematical Statistics - I

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## Courses for Semester - II

## Compulsory Core Courses (CCC)

Paper V (ECO 201) - Microeconomics Theory - II

Paper VI (ECO 202) - Macroeconomic Theory - II

Paper VII (ECO 203) - Statistical Methods

# Elective Care Courses (ECC)

The candidate is required to select any three elective courses from the following:

Paper ECO B01: Environmental Economics - II

Paper ECO B02: Demography - II

Paper ECO B03: Agricultural Economics - II

Paper ECO B04: Industrial Economies - II

Paper ECO B05: Mathematical Economics - II

Paper ECO B06: Indian Banking System.

Paper ECO B07: Mathematical Statistics - II

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## Courses for Semester - III

## Compulsory Core Courses (CCC)

Paper IX (ECO 301) - Public Economics - 1

Paper X (ECO 302) - International Trade Theory

Paper XI (ECO 303) - Economics of Development and Growth \* 1

## Elective Core Courses (ECC)

The candidate is required to select any three elective courses from the following:

Paper ECO C01: Economics of Infrastructure - I

Paper ECO C02: Econometrics - 1

Paper ECO C03: Indian Economics Development and Police of

Paper ECO COA: International behave

Paper ECO C05 Health Economics

Paper ECO C06: Computer Application In Economics-1

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## Courses for Semester - IV

## **Compulsory Core Courses (CCC)**

Paper XIII (ECO 401) - Public Economics - II

Paper XIV (ECO 402) - Trade Policy and International Monetary System

Paper XV (ECO 403) - Economics of Development and Growth - II

## **Elective Core Courses (ECC)**

The candidate is required to select any three elective courses from the following:

Paper ECO D01: Economics of Infrastructure - II

Paper ECO D02: Econometrics - II

Paper ECO D03: Indian Economic Development and Policy -- II

Paper ECO D04: Survey Method

Paper ECO D05: Indian Health Care System

Paper ECO D06: History of Economic Thought

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## <u>Semester – I</u>

# Campulsory Core Courses

## Paper I - Microeconomics Theory - I

## Module - 1

Consumer Choice: Utility function and Indifference Curve Analysis- Bads, Neutrals, Optimal Choice, Corner Solutions. Price, Income and Substitution Effects. Engel Curves. Slutsky Theorem and Derivation of Demand Curve. Consumer Surplus. Elasticity of Demand- Laffer Curve. Network Externalities- Bandwagon Effect, Snob Effect, Veblen Effect, Revealed Preference Theory. Choice under Risk and Uncertainty.

#### Module - 2

Production Function: short and long run. Law of returns and Returns to Scale, Ridge lines, Expansion Path. Forms of Production Function: Cobb-Douglas, Fixed Coefficient and CES. Elasticity of Technical Substitution, Capital and labor Deepening Technical Progress through Isoquants.

## Module - 3

Concept of Cost: Short and long Run Cost Curves. Dynamic Changes in Costs – Learning Curve. Modern Theory of Cost Curves. Pricing Under Different Market Structures: Perfect Competition, The Efficiency of a Competitive Market. Price Supports. Monopoly, Social Cost of Monopoly Power. Intertemporal Price Discrimination and Peak-load Pricing, Two-Part Tariff. Monopolistic Competition. Bilateral Monopoly.

#### Books Recommended:

- 1. A. Koutsoyiannis: Modern Microeconomics, Macmillan, London.
- 2. Robert S. Pindyck and Daniel L. Rubinfeld: Microeconomics, Pearson Education Inc., New Delhi.
- 3. D. Salvatore: Microeconomic Theory, OxfordUniversity Press, New Delhi.
- 4. Hal R. Varian: Microeconomic Analysis, W.W.Norton & Company Inc., New York.





## Paper II - Macroeconomic Theory - I

#### Module - 1

The Origin and Development of Macroeconomics - Classical, Keynes, New Classical and Modern Views; Macroeconomic Variables; National Income-Concepts, Components, Measurement, Inter-relationship between three Measures of National Income; Measurement of Economic Welfare. Circular Flow of Income in Two, Three and Four Sector Economy.

## Module - 2

Consumption Function- Determinants, Consumption Function Hypotheses: Absolute, Relative, Permanent Income hypotheses and Life Cycle Hypothesis; Investment Function-Neo-Classical Theory of Investment, Stock Market and Tobin's Q ratio and Neo-Keynesian Theory of Investment; Theories of Accelerator.

#### Module - 3

Classical, Keynesian, and Post Keynesian Theories of Demand for Money - Inventory Theory of Baumol and Portfolio Balance Theory of Tobin; Restatement of Quantity Theory of Money by Milton Friedmanand Patinkin's Theory for Money Demand; Supply of Money – Measurement, Components, Determinants, High-Powered Money & Money Multiplier and Theories of Money Supply.

#### Books Recommended:

- 1. Errol D'Souza, Macroeconomics, Pearson Education.
- 2. Richard, T. Froyen, Macro Economics: Theories and Policies, Pearson Education.
- 3. P.Edgemond, Macreconomics, PHI, New Delhi.
- 4. Gregory Mankiw, Macroeconomics, CBS Publishers, New Delhi.
- 5. Robert J Gorden, Macroeconomics, Harper Collins.

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# Paper III - Mathematical Methods for Economics

#### Module - 1

Concept of a Function; Limit, Continuity and Differentiability of a Real Valued Function; Concave and Convex Functions. Derivatives – Simple Differentiation; Maxima, Minima and Point of Inflexion and Applications of Simple Differentiation in Economics, Partial Differentiation and Unconstrained and Constrained Optimisation(Two Independent Variable Case), Simple Applications in Economics.

## Module - 2

Integration; Indefinite and Definite; Applications, First order Difference and Differential Equations and their Application in Economics.

#### Module - 3

Matrices and Determinants and their Applications in Economics, Vectors, Input-Output Model, Linear Programming (graphical and simplex methods), Game Theory.

#### Books recommended:

- 1. R. G. D. Allen: Mathematical Analysis for Economics, McMillan, London.
- 2. Edward T. Dowling: Muthernatics for Economics, Schaum's Outline series, McGraw-Hill Book Co., New Delhi.
- 3. LaxmiNarainNathuramka: Arthshastra Mein GanitKcPrayog (Hindi), Ramesli Book Deopt, Jaipur.
- 4. B. C. Mehta and G. M. K. Madnani: Mathematics for Economists, Sultan Chand & sons, New Delhi.
- 5. Alpha C. Chiang: Fundamental Methods of Mathematical Economics, McGraw-Hill, Tokyo.
- 6. BalwantKandoi: Mathematics for Business and Economics with Application, Volume 1 & II, Himalaya Publishing House.

Elective Core Courses

The candidate is required to select any three elective courses from the following:



# ECO A01: Environmental Economics -I

#### Module - 1

Classification of resources: Renewable and Non-renewable. Biotic and Abiotic, Exhaustible and Non-exhaustible Resources. Environmental Economics: Meaning, Scope, Positive versus Normative Perspective. Relation of Environmental Economics with Economics, Ecological Economics and Resource Economics.

Sustainable Development: Concept, Objectives, Indicators, Strong and Weak sustainability. Development and Environment: Environmental Kuznets Curve, Trade and Environment.

#### Module - 2

Air Pollution: Types of Pollutants and their Impact

Water Pollution: Concepts of BOD and COD, pH values, Fluoride; Fertilizer use.

Land Degradation: Problem of Solid Waste Disposal and Contamination; Problem of Salinity and Water logging. Afforestation and Deforestation, Significance of Social Forestry. Depletion of Ozone Layer: Green House Effect, Global Warming and Climate Change. Acid rain, Urban Pollution and Urban Health.

#### Module - 3

Economic Theory and Measurement of Environmental Benefits. Demand for Environmental Service – Willingness to Pay and Willingness to Accept.

Alternative Approaches and Methods of Environmental Valuation – Revealed Preference and Stated Preference Method – Hedonic Pricing, Household Production Function, Travel Cost Method, Defensive cost and Contingent Valuation Method. Green Accounting: Flaws in Conventional System of National Income Accounts, Requisite Modifications to National Income Account.

Disaster Risk Management and Development: Risk Identification, Risk Reduction and Transfer, Adverse Event Management and Recovery.

## Books Recommended:

- 1. Bhattacharya, R.N. (2001), Environmental Economics An Indian Perspective, Oxford University Press, Delhi
- 2. Hanley, N., J.F. Shogren, and B. White (2006), Environmental Economics: In Theory and Practice, Oxford University Press.

- 3. Kolstad, C, D. (2003) Environmental Economics, Oxford University Press
- 3. Sengupta, Ramprasad (2003), Ecology and Economics: An Approach to Sustainable Development, Oxford University Press.
- 4. Singh, K. and A. Shishodia (2007), Environmental Economics: Theory and Applications, Sage Publications, New Delhi.
- 5. RamprasadSengupta (2012), Ecological Limits and Economic Development, Oxford University Press.

## Comme ECO A02: Demography -I

## Module - 1

Introduction to Population Study and Demography; Its Nature and Scope; Relationship with other disciplines; Basic Demographic Concepts; Components of Population Change; Demographic Transition and Optimum Theory of Population; Historical Population Trend in Developed and Developing Regions.

Sources of Demographic Data (with details of items on which it collects data): Census of India, Vital Registration System, Sample Registration System, National Sample Survey Organization, National Family Health Survey and District Level Household Survey.

### Module-2

Determinants and Consequences of Age-Sex structure of Population; Demographic Dividend; Basic Fertility Terms, Concepts and Data, Concept of Morbidity; Measures of Morbidity: Incidence and Prevalence Rates; Meaning and Measure of Burden of Diseases; Epidemiological Transition; Concept of Migration and Mobility, Types of Migration, Census Definition of Migrants

#### Module - 3

Techniques of Analysis: Crude Birth and Death Rates, Age Specific Birth and Death Rates, Infant Mortality, Child Mortality, Maternal Mortality, Standardized Birth and Death Rates; Analysis of Total Fertility Rate, Gross Reproductive Rate, Net Reproductive Rate; Fertility Transition in India

## Books Recommended:

1. Bhende, Asha A. and Tara Kanitkar (2004) Principles of Population Studies, Mumbai: Himalaya Publishing House, Chapter?

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- 2. Jacob S. Siegel and David a. Swanson (2004): The Methods and Materials of Demography, Second Edition, Chapters 1, 2, 3, 7, 9, 10, Elsevier Science, USA.
- 3. John Weeks (2005): Population: An Introduction to Concepts and Issues, Wordsworth Learning. Singapore 9 th edition.
- 4. Pathak, K.B. and F.Ram (1998) Techniques of Demographic Analysis, Mumbai: Himalaya Publishing House, Chapter 4 and 8.
- 5. National Family Health Surveys
- 6. Srinivasan K. (1998) Basic Demographic Techniques and Applications. New Delhi: Sage Publications. Chapter 4.
- 7. United Nations, (1973): The Determinants and Consequences of Population Trends, Vol. I, Population Studies, No. 50, Chapter 7, New York.
- 8. United Nations, World Population Ageing, 1950-2050

# ECO A03:Agricultural Economics -I

#### Module - 1

Introduction: Nature and Scope of Economics of Agriculture; Specificities of Farm Organisation and Agricultural Production and Markets; Inter-sector Linkages of Agriculture [Backward and Forward Linkages and Feedback Effects] Role of Agriculture in Economic Development: Contribution of Agriculture to Economic Development; I listorical Perspective [Experience of England, United States, Australia, Latin America, Soviet Russia, Japan and India]; Declining Role of Agriculture and Dilemmas of Development.

#### Module - 2

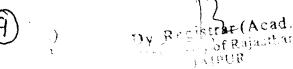
Agricultural Production: Uniqueness of Agricultural Production; Various Types of Factor-Product, Factor-Factor, and Product-ProductRelations; Cobb-Douglas and CES production Functions. Role of Farm Size and Structure in Equilibrium, Productivity, and Return to Scale. Sources and Barriers to Agricultural Development.

#### Module - 3

Agricultural Transformation: Schultz Theory of Transformation of Traditional Agriculture, Agricultural Transformation: Indian Experience.

Risk and Uncertainty in Agriculture: Nature and Types of Risks and Uncertainties in Agriculture, Public Policies and Farm Level Measures to Reduce Risk and Uncertainties.

Demand for and Supply of Farm Products: Characteristics of Demand for Farm Products; Quantity and Quality Components of Demand for Food, Forecasting of Demand for Food



Products, Characteristics of Supply of Farm Products, Supply Response of Farm Products; Role of Price and Non-PriceFactors in Inducing Aggregate Supply, Empirical Supply Response Functions and Evidence.

#### Books recommended:

- 1. Bruce L. Gardener and Gordon C. Rausser (Eds.): Handbook of Agricultural Economics Vol. I A Agricultural Production, Amersterdam, Elsevier Science B.V. 2002.
- 2. Bruce L. Gardener and Gordon C. Rausser (Eds): Handbook of Agricultural Economics Vol.1BMarketing, Distribution and Consumption, Amersterdam, Elsevier Science B.V., 2002.
- 3. Bruce L. Gardener and Gordon C. Rausser (Ed.): Handbook of Agricultural Economics Vol., 2AAgricultural and Its External Linkages, Amersterdam, Elsevier Science B.V., 2002.
- 4. Bruce L. Gardener and Gordon C. Rausser (Ed.): Handbook of Agricultural Economics Vol., 2BAgricultural and Policy, Amersterdam, Elsevier Science B.V., 2002.
- 5. Eicher Karl and Lawrence Witt (Eds.): Agriculture and Economic Development, New York, McGraw Hill Co., 1964.
- 6. GhatakSubrata and Ken Ingersent: Agriculture and Economic Development, Harvestor Press Ltd. London, 1984
- 7. Southworth Herman and Bruce Johnston (eds): Agricultural Development and Economic Growth, Cornell University Press, New York, 2011.
- 8. Tsakok, Isabelle (2011): Success in Agricultural Transformation: What It Means and What Makes It Happen, Cambridge University Press, New York, 2011.

## ECO A04: Industrial Economics -I

#### Module-1

Industrialization and Development. Interdependence of Industrial Sectors; Backward and Forward Linkages. Location of Industries, Theories and Measures of Industrial Localization (Sargent F. &A.Weber). Localization of Industries in India. Industrial Project Selection Criteria.

#### Module-2

Modern Corporation Enterprise. Size and Ownership Structure of Industrial Enterprise. Dominant Position of Corporate and its Characteristics. Issue of Separation of Ownership from Management and Control Models Alternative to Profit Maximization: Baumol, Williamson, Marris, Cyert and March

Monopoly Power and Oligopolistic Market Structure. Measures of Sellers Concentration. Determination of Sellers Concentration: Economies of Scale, Barriers to Entry, Mergers, Size and Growth of Markets.

#### Module-3

Market Conduct under Oligopoly: Rivalry and Collusive Conduct. Dominant Firm Behaviorand Potential Competition. Limit Price and Contestable Markets. Non-price Competition with reference to Advertising.

Market Performance: Allocative Efficiency. Market Structure and Profitability. Productive Efficiency and Sub-optimal Capacity. Allocative versus Productive Efficiency.

#### Books Recommended:

- 1. Barthwal R.R.: Industrial Economics. An Introductory Textbook, Wiley Eastern Limited, New Delhi.
- 2. Cohen K.L. & Cyert R.M.: Theory of the Firm, Prentice Hall.

#### ECO A05: Mathematical Economics - I

#### Module - 1

Theory of Consumer Behaviour-Nature of a Utility Function; Properties of an Indifference Curve; Maximization of Utility; Demand Functions: Ordinary and Compensated, Price and Income Elasticity. Elasticity Relations in Demand Analysis and Restrictions on Demand Functions; Slutsky Equation - n-Commodity Case, Elasticity Form and Important Results; Income and Leisure - Derivation of Labour Supply Function and its Properties; Linear Expenditure System- Properties and Derivation of Linear Demand Functions; Homogeneous and Homothetic Utility Functions; Indirect Utility Functions- Properties, Derivation, Roy's Identity and Derivation of Direct and Inverse Demand Functions; Consumer's Surplus.

#### Module - 2

Theory of Firm- Production Function, Properties of a Well Behaved and Homogeneous Production Function: Cobb Douglas and CES Production Functions, Product Curves, Output Elasticity of Factor Input, Isoquant, Elasticity of Substitution of a Homogeneous Production Function- linearly Homogeneous, Cobb-Douglas, CES Production Function and Special Cases of CES Production Function, Expansion Path; Optimization Behaviour of a Firm-Constrained Cost Minimization, Constrained Output Maximization and Profit Maximization.



#### Module - 3

Input Demand Functions- Properties and Derivation of Producer's Input Demand Functions (through profit maximization); Cost Functions- Properties and Derivation of Short run and Long Run Cost Functions (through profit maximization); Determination of Optimum Plant Size; Perfect Competition-Market Demand, Producer Demand, Supply Functions(Short Run and Long Run), External Economies and Diseconomies, Commodity Market Equilibrium Under Perfect Competition (Short Run and Long Run), Differential Cost Conditions and Rent, Effects of Taxes on Optimum Output Level, Supply Function and Price Level.

Note: Use of non-programmable calculator is permitted.

#### Books Recommended:

- 1. J.M. Henderson and R.L. Quandt: Micro Economic Theory: A Mathematical Approach, McGraw-Hill. London.
- 2. RGD Allen, Mathematical Economics, Macmillan.
- 3. B.C. Mehta: Mathematical Economics: Micro Economic Models, Sultan Chand & Sons, New Delhi.
- 4. Alpha C Chiang: Fundamental Methods of Mathematical Economics, McGraw-Hill, Kagakusha, Tokyo.

## ECO A06: Indian Banking System

#### Module- 1

Indian Banking System as on the eve of bank Nationalization, Structure and Development of commercial banks in India since 1969. Branch expansion programme and policy, deposit mobilization and sectoral allocation of Bank Credit. Concept of social and mass banking. Priority sector advances and advance to the neglected sections of the society.

Financial Sector Reforms- Context, need and objectives. Implementations of the Narsimham Committee recommendations, Issues in financial reforms.

## Module -2

Rural Banking- Overall structure and review of the contribution of major credit cooperatives, commercial banks and Regional Rural banks including NABARD.

Human Resource Development- Present and future HRD needs for bank employees in India.

Recruitment, training and appraisal of bank employees. Khandelwal Committee

Recommendations on Human resource in public sectors Banks.

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#### Module-3

The Reserve Bank of India- Functions and Role. Autonomy of the RBI. Liquidity Management. Monetary Policy- Goals, targets and indicators. RBI's monetary policy-objectives and Techniques. Impact of RBI'S monetary policy on economic growth and price stability.

## Books Recommended:

- 1. S.B. Gupta: Monetary Planning for India (Latest Ed.)
- 2. K.Rao: Management of Commercial Banks.
- 3. L.M. Bhole: Impacts of Monetary Policy.
- 4. HarendraBadhav (ed.) Challenges to Indian Banking Commpetition, Globalisation and Financial Markets McMillan
- 5. N.S. Yher: Non-Performing Advances in Banks, Skylark, New Delhi.
- 6. Report of the Committee (Narsimhan) on the Financial System Nov., 1991.
- 7. Raghuram Rajan Committee Report on Financial Sector reforms, Planning Commission.
- 8. I.B.A Bulletin: Annual Special Issues
- 9. RBI Report on trend and Progress of Banking in India (Latest edn.)
- 10. Hanson and Kathuria (ed.) A Financial Sector for the 21st Century Oxford. University Press.
- 11. Y.V. Reddy, Monetary and Financial Sector Reforms in India, UBSPD, New Delhi

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#### \*\*\* ECO A 07 : Mathematical Statistics-I

## Module 1

Basic Mathematical and Statistical Tools: The Summation Operator and Descriptive Statistics, Properties of Linear Functions, Proportions and Percentages, Some Special Functions and their Properties and Differential Calculus. Fundamentals of Probability: Basic Laws of Probability, Conditional Probability, Theorem of Total Probability, Bayes' Theorem and Independence of Events and Simple Applications of Probability.

#### Module-2

Random Variables and their Probability Distributions: Discrete and Continuous Random Variables, P.M.F., P.D.F. and C.D.F., Distribution of a Function of a Random Variable, Expectation of Random Variable and Its Properties, Moments and Cumulants- Moment Generating Function, Cumulants Generating Function and Characteristic Function, Chebyshev's Inequality. Features of Probability Distributions: A Measure of Central Tendency- The Expected Value and its Properties, Measures of Variability (Variance and Standard Deviation) –derivation and properties, Standardizing a Random Variable, Skewness and Kurtosis.

## Module-3

Joint distributions: Joint, marginal and conditional distributions, distribution of functions of random variables and Independence of random variables, Transformation in Univariate and Bivariate Distributions, Bivariate Probability Distributions. Features of Joint and Conditional Distributions: Measures of Association- Covariance, Product Moments, Correlation, the Population Correlation Coefficient and its Sample Estimate, Rank Correlation Coefficient, Partial Correlation Coefficient, Simple Linear Regression, Variance of Sums of Random Variables and their Properties, Conditional Expectation and Conditional Variance and their Properties. Uses and Properties of the Normal and Related Distributions-The Normal Distribution, the Standard Normal Distribution, the Chi-Square Distribution, the t Distribution and the F Distribution.

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## Books Recommended:

- 1. A.M. Goon, M.K. Gupta and B. Dasgupta, An outline of Statistical Theory (Vol. I), 4th Ed., World Press, Kolkata, 2003.
- 2. S.C. Gupta and V.K. Kapoor, Fundamentals of Mathematical Statistics, 11th Ed., Sultan Chand and Sons, latest edition.
- 3. R.V. Hogg, A.T. Craig, and J.W. Mckean, Introduction to Mathematical Statistics, 6th Ed. Pearson Education, 2005.
- 4. A.M. Mood, F.A. Graybill and D.C. Boes, Introduction to the Theory of Statistics, 3rd Ed., Tata McGraw Hill Publication, 2007.
- 5. V.K. Rohtagi and A.K. Md. E. Saleh, An Introduction to Probablity and Statistics, 2nd Edition, John Wiley and Sons, 2009.
- 6. S.A. Ross, Introduction to Probability Models, 9th Ed., Academic Press, 2007.
- 7. E.J. Dudewicz and S.N. Mishra, Modern Mathematical Statistics, John Wiley and Sons, 1988.
- 8. D.C. Montgomery, Designs and Analysis of Experiments, John Wiley and Sons, New York, 2001. 7. D.C. Montgomery, E.A. Peak and G.G. Vinning, Introduction to Linear Regression Analysis, 3rd Ed., John Wiley and Sons, 2006.
- 9. Koutsoyiannis A., Theory of Econometrics, Second Edition, Palgrave, 2007
- 10. Gujarati D.N., Basic Econometrics, Third Edition, McGraw -Hill International Editions, 1995.
- 11. Wooldridge, Introductory Econometrics: A Modern Approach, Third Edition, South-Western, Cengage Learning, 2006.

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## Semester- 2

## Compulsory Core Courses

## Paper V - Microeconomics Theory - II

#### Module -1

Oligopoly Market: Non-Collusive Models of Cournot, Bertrand, Edgeworth, Chamberlin and Stackelberg. Cartels and Price Leadership. Baumol's Model, Marris's and Williamson's Managerial Theory. Full Cost Pricing, Bain's limit Pricing Theory and Recent Developments Including Sylos-Labini's Model. Behavioural Model of the Firm. Game Theory.

#### Module- 2

Theory of Distribution: Neo-Classical Approach, Marginal Productivity Theory, Euler's Theorem. Technical Progress and Factor Shares.

Factor Pricing Under Perfect and Imperfect Competition: Determination of Wages, Rent, Interest and Profit. Macro Theories of Distribution – Ricardo, Marx, Kalecki and Kaldor's Models.

#### Module-3

Welfare Economics: Pigouvian Welfare Economics, Pareto Optimality. Kaldor – Hicks Compensation Principle. Social Welfare Function and Theory of Social Choice – Rawl, Bergson – Samuelson and Arrow's Theorem. Externalities, Public Goods and Market Failure. Asymmetric Information – Market Signaling, Moral Hazard, The Principal-Agent Problem. Books Recommended:

- 1. A. Kontsoyiannis: Modern Microeconomics, Macmillan, London.
- 2. Rohert S. Pindyck and Daniel L. Rubinfeld: Microcconomics, Pearson Education Inc., New Delhi.
- 3. D. Salvatore: Microeconomic Theory, OxfordUniversity Press, New Delhi.
- 4. Hal R. Varian: Microeconomic Analysis, W.W.Norton& Company Inc., New York.

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# Paper VI - Macroeconomic Theory - II

#### Module-1

Determination of Output and Employment-The Classical and Keynesian models; Multiplier-Concept, Working, Static and Dynamic Multiplier; IS-LM Model- The Interaction of Real and Monetary Sectors of the Economy, Keynesian Version of the IS-LM Model, Neo-Classical Version of the IS-LM Model, Fiscal Policy and Crowding out Effect andRole and Relative Effectiveness of Fiscal and Monetary Policies; Aggregate Supply and Aggregate Demand Model- Neo-Classical Three Sector Model and Keynesian Three Sector Model.

#### Module-2

Open Economy Macroeconomics- Trade Balance, Exchange Rates and International Monetary System; Mundell-FlemingModel:Analysis of Fiscal, Monetary and Trade Policies under Imperfect Capital Mobility and Perfect Capital Mobility with Fixed and Flexible Exchange Rate Systems; Classical, Keynesian and Monetarist Approaches to Inflation and Policies to Control Inflation; Phillips Curve Analysis; Expectation Augmented Phillips Curve Analysis:Natural Rate of Unemployment Hypothesis. Role of RBI in Inflation Control, Credit Control and Economic Stability.

#### Module-3

New Classical Macroeconomics- The New Classical Critique of Keynesian Micro Foundations. The Real Business Cycle Theory. Rational Expectations- Solution of a Simple Macroeconomic Model with Rational Expectations and Economic Interpretation.

## Books recommended:

- 1. Eric Pentacost, Macro Economics: An Open Economy Approach, Macmillan, Indian Edition, New Delhi.
- 2. Errol D'souza, Macroeconomics, Pearson Education.
- 3. Richard, T. Froyen, Macro Economics: Theories and Policies, Pearson Education.
- 4. P.Edgemond, Macreconomics, PHI, New Delhi.
- 5. Gregory Mankiw, Macroeconomics. CBS Publishers. New Delhi.
- 6. Robert J.Gorden, Macroeconomics, Harper Collins.



# Paper VII - Statistical Methods

#### Module-1

Measures of Central Tendency, Dispersion, Skewness, and Kurtosis, Measurement of Inequality-Lorenz Curve and Gini Coefficient.

Correlation, Simple Regression and Interpretation of Multiple linear Regression Equation.

#### Module-2

Analysis of Time Series and Curve Fitting, Index Numbers.

Probability, Mathematical Expectation, Probability Distributions (Binomial, Poisson, and Normal)

#### Module-3

Sample and Survey Methods, Testing of Hypothesis, Application of Z, t,  $F & X^2$  tests, Association of Attributes, Analysis of Variance.

#### Book recommended:

- 1. S. P. Gupta: Statistical Methods, Sultan Chand & Sons, New Delhi.
- KailashNath Nagar: SankhyikiKeMoolTatva (Hindi) MeenakshiPrakashan, Meerut.
- 3. A. L. Nagar & R. K. Das: Basic Statistics, OxfordUniversity Press, New Delhi.
- 4. D. R. Agarwal: Quantitative Methods, Vrinda Publication.

## Elective Core Courses

The candidate is required to select any three elective courses from the following:

## Course ECO B01: Environmental Economics-II

#### Module-1

Social Choice of Optimum Environmental Protection: Individual preferences regarding Environment Protection-Biocentrism. Sustainability, Anthropocentrism; Social Choice from Individual Values.

Welfare Economics: Efficiency and Competitive Markets. Problems of Market Failure: Public bads and Externalities-Optimal Provision of Public goods and bads, Pricing Public goods and bads.

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## Module-2

Theory of Environment Regulation: Rationale for regulation, Price Rationing, Pigovian taxes-single and multiple polluters, Subsidies for Abatement of Pollution in short and long run, Property Rights: Coase Theorem, Problems of Public bads and Bargaining, Policy significance of Coase Theorem, Common Property Resources and Tragedy of Commons. Command and Control, Economic Incentives; Tradable Pollution Permits.

#### Module-3

Regulation with unknown Control Cost: Unknown Polluter Characteristics (adverse selection problem), Unobserved Control Cost-emission fees or quantity regulation, Hybrid Price-Quantity regulation, Obtaining Private Control Cost Information, Enforcement, Dynamics and Commitment, and Moral hazard. Environmental Risk and uncertainty: Regulating Risk with Liability, Liability versus Direct Regulation and Environmental Risk and Insurance.

#### Books Recommended:

- 1. Hanely, Nick, Jason F.Shorgen, and Ben White (1999), Environmental Economics: In Theory and Practice, MacMillian.
- Kadekodi, Gopal K. (2004), Environmental Economics in Practice, Oxford University Press.
- 3. Kolstad, C, D. (2003), Intermediate Environmental Economics, Oxford University Press.

## ECO B02: Demography-II

#### Module-1

Life table: Basic concepts of Life Table; Types and Forms of Life Table; Construction of Life Tables based on Age-Specific Death Rates, Conventional Approach of Life Table Construction; Concept and Need for Model Life Tables; Mosley and Chen's Framework for Child Survival; Bongaarts Proximate Determinants of Fertility

## Module-2

Concept and uses of Population Projection, Methods of Interpolation, Extrapolation using Gompertz Curves; Concepts and Measures of Population Ageing; Implications of Population Ageing on Labor Force, Retirement and Work Participation among Elderly, Implication for Government Expenditure for Pension

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## ECO B03: Agricultural Economics -II

#### Module-1

Agricultural Finance: Financial Characteristics of Agriculture, Imperfect Information [Agency Relationship, Adverse Selection, andMoral Hazard] and Enforcement Problems in Credit Markets; Segmented Rural Credit Markets, ResolvingInformation and Incentive Problems; Managing Borrowers' Credit Risks; Agribusiness and Trade Financing; and Rationale for Government Intervention in Rural Credit Markets. Structure and Functioning of Rural Credit Market in India.

## Module-2

Agricultural Markets: Nature, Types and Problems of Agricultural Commodity Markets; Marketing Margins and Marketing Margin, Determinants; and Evaluation of Marketing Efficiency. Horizontal Structure of Agricultural Marketing, Vertical Market Relationships, Institutional and Organizations in Agricultural Markets (Farmers Cooperatives, Marketing Orders, Marketing Boards and Trading Enterprises). Instability in Agricultural Markets, Price Stabilization and Social Benefits, Storage and Market Stabilization, Role of Commodity Futures and Options in Stabilization.

#### Module-3

Food Security and International Trade: Concept, Threat, Indicators and Mechanism to Food Security; Food Assistance Programs [both Domesticand International]. Main Features of International Trade in Agricultural Commodities, Domestic Agricultural and Trade Policies of Developed Countries and Their Impact on World Trade. Agriculture in GATT Negotiations and WTO.Recent Developments in Indian Agriculture: Indian Agricultural Development Strategy Since Independence. Opportunities and Challenges [Expectations, Performance, and Emerging Constraints and Potentials] for Indian Agriculture in the Post Reform Period. National Agricultural Policy (Latest) and the Agricultural Development Strategy in the Latest Five Year Plan.

#### Books Recommended:

1. Besley, Timothy: "How Do Market Failures Justify Interventions in Rural Credit Markets?" The World Bank Research Observer, Vol. 9, No.1 2. Bruce L. Gardener and Gordon C. Rausser (Eds.): Handbook of Agricultural Economics Vol.1 A: AgriculturalProduction, Amersterdam, Elsevier Science B.V., 2002.



#### Module-3

Gender Issues: Understanding Gender, Gender Inequalities, Gender Differentials in Nutrition and Health, Employment and Property Inheritance and Female Headship; Modern Theories of Population and Development: Pessimistic, Optimistic and Neutralist View; National Population Policy, 2000; National Rural Health Mission

#### Books Recommended:

- 1. Caldwell, J, Sally Findley, Pat Caldwell and Gigi Santow (1990): What we know about health transition: The cultural, social and behavioural determinants of health. The proceedings of an international workshop, Vol.1&2, ANU, Canberra, Health Transition Centre.
- 2. F. Ram and K.B. Pathak (1998): Techniques of Demographic Analysis, Himalaya Publishing house, Bombay(Chapters 2 & 3).
- 3. Preston, S. H., Patrick Heuveline and Michel Guillot (2001): Demography: Measuring and Modeling Population Process, Blackwell Publishers, Oxford, UK (Chapters 2, 3 & 4).
- Shryock, Henry S. Jacob Siegel and Associates (1980): The Methods and Materials of Demography, Vol. 2, fourth printing (revised), US Department of Commerce. Washington DC, pp. 389-393, Chapter 14
- 5. Jacob S. Siegel and David a. Swanson (2004): The Methods and Materials of Demography, Second Edition, Chapters 1, 2, 3, 7, 9, 10, Elsevier Science, USA.
- 6. John Weeks (2005): Population: An Introduction to Concepts and Issues, Wordsworth Learning. Singapore 9 edition.
- Basu, Alaka M., (1992): Culture, the Status of Women and Demographic Behaviour, Oxford University, New York.
- 8. Dyson, Tim and Mick Moore, (1983). "On Kinship structure, female autonomy, and demographic behaviour in India", Population and Development Review vol. 9(1), pp. 35-60.
- 9. Birdsall, Nancy, Kelley, Allen C. and Sinding, Steven W. (2001). Population Matters: Demographic Change, Economic Growth and Poverty in the Developing World, Oxford: Oxford University Press Chapters 2, 4 and 5.
- 10. Peabody, J.W.; Rahman, H. Omar; Gertlor, Paull, J.; Haan, Joyce, (1999): Policy and Health Implication for Development in Asia. Cambridge University Press.

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- 3. Bruce L. Gardener and Gordon C. Rausser (Eds.): Handbook of Agricultural Economics Vol.1 B: Marketing, Distribution and Consumption, Amersterdam, Elsevier Science B.V., 2002.
- 4. Bruce L. Gardener and Gordon C. Rausser (Eds.): Handbook of Agricultural Economics Vol.2 A: Agriculturaland Its External Linkages, Amersterdam, Elsevier Science B.V., 2002.
- 5. Bruce L. Gardener and Gordon C. Rausser (Eds.): Handbook of Agricultural Economics Vol. 2 B: Agricultural and Policy, Amersterdam, Elsevier Science B.V., 2002
- GhatakSubrata and Ken Ingersent: Agriculture and Economic Development, Harvestor Press Ltd., London, 1984
- 7. Government of India: Five Year Plan, (Latest), Planning Commission, Government of India, New Delhi.
- 8. Government of India: National Agricultural Policy, Ministry of Agriculture, Government of India, New Delhi. (Latest).
- 9 Hoff Karla and Joseph E.Stiglitz: "Introduction: Imperfect Information and Rural Credit Markets Puzzles and Policy Perspective" The World Bank Economic Review, Vol.4, No.3 (1990)
- 10. World Bank: Rejuvenating Indian Agriculture, Washington, World Bank

## ECO B04: Industrial Economics 11

## Module-1

Policy goal of Industrialization in India. Nature of Industrial data for Organized Industry. Major Classification of the Organized Industry: Employment Size and Ownership Structure.

#### Module-2

Pattern of Industrial Growth and Changes in Industrial Structure in India since 1951. Factors affecting Industrial Location. Regional Imbalances in Industrial Development in India and Government Policy for Balanced Regional Development of Industry.

Market Structure and R&D. Allocative Efficiency and Capacity Utilization in Indian Industry. Productivity Growth, FDI and Acquisition of Technology in India.

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#### Module-3

MRTP and Nature of Concentration of Indian Industry. Liberalisation and Privatisation in Indian Industry. Mergers and Takeovers. Competition Policy and Consumer Protection in India. Industrial Development in Rajasthan.

#### Books Recommended:

- 1. Barthwal R.R.: Industrial Economics. An Introductory Textbook, Wiley Eastern Limited, New Delhi.
- 2. Cohen K.L. & Cyert R.M.: Theory of the Firm, Prentice Hall.
- 3. Scherer, F.M. & Ross David: Industrial Market Structure and Economic Performance, Boston Houghton, Mifflin, Company.
- 4. Hay., D.A. and Morris D.J.: Industrial Economics: Theory and Evidence, Oxford University Press.
- 5. Shepherd W.J.: The Economics of Industrial Organisation (3<sup>rd</sup> ed.), Princeton Hall, Englewood Cliffs, New Jersey.
- 6. Martin Stephen: Advanced Industrial Economics, Blackwell Publishers Limited, UK.
- 7. Bain J.S.: Industrial Organisation (2<sup>nd</sup> ed.), University of California.
- 8. Caves, R.: American Industry: Structure, Conduct Performance, Princeton Hall.
- 9. Wildsmith, S.: Managerial Theories of the Firm
- 10. Devine P.J. & Others: Introduction to Industrial Economics, George Allen and Unwin.
- 11. Nayyar, Deepak (ed.): Industrial Growth and Stagnation, Oxford University Press.

#### **B05**: Mathematical Economics-II

## Module - I

The Existence and Uniqueness of Equilibrium- The Stability of Equilibrium, Static Stability-Marshallian and Walrasian Stability Conditions and Dynamic Stability- Lagged Adjustment-the Cobweb Model. Monopoly- Maximization of Profit and Sales Revenue, Price Discrimination: Market Discrimination and Perfect Discrimination, Multi-Plant Monopolist, Effect of Various Faxes on Output and Price of a Monopoly Firm, Bilateral Monopoly; Monopolistic Competition Equilibrium: Short Run and Long run; Duopoly and Oligopoly Market Models: The Quasi-Competitive Solution, the Collusion Solution, the Cournot Solution. Stakelberg Solution, the Market Share Solution and the Kinked-Demand Curve Solution Models

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#### Module - 2

Macroeconomic Models- Keynesian Theory of Income Determination and Derivation of Different Multipliers, Employment and Output Determination with Fixed and Flexible Prices: IS-LM and AD-AS Models, Fleming-Mundell Open Economy Model, Trade Cycles: Multiplier-Accelerator Interaction Models of Samuelson and Hicks; Growth Models: Harrod – Domar Model, Neoclassical Models of Solow & Meade and Kaldor's Model.

## Module - 3

Linear Programming- Simplex Method; Problem of Degeneracy and Mixed Constraints, Duality Theorems, Complementary Slackness Conditions, Application of Linear Programming in Economics; Input-Output Analysis-Concepts of Static, Dynamic, Closed and Open Input - Output Models, Hawkins-Simon Conditions of Viability, Determination of Gross Output, Price and Value Added in Open Input -Output Model, Determination of Goss Output in Closed Input-Output Model; Theory of Games- Two-Person, Constant Sum Games, Zero-Sum Game, Maximin and Minimax, Dominant Strategies, Pure and Mixed Strategies, Saddle Point Solution, Linear-Programming Formulation of a Matrix Game and Conversion of Game Theory into Linear Programming.

Note: Use of non-programmable calculator is permitted.

## Books Recommended:

- 1. J.M. Henderson and R.L. Quandt: Micro Economic Theory: A Mathematical Approach, McGraw-Hill. London.
- 2. R.G.D. Allen, Mathematical Economics, MacMillan.
- 3. Alpha C Chiang: Fundamental Methods of Mathematical Economics, McGraw-Hill, Kagakusha, Tokyo.
- 4. R.G.D. Allen, Macroeconomic Theory: A Mathematical Treatment, McGraw-Hill, London.
- 5. Michael K. Evans: Macroeconomic Activity: Theory, forecasting and Control.
- 6. David Romer: Advanced Macroeconomics, McGraw-Hill, Singapore.

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## ECO B06: Indian Financial System

#### Module- I

Financial System- Meaning, Structure and functions of financial system. Financial system and economic development. Financial intermediaries and financial markets.

Money Market- Designation, nature and role of money market in the economy. Indian money market- call money market, treasury bills market, commercial bill market, markets for commercial paper and certificate of deposits. The discount market. Discount and finance house of India and securities trading corporation of India.

#### Module - 2

Government Security Market- Nature and Organization of Government security market, volume and composition of Issues. Secondary market transactions, prices and yield. Implications of monetary policy, Recent development in Government security market.

#### Module- 3

Industrial Security Market- Organization and structure. Listing, trading and settlement. Primary and secondary market. Drawbacks of Indian stock market. Recent development in Industrial security market.

Markets for futures, options and other financial derivatives.

#### Books recommended:

- 1. S.B. Gupta: Monetary Planning for India (Latest Ed.)
- 2. K.Rao: Management of Commercial Banks.
- 3. L.M. Bhole: Impacts of Monetary Policy.
- 4. HarendraBadhav (ed.) Challenges to Indian Banking Commpetition, Globalisation and Financial Markets McMillan
- 5. N.S. Yher: Non-Performing Advances in Banks, Skylark, New Delhi.
- 6. Report of the Committee (Narsimhan) on the Financial System Nov., 1991.
- 7. Raghuram Rajan Committee Report on Financial Sector reforms, Planning Commission.
- 8. I.B.A Bulletin: Annual Special Issues
- 9. RBI Report on trend and Progress of Banking in India (Latest edn.)
- 10. Hanson and Kathuria (ed.) A Financial Sector for the 21<sup>st</sup> Century Oxford. University Press
- II. Y.V. Reddy, Monetary and Financial Sector Reforms in India, UBSPD, New Delhi.



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#### ECO B07: Mathematical Statistics - II

#### Module-1

Sample Surveys and Elements of Sampling Theory: Concepts of Populations, Parameters, Sample Statistics and Sample, Complete Enumeration vs. Sampling, Principal and Organizational Aspects in the Conduct of a Sample Survey, Properties of a Good Estimator, Sampling and Non-sampling Errors, SRSWR & SRSWOR, Determination of Sample Size, Stratified Random Sampling and Different Allocations, Systematic Sampling, Comparison of Known Sampling Strategies under Linear Trend, Ratio and Regression Estimators and their Comparison with SRSWOR Estimator.

Sampling Distributions: Sampling Distribution of a Statistic, Standard Errors of Sample Mean, Sample Proportion and Sample Moments, Sampling Distribution for Normal Distribution, Chisquare, t and F statistics and Sample Correlation Coefficient r when  $\rho=0$ .

Limit Theorems: Weak law of large numbers, Central limit theorem (I.i.d. with finite variance case only) and De Moivere's Laplace Theorem.

## Module -2

Analysis Of Variance and Covariance: Analysis of Variance and Covariance (With One Concomitant Variable) in One-Way and Two-Way Classified Data with Equal Number of Observations Per Cell.

Testing of Statistical Hypothesis and Tests of significance: Simple and Composite hypotheses, Null and Alternative Hypotheses, Critical Region and Power of Test, Applications of Neyman-Pearson Lemma for Testing Simple and Composite Hypotheses, Kinds of Errors, Level of Significance and Probabilities of Type I and Type II Errors, Likelihood Ratio Tests for Parameters of Univariate Normal Distribution, Large Sample Test, Use of CLT for Testing Single Proportion and Difference of two Proportions, Single Mean and difference of Two Means, Standard Deviation and difference of Standard Deviations, Tests of Significance based of Chi-Square, t and F Distributions, Computing and Using p-Values for Significance, Test Consistency.

Non-Parametric Tests: One Sample and two Sample Sign Test, Wald-Wolfowitz Run Test, Run Test for Randomness, Median Test and Wilcoxon-Mann-Whitney Test (derivation not required, give stress on examples).

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#### Module-3

Estimation: Parameter Space, Sample Space, Finite Sample Properties of Estimators and Estimates- Unbiasedness, the Sampling Variance of Estimators and Efficiency, Asymptotic or Large Sample Properties of Estimators-Consistency, Asymptotic Normality and Central Limit Theorem, General Approaches to Parameter Estimation-Method of Moments, Maximum Likelihood and Least Squares, Interval Estimation and Confidence Intervals-The Nature of Interval Estimation, Confidence Intervals for the Parameters of Normal Distribution, Confidence Intervals for Difference of Mean and for Ratio of Variances.

Applied Linear Regression analysis with focus on applications; model formulation, checking, selection; interpretation and presentation of results. Hands-on data analysis with computer software.

#### **Books Recommended:**

- 1. A.M. Goon, M.K. Gupta and B. Dasgupta, An outline of Statistical Theory (Vol. I), 4th Ed., World Press, Kolkata, 2003.
- 2. S.C. Gupta and V.K. Kapoor, Fundamentals of Mathematical Statistics, 11th Ed., Sultan Chand and Sons, latest edition.
- 3. R.V. Hogg, A.T. Craig, and J.W. Mckean, Introduction to Mathematical Statistics, 6th Ed. Pearson Education, 2005.
- 4. A.M. Mood, F.A. Graybill and D.C. Boes, Introduction to the Theory of Statistics, 3rd Ed., Tata McGraw Hill Publication, 2007.
- 5. P. Mukhopadhyay, Mathematical Statistics, 2nd Ed., Books and Allied (P) Ltd., 2000.
- 6. G. Casella and R.L. Berger, Statistical Inference, 2nd Ed., Thomson Duxbury, 2002.
- 7. J.D. Gibbons and S. Chakraborty, Non Parametric Statistical Inference, 4th Ed., Marcel Dekkar, CRC, 2003.
- 8. M.G. Kendall and A. Stuart, The Advanced Theory of Statistics (Vol. III), Macmillan Publishing Co., Inc., 1977.
- 9. W.G. Cochran, Sampling Techniques, John Wiley and Sons, New York, 1997.



- 10. D. Singh and F.S. Chaudhary, Theory and Analysis of Sample Survey Designs, New Age International (P) Ltd., 1995.
- 11. P.V. Sukhatme, B.V. Sukhatme, S. Sukhatme and C. Ashok, Sampling Theory of Surveys with Applications, Lowa State University Press, Lowa, USA, 1984.
- 12. Wooldridge, Introductory Econometrics: A Modern Approach, Third Edition, South-Western, Cengage Learning, 2006.
- 13. Koutsoyiannis A., Theory of Econometrics, Second Edition, Palgrave, 2007
- 14. Gujarati D.N., Basic Econometrics, Third Edition, McGraw -Hill International Editions, 1995.

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## Semester - III

## Compulsory Core Courses

## Paper IX - Public Economics - I

## Module 1

Nature and Scope of Public Finance, Public Finance and Private Finance, Economic Analysis of Public Policy, Role of Government in the Economic Activity – Allocation, Distribution and Stabilization Functions, Private, Public and Merit Goods. Theory of Externalities – External Benefits and Cost – Correction of Externalities, Principle of Maximum Social Advantage,

Public Budgets - Kinds of Budgets, Optimal Budgeting, Balanced and Unbalanced Budgets - Deficit Financing, Performance and Programming Budgeting, Zero base budgeting.

## Module 2

Public Expenditure - Hypothesis and evaluation, Effects of Public Expenditure on Production and Distribution, Bowen, Lindhal and Samuelson's Models, Wagner's Law of Increasing State Activities, Weisman-Peacock Hypothesis.

Public Revenue - Canons of Taxation, Different Approaches to the Division of Tax Burden, Incidence and Effects of Taxation, Taxable Capacity, Justice in Taxation, Benefit & Ability to Pay Approaches. Theory of Optimal Taxation - Equal Absolute,

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Equal-Proportional, Equal-Marginal and least Aggregate Sacrifice principles, Buoyancy and Elasticity of a Tax.

#### Module 3

Direct and Indirect taxes – Effects of Direct Tax on Production (viz. Labour Supply and Saving Rate) and Distribution, Effects of Indirect Tax on Production, Progressiveness of a Tax System and its Measurement, Shifting and Incidence of Taxes under Monopoly and Perfect Competition.

## Books recommended:

- R. A. Musgrave and P.B. Musgrave: Public Finance in Theory and practice, New York: McGraw-Hill.
- 2. R. A. Musgrave: Theory of Public Finance, McGraw-Hill.
- 3. S. Ganguli: Public Finance, The World Press Private Limited.
- 4. John Callis and Phillip Jones, Public Finance and Public Choice, Oxford University Press.
- 5. Harvey Rosen, Public Finance, McGraw Hill Publications.
- 6. David N. Hyman, Public Finance A Contemporary Applications of Theory to Policy, Thomson South Western.
- 7. R. K. Lekhi, Public Finance, Kalyani Publishers.

# Paper X - International Trade Theory

#### Module 1

Early Trade Theories: Mercantilism, Classical Theory of Trade, Absolute Advantage and Comparative Advantage – Views of Adam Smith, Ricardo, Mill, Haberler, Empirical Testing of Classical Theory.

Standard Theory of Trade - Production Possibility Frontier, Community Indifference Curves, Offer Curves, Trade Indifference Curves, Terms of Trade and Gains form Trade.

## Module 2

Factor Endowments and Heckscher - Ohlin Model-factor Price Equalization Theorem, Stolper - Samuelson theorem, Metzler Paradox and Rybczynski Theorem, Empirical

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Verification of H-O Theory, Leontief Paradox, Meade's General Equilibrium in trade,

International Trade under Imperfection Competition in Goods Markets: Intra Industry

Trade.

#### Module 3

Economic Growth and International Trade – Growth of Factors of Production, Technical Progress, Immiserizing Growth, International Factor Movements – Labour and Capital Movements and their Effects, Brain Drain, Multinational Corporations and their Role.

Free Trade versus Protection, Instruments of Protection and their Effects; Tariffs (Partial and General Equilibrium), Quota, and other Non-Tariff Barriers.

#### Books Recommended:

- 1. J. Bhagwati: International Trade, Cambridge University Press, London.
- 2. R. J. Carbough: International Economics, Cengage Learning; 13 edition.
- 3. D. Salvatore: International Economics, PHI, New York.
- 4. Rana and Verma: International Economics, Vishal Publishing House Ludhiana (Hindi and English).

Paper XI - Economics of Development and Growth - I

#### Module 1

Understanding Development: Dividing the World and levels of Development (Development as an Evolving Concept i.e. Development, Growth and Change; Goulet's Core Values of Development; Sen's Conception of Development; Income / Output Based Measures and their Inadequacies; PQLI and HDI as Indicators of Development). Ingredients of Development – Land, labour, Physical and Human Capital, Technological Change, Scale and Organization, Sustainable Development (conceptualization, concern, indicators and remedial measures), Concept, Measures and Problems of Growth, Poverty and Inequalities in LDCs and their Impact on Development.

## Module 2

Theories of Economic Development: Agriculture - Industry Interface - Interdependence between Agriculture and Industry; Industrialization and Urbanization (The Models of

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Lewis, Fei and Ranis and Todaro); The Balanced Growth Doctrine (Review of Rosenstein, Nurkse and Lewis); Strategy of Unabylanced Growth (Hirschman's version), and the Reconciliation of the two.

## Module 3

Project Evaluation Criteria: Internal Rate of Return, Net Present Vaule and Cost-Benefit Analysis Social Discount Rate, Shadow Prices of Capital, Unskilled labour and Foreign Exchange, Choice of Techniques, Capital-Output Ratio, Applications of Input-Output Analysis in Planning, Finance of Economic Development - Domestic and External Resources, Two-Gap Model, International Trade and Development, Types and Approaches of Planning, Plan Models of India, Past Performance and Current Issues of Indian Planning.

## Books Recommended:

- Meier, Gerald M. and James E. Raunch: Leading Issues in Economic Development, Eighth Edition, Oxford University Press, New York.
- 2. Ray, Debraj: Development Economics, Seventh Impression, Oxford University Press, New Delhi.
- 3. Thirlwall, A. P. Growth and Development, Eighth Edition, Palgrave Macmillan, New York.
- Todaro, Micheal P. and Stephen Smith C: Economic Development, Eighth Edition, Second Impression, Pearson Education, (Singapore) Pvt. Ltd. Indian Branch, Delhi.
- Yotopoulos, Pan A. and Nugent Jeffery B: Economics of Development: Empirical Investigations, Harper and Row Publishers, New York.

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## **Elective Core Courses**

Tr's candidate is required to select any three elective courses from the following:

## ECO C01: Economics of Infrastructure -I

## Module1:

Infrastructure and economic development – Infrastructure as a public good; Social and physical infrastructure; Special characteristics of public utilities, The peak load, Off load problem; Dual principle controversy; Economies of scale of joint supply; Marginal cost pricing vs. other methods of pricing in public utilities; Cross subsidization – free prices, equity and efficiency.

#### Module 2:

The structure of transport costs and location of economic activities; Demand for transport – Models of freight and passenger demand; Model choice; Cost functions in the transport sector; Principle of pricing; Special problems of individuals modes of transport; Inter-model condition in the Indian situation.

#### Module 3:

Infrastructure development and reforms in India – power, transport, and communication rate making in telephone utilities; Principles of decreasing costs in telephone industry – Characteristics of postal services; Criteria for fixation of postal rates; Measurement of standards of service in telephone and postal utilities.

## Books Recommended:

- National Council of Applied Economic Research, 1996, India Infrastructure Report: Policy Implications for Growth and Welfare, New Delhi.
- 2. Parikh, K.S. (1999), India Development Report 1999-2000, Oxford, New Delhi.
- 3. Economics of Infrastructure (1976), Vol.VI, ICSSR, ICSSR.
- 4. Crew, M.A. and P.R. Kleindorfer (1979), Public Utility Economics, MacMillan, New York.
- 5. CUTS: Competition and Regulation in India, 2007 and 2000

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## ECO COZ: Econometrics- I

#### Module 1

Basic Econometrics: Nature, meaning and scope of econometrics; Simple and General linear Regression Model – Assumptions, Estimation (OLS approach) and Properties of Estimators; Derivation of Least Square Parameters; Goodness of Fit and Econometric Inference. Functional Forms of Regression Models: Log-log, Semi-log, Reciprocal Transformation

#### Module 2

Violation of Assumptions: Heteroscedasticity; Multicollinearity and Auto-correlation; Specification Problems. Regressions with Qualitative Independent Variables: Dummy Variable Technique; Regression with Binary Dependent Variables: Logit, Probit and Tobit models.

#### Module 3

Dynamic Econometric Model: Auto-regressive and Distributed Lag Models - Koyck Model, Partial Adjustment Model, Adaptive Expectations;, Almon Approach to Distributed Lag models. Method of Instrument Variables

Note- Use of non-programmable calculator is permitted,

## -Books-Recommended:-

- 1. J. Kmenta: Elements of Econometrics, University of Michigan Press.
- 2. Damodar Gujrati: Basic Econometrics, McGraw-Hill Higher Education.
- 3. J. Johnston: Econometrics Methods, McGraw-Hill College.
- 4. G. S. Maddala: Econometrics, John Wiley & Sons.
- 5. R. S. Pindyck and D. Z. Rubinfield: Econometrics Methods and Econometrics Forecasts, McGraw-Hill Publishing Co.
- 6. Rao and Millar: Applied Econometrics, Wadsworth Publishing Company.

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# ECO C03: Indian Economic: Development and Policy - I

#### Module 1

Natural Resource in India- land, Water, Forest and Minerals, Population- Size, Composition, Quality and Growth Trends. Characteristics of Indian Population through Recent Census, Population Policy and Economic Effects of Population Pressure, Poverty, Unemployment and Human Development during Plan Period- Appraisal of Government Measures, India's Human Development Record in Global Perspective.

#### Module 2

Agricultural Development—in India: Institutional Aspects—land Reforms, Green-Revolution, Technological Aspects—Agricultural Inputs and Shifts in Production Function, Agricultural Cost and Price Policy, Agricultural Marketing and Credit, Food Policy and Security, Subsidy and Public Distribution System, Capital Formation in Indian Agriculture, Problems in Agriculture- A Need for Second Green Revolution.

#### Module 3

Industry- Strategy of Industrial Development and Industrial Policy Reforms, Small Scale and Cottage Industries, Reservation Policy Relating to Small Scale Industries, Sources of Industrial Finance- Banks, Share Market, Insurance Companies, Pension funds, Non-Banking Sources and FDI, Role of Foreign Capital for Direct Investment and Portfolio Investment, Public Sector Reforms, Privatization and Disinvestment.

## Books & References:

- 1. Dutt and Sundram: Indian Economy, S. Cliand (Latest Ed) (Hindi and English).
- A.N. Agrawal: Indian Economy, New Age International Pub. (P) Limited, (Latest Ed) (Hindi and English).
- Laxmi Narayan Nathuramka: Bhartiya Arthshastra, College Book House, Jaipur (Latest Ed).
- 4. Mishra & Puri: Indian Economy, Himalaya Publishing House (Latest Ed) (Hindi and English).
- 5. Twelfth Five Year Plan, Planning Commission.
- 6. Economic Survey (Latest), GOL.
- 7. Monthly Bulletins RBI.

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# ECO C04: International Finance

#### -Module 1 --

International Finance - Functions, Sources and Uses, International Capital FlowsForeign Direct Investment, Foreign Portfolio Investment, Effects of Investment on Host
Countries and Financial Instability, India's Policy towards Foreign Capital. International
Financial System and Global Economy,

Principles of International Financial Management, Foreign Exchange Market- Structure, Kinds, Instruments of Payments, Functions, Trading. Developments in Foreign Exchange Markets- Eurocurrency Markets, Asian Dollar Markets and International Bond Markets, Stability of Foreign Exchange Market.

## Module 2

Foreign Exchange Rate- Meaning, Exchange Risk, Hedging and Speculation. Determination of Equilibrium Exchange Rate and Exchange Rate Systems.

International Business Finance- Traditional Trade Finance, Multilateral Financial Markets, International Banking, International Financial Centers, International Trade and Business organizations, Trade Imbalances in the Modern Global Economy, International Monetary System and Alternative International Monetary Standards, IMF and Problem of International liquidity.

## Module 3

The Theory of Optimum Currency Areas- Growth of Regional Financial Institutions.

Reforms in International Monetary System for Developing Countries, Asian Development Bank and its lending Activities, Borrowing from World Bank, Asian Development Bank and Aid India Club Nations and its Overall Impact on Indian Economy. Open Economy of India- Trends in India's Balance of Payments and Growth of Foreign Exchange Reserves Since the Year 1990, Convertibility of Indian Rupee and its Impact on Indian Economy, Exchange Rate Management in India.

Role of the Regional Blocks- EU, NAFTA, ASEAN, SAFTA etc. in the International Business, WTO and its Impact on Different Sectors of the Indian Economy.

## Books Recommended:

- Grabbe J. Orlin: International Financial markets, Prentice Half, Inc. Englewood cliffs, NJ, USA.
- 2. Daniel R. Kane: Principles of International Finance, Croom Helm Ltd.
- 3. Harold James: International Monetary Cooperation since Bretton Wood, IMF.
- 4. Peter B. Kenen (Ed): Managing the World Economy: Fifty Years after Bretton Wood.
- 5. Pater Kenen: International Economics, Cambridge University Press.
- 6. Bo Soderster and Geofrey Reed: International Economics MacMillan.
- 7. Lovi-Maurica: International Financial, Mc Graw-Hill.

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# ECO CO 5 Health Economics

#### Module 1.

introduction to Health Economics: Basic concepts in Economics with special reference to health - Utility, Demand and supply analysis, Elasticities, Expenditure Function, Imperfections in Market Structure, Production possibility Frontier (PPF), Externalities and Market Failure: Approaches to Economics-Positive and Normative, Welfare economics and health.

Application of Economics to issues relating to health with special reference to market failure and public policy. Health Economics and Population Dynamics - Demographic aging, obesity, disability and malnutrition.

Costing and Health Economics: The importance of costing in Health Economics, Alternative definitions of cost, Cost theory and cost analysis, types of cost - monetary and non-monetary, measurement and valuation issues in cost, production cost and discounting, Constraints in measuring health cost.

#### Module 2:

Economic Evaluation—Part I: What is economic evaluation? Various types of economic evaluation used in health care, measuring outcome, Cost effectiveness analysis (CEA), Cost-Benefit Analysis (CBA), Divergence between social and private costs and benefits in health care. Limitations of economic evaluation, Consumer Impact Assessment.

Economic Evaluation – Part II: Importance of Measures of General health status and quality of life, Measuring Health Outcomes, Assigning monetary values to health outcomes, human life and Quality Adjusted Years of Life, Cost-Utility Analysis (CUA) – including Quality Adjusted Life Years (QALYs) and Health Year Equivalents (HYEs), Economics of Prevention and Public Health – Economic evaluate on of prevention programs (include ADL and IADL for aged)

## Module 3:

Efficiency and Equity in Health: An overview of the normative economics of the health sector, Health Care and Welfare State, Private versus public health care, Public and Private Partnership in Health Care, Efficiency and effectiveness in health care, Equity in Health care Delivery

Health inequalities: health inequality and its measurement, determinants of health, health seeking and access to health care service, Health care utilization.

# Books Recommended:

- 1. Rexford E. Snterre and Stephen P. Neun, Health Economics: Theories, Insights and Industry Studies, Thompson South Western, 3<sup>rd</sup> Edition (614, San/Hea, 073226)
- 2. Zweifel and Breyer, 1997, Health Economics, Oxford University Press.
- Drummond MF, Sculpher MJ, Torrance GW, O'Brien B, Stoddart GL, eds. Mcthods for economic evaluation of health care programmes, Third Edition, Oxford University Press, 2005.
- 4. Health economisc: 3rd Edition by Phelps
- 5. The economics of health and health care, 2<sup>nd</sup> edition by Folland, Goodman and Stono (FGS)
- 6 Gold Marthe R. Joanna F. Siegel. Lousie B. russel. and Milton C. Weinstein, 1996, Cost effectiveness in health and medicine, new York: Oxford University Press.
- 7. Handbook of Health Economics (Anthony J. Culyer and Joseph P Newhouse eds., Elsevier Science, 2000: Available online at: http://www.sciencedirect.com/science/handbooks/15740064
- 8. David Wonderling, Reinhold Gruen & Nick Black, 2005, Introduction to health economics, Chapters 10-11, 127-152.
- 9. Gold Marthe R. Joanna E Siegel, Lousie B russel, and Milton C Weinstein, 1996, Cost effectiveness in health and medicine, New York: Oxford University Press., Ch. 6, pp. 176-213.

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# **ECO CO6: Computer Applications in Economics**

## Module 1:

Introduction to Computers: What is Computer and its applications? Data Representation: Introduction to Number System: Binary system, Octal number system, Hexadecimal number system, Decimal number system. Converting from one number to another number: Converting to binary from octal, converting to octal from binary, converting to decimal from binary, octal, hexadecimal, converting to binary from hexadecimal, converting to hexadecimal from binary. Floating Point Arithmetic: Addition, Substraction, Multiplication, Division of Floating Point. MS Excel: Worksheet Overview, Entering information, Worksheet Creation, Opening and Saving, Workbook, Formatting numbers and texts, Protecting cells, Producing Charts and Printing Operations.

# Module 2:

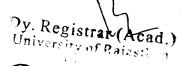
Data Processing, Techniques and Algorithms: Concept of data, record and file; Types of data and data structures, data analysis; File handling and, appending and cascading, closing and attribute control; Data storage and retrieval; Data operations; Algorithms like sorting, merging, joining and bifurcation; Database concepts and operation on database; DBMS and RDBMS. Introduction to MS Excel and MS Access.

# Module 3: Statistical Processing Techniques and Methods

Time and frequency series, – Presentation of charts and scatter plots– line, sub divided, multiple, pie graphs – estimation of descriptive statistics – estimation of growth rates, C.V., trend equations and regression equations – Estimation of Simple Econometric Model using Analysis Tool – Introduction to SPSS, E-Views and STATA. Input-Output Statement: Scanf, printf, Library functions. Control structures; Decision making and Loop statements. Use of: Arrays, String and String functions. IT Application to Economics On line banking; Electronic transaction; Document delivery; Authentication and validation transaction processing- Document and transaction security and digital signature.

## Suggested Readings:

- 1. Gurvinder Singh, Rashpal Singh: P.C. Computing, Kalyani Publishers.
- 2. BPB Publishers: Complete Reference M.S. Office.
- 3. Yashwant Kanitkar: Let us 'C'.



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# Semester - IV

# Compulsory Core Courses

# Paper XIII - Public Economics - II

#### Module 1

Public Debt - Sources, Effects, Burden and its Management, Theory of Public Debt, Loans and Saving as Sources of Finance for Development. Fiscal Policy, Neutral and Compensatory Fiscal Policy, Functional Finance; Fiscal Policy in Developing Countries, Fiscal Policy for Stabilization - Automatic and Discretionary Stabilizers. Built-in-Flexibility, Interdependence of Fiscal and Monetary Policies, Balanced Budget Multiplier, Anti Inflationary Policy.

## Module 2

Indian Tax System -Salient features, Major Taxes, Main Trends in the Revenue of the Central and State Governments in India, Non-Tax Revenue, Union Budget of India, Major Trends in Public Expenditure in India (growth and composition), Problem of Budget Deficit and FRBM Act. Pricing Policy in Public Enterprises, Disinvestment and Privatisation of Public Enterprises in India, Internal and External Public Debt of India.

### Module 3

Fiscal Federalism -Theory and Problems, Problems of Centre-State Financial Relations in India, Criteria for Resource Transfer from the Centre to States, Finance Commissions and Devolution of Resources to States, Recent Tax Reforms in India, Recommendation of Raja J. Chelliah Committee and Kelkar Committee. Direct Tax Code and GST. State Finances of Rajasthan - Trend and Composition of Revenue and Expenditure.

# Books recommended:

- R. A. Musgrave and P.B. Musgrave; Public Finance in Theory and practice, New York: McGraw-Hill.
- 2 R. A. Musgrave: Theory of Public Finance, McGraw-Hill.
- 3. S. Ganguli: Public Finance, The World Press Private Limited.
- 4. John Callis and Phillip Jones, Public Finance and Public Choice, Oxford University Press.
- 5. Harvey Rosen, Public Finance, McGraw Hill Publications.
- David N. Hyman, Public Finance A Contemporary Applications of Theory to Policy, Thomson South Western.
- 7. R. K. Lekhi, Public Finance, Kalyani Publishers.
- 8. Chelliah and Kelkar Committee Reports.

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# Paper XIV - Trade Policy and International Monetary System

#### Module 1

Political Economy of Protectionism: Trade Policy in Developing Nations- Import Substitution V/s Export Promotion, Strategic Trade Policy in Developed Nations. Trade and Economic Development, Deteriorating Terms of Trade of developing Nations-Prebisch-Singer Hypothesis, Current Trade Problems of Developing Nations. International Capital Movement and Factors Affecting it, Various Forms of Foreign Capital and its Role in Economic Development.

## Module 2

Economic Integration - Stages and Forms, Theory of Customs Union - Static and Dynamic Effects, Regional Trade Blocks - Bilateral and Multi-Lateral International Negotiations, Preferential Trade Areas (PTAs) and Free Trade Areas (FTAs). WTO - Issues and its Impact on Trade, Rise and Fall of Bretton-Woods System and Present International Monetary System, IMP, World Bank-Their Achievements and Failures.

#### Module 3

Foreign Exchange Market - Functions and Exchange Rate Determination, Exchange Rate Theories- Mint Parity, Purchasing Power Parity (PPP), Monetary Approach and Portfolio Balance Approach, Fixed and Flexible Exchange Rates, Exchange Controls and Multiple Exchange Rates, Current Exchange Rate Regime, Euro Currency Market. Balance of Payments - Accounting, Components, Causes of Disequilibrium and Mechanism of Adjustments, Foreign Trade Multiplier, Devaluation and Marshall-Lerner Condition, Elasticity and Absorption Approaches, External and Internal Balance, Swan Model.

## Books recommended:

- 1. J. Bhagwati: International Trade, Cambridge University Press, London.
- 2. R. J. Carbough; International Economics, Cengage Learning; 13 edition.
- 3. D. Salvatore: International Economics, PHI, New York.
- Rana and Verma: International Economics, Vishal Publishing House Ludhiana (Hindi and English).
- 5. Soderston and Reed: International Economics, Palgrave Macmillan; 3Rev Ed edition.





#### Module 1

Economic Growth and Structural Change: Structural Changes in the Composition of Gross Domestic Product, Occupational Structure, Structure of Capital Accumulation; and Accumulation of Human Capital; Exploring the Relationship between Economic Development and Income Distribution (Kuznets' inverted U –Shaped Curve and Augmented Kuznets' Curve, Denison & Chenery empirical studies), Living in a Heterogeneous World, World-Islands of Prosperity and How the Other Three Quarters live.

#### Module 2

Theories of Growth: Glassical Approach: Adam Smith, Marx and Schumpeter - Neo-Classical Approach: Robinson, Solow, Kaldor and Harrod-Domar model, Cambridge Criticism of Neoclassical Analysis of Growth, the Capital Controversy. Technological Progress- Embodied and Disembodied Technical Progress, Hicks, Harrod learning by doing, Production Function Approach to the Economic Growth, Growth Models of Kaldor and Pasintti, Optimal Savings and Ramsay's Rule of Accumulation. Romar Model of Technological Change.

# Module 3

Endogenous Growth; Intellectual Capital, AK Model, Uzawa-Lucas Model – Explanation of Cross Country Differentials in Economic Growth. Economic Isolation and Integration with the Global Market. An Overview of the Economic Functions of the Market and State, Efficiency of the Competitive Market, Market Failure, Government Failure, On the Choice of Economic System, Market Failure in a Dynamic Economy.

## Books recommended:

- Chenery, Hollis and Moises Syrquin: Patterns of Development: 1950-70, Oxford University Press.
- Kuznets, S.: Modern Economic Growth, Rate Structure and Spread, Vakils, Feffer and Simons Private Limited, Bombay.
- 3. Meier, Gerald M. and James E. Rauch: Leading Issues in Economic Development, Eighth Edition, Oxford University Press, New York.
- 4. Ray, Debraj: Development Economics, Oxford University Press, Delhi.
- 5. Robert J.Barrow and Xavier Sala-i-Martin: Economic Growth, Prentice-Hall of India, Pvt. Lid., New Delhi.
- 6. Thirlwall, A. P. Growth and Development, Eighth Edition, Palgrave Macmillan, New York.
- 7. Thorvaldur Gylfason: Principles of Economic Growth, Oxford University Press.

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#### **Elective Core Courses**

The candidate is required to select any three elective courses from the following:

## ECO D01: Economics of Infrastructure -II

#### Module 1:

Primacy of energy in the process of economic development; Factors determining demand for energy. Effects of energy shortages. Energy conservation renewable and nonconventional sources of energy; Energy modeling; The search for an optimal energy policy in the Indian context.

Bulk supply and pricing of electricity – The relative economics of thermal, hydel and nuclear power plants – The case for a National Power Grid.

### Module 2:

Financing water utilities - Urban and rural water supply.

The exploitation of National Gas; Pricing problem.

Organisation and financing of supply of social services; Private vs public sector financing; Recent debate about the fixation of prices of social services; Development of social services in the successive Indian plans.

## Module 3:

Education and economic growth; Approaches to educational planning, social demand, rate of return and manpower balance approaches; The case for universal, free, primary education; Structure of higher education and problems of its financing in India; Human resources and human capital development – The issues in education policy.

Health dimensions of development - Determinants of health - Poverty, malnutrition, illiteracy and lack of information, Economic dimensions of health care - Demand and supply of health care, Financing of health care and resource constraints - Inequalities in health - Class and gender perspectives; Institutional issues in health care delivery.

#### Books Recommended:

- 1. National Council of Applied Economic Research, 1996, India Infrastructure Report; Policy Implications for Growth and Welfare, New Delhi.
- 2. Parikh, K.S. (1999), India Development Report 1999-2000, Oxford, New Delhi.
- 3. Economics of Infrastructure (1976), Vol.VI, ICSSR, ICSSR.
- Crew, M.A. and P.R. Kleindorfer (1979), Public Utility Economics, MacMillan, New York.
- 5. CUTS: Competition and Regulation in India, 2007 and 2009.

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## ECO D02: Econometrics - II

## Module 1

Simultaneous Equation Models: The Simultaneous Equation bias and Inconsistency of OLS estimators; The Identification Problem; Rules of identification — order and rank conditions; Methods of estimating simultaneous equation system; Recursive methods and OLS; Indirect least squares (ILS); 2SLS, K class estimators, 3SLS and ML methods — application.

## Module 2

Time Series Econometrics: Key Concepts, Spurious Regression, Stationary Stochastic Processes, Non Stationary Processes, Unit Root Tests - Dickey-Fuller Test, Augmented Dickey Fuller Test, Phillips-Perron Test.

Properties of AR, MA and ARMA Processes.

Cointegration and Error Correction Mechanism (ECM)

#### Module 3

Introduction to Panel Data: Panel Data with Fixed and Random Effects.

Fixed Effects: Within and Between Group Effects, Unbalanced Panel and Fixed Effects.

Randon Effects: GLS, Testing for Random Effects, Estimation of Dynamic Panel Model.

Note: Use of non-programmable calculator is permitted.

# Books Recommended:

- 1. J. Kmenta: Elements of Econometrics, University of Michigan Press.
- 2. Damodar Gujrati: Basic Econometrics, McGraw-Hill Higher Education
- J. Johnston: Econometrics Methods, McGraw-Hill College.
- 4. G. S. Maddala: Econometrics, John Wiley & Sons: 4th Edition.
- 5. R. S. Pindyck and D. Z. Rubinfield: Econometrics Methods and Econometrics
  Forecasts, McGraw-Hill Publishing Co.
- 6. Rao and Millar: Applied Econometrics, Wadsworth Publishing Company.

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## Module 1-

Foreign Trade: Salient features, Trends, Composition, Direction and Organization, Trade Reforms, liberalization and Recent Changes in Trade Policy, MNCs and their Impact on Indian Economy, WTO – Issues and its Impact on Indian economy, India's Balance of Payment Position in Recent Years.

#### Module 2

Economic planning: Goals, Achievements and Shortcomings of Planned Development, Planning and the market. Decentralized Planning: Constitutional Obligations and Panchayati Raj Institutions. Balwant Rai Mehta Committee and Ashok Mehta Committee, Financial Aspects of 73<sup>rd</sup> and 74<sup>th</sup> Constitutional Amendments. Problem of Subsidy, National and Per Capita Income – Growth pattern and trends, Aggregate and Sectoral Composition and Change therein, Regional Distribution, Income Inequalities in India.

## Module 3

New Economic Policy – LPG and Second Phase of Economic Reforms, Infrastructure Development in India – Physical Infrastructure (Power, Transport, Communication and Irrigation) and Social Infrastructure (health and education), SEZs

# Books and References:

- Rudra Dutt and Sundaram: Indian Economy, S. Chand (Latest Ed.) (Hindi and English)
- 2. A. N Agrawal: Indian Economy, New Age International Pub. (P) Limited, (Latest Ed.) (Hindi and English).
- 3. Laxmi Narayan Nathuramka: Bhartiya Arthshastra, College Book House (Latest Ed.)
- 4. Mishra & Puri: Indian Economy, Himalaya Publishing House (Latest Ed.) (Hindi and English)
- 5. Uma Kapila: Indian Economy, Academic Foundation.

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# ECO D04: Survey Methods

## Module 1

Sample Methods: Principle of Sample Surveys, Stages of Survey, Practical Problems in Planning, Execution and Analysis of Surveys, Random Number Tables and their Uses in Drawing Samples with Equal Probability (Simple Random Sampling) and Probability Proportional Size. Sampling and Non-Sampling errors. Critical Study of Sample Design Employed by NSSO and in Rural Credit Surveys.

# Module 2

Sample Designs: Simple Random Sampling With and Without Replacement. Relative Efficiency of WR and WOR Stratified Sampling, Proportional Optimum and Neyman Allocation. Gain in Precision, Cluster Sampling. Two Stage Sampling. Systematic Sampling.

### Module 3

Regression Analysis with One and Two Explanatory Variables. Multiplicative and Additive models. Growth Equations. Estimation of Regression Parameters and their Standard Errors. The Problem of Curve Fitting. Fitting of linear, Exponential and Parabolic Curves. Application in the Estimation of Elasticities and Growth Rates.

# Books Recommended:

- 1. M. N. Murthy, Sampling Methods.
- Sukhatma P.V. Sukhatme B.V. and C. Ashok, Sampling Theory of Surveys with applications, Asia Publishing House, New Delhi.
  - 3. Gujarati D., Basic Econometrics, McGraw-Hill Higher Education.
  - 4. Intriligator M.D., Econometric Models, Techniques, and applications, Prentice Hall of India.

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# ECO D05: Indian Health Care System

#### Module1:

Changing scenario of Health inequalities in India, Medical Tourism in India, Interbational Comparison,

He aith Carc System: Stakeholders in health care systems: Consumer, providers, and state, Human capital and health, health care and labor market, Demand for health care and for medical services — The consumer perspective, Moral Hazard and the economics of Moral Hazard, Demand and Supply of Human and physical infrastructure—physician, hospital and drugs etc, Costs as a barrier to health care utilization.

#### Module2:

Policies, Reforms and Regulatory Concerns in Health Sector: Health care delivery systems and Role of Government in providing health care, Role of international organizations, improving access to health care with quality, Overview of health sector reforms and Policies, Regulatory concerns and regulation of health sector including pharmaceutical industry, National Health Policies and Programmes.

#### Module3:

Health Financing and Health Insurance: National Health Accounting: Sources and Uses of Funds, health budgeting, Interrelationship between epidemiological transition and health expenditure, Health care financing system, source of health care spending, The Health Insurance – intermediary agent, The private health insurance, Regulation of health insurance, Government as health insurer in India, Equity in health care finances, Future investment strategies in health sector, Willingness to pay for health care, User charges as determinant of health financing

#### Recommended:

- Rexford E. Snterre and Stephen P. Neun, Health Economics: Theories, Insights and Industry Studies, Thompson South - Western, 3<sup>rd</sup> Edition (614, San/Hea, 073226)\
- 2. Zweifel and Breyer, 1997, Health Economics, Oxford University Press.
- Drummond MF, Sculpher MJ, Torrance GW, O'Brien B, Stoddart GL, eds. Methods for economic evaluation of health care programmes, Third Edition, Oxford University Press, 2005.
- 4. Health economisc: 3rd Edition by Phelps
- The economics of health and health care, 2<sup>nd</sup> edition by Folland, Goodman and Stono (FGS)
- Gold Marthe R, Joanna E Siegel, Lousic B russel, and Milton C Weinstein, 1996, Cost effectiveness in health and medicine, new York: Oxford University Press.
- 7. Handbook of Health Economics (Anthony J. Culyer and Joseph P Newhouse eds., Elsevier Science, 2000: Available online at: <a href="http://www.sciencedirect.com/science/handbooks/15740064">http://www.sciencedirect.com/science/handbooks/15740064</a>
- 8. David Wonderling, Reinhold Gruen & Nick Black, 2005, Introduction to health economics, Chapters 10-11, 127-152.
- Gold Marthe R, Joanna E Siegel, Lousie B russel, and Milton C Weinstein, 1996, Cost effectiveness in health and medicine, New York: Oxford University Press., Ch. 6, pp. 176-213.

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# **ECO D06: History of Economic Thought**

## Module 1:

Mercantilism Physiogrates, Quesnay's table economic concept of surplus growth, theory of taxation and role of government.

Classical school Adam Smith the invisible hand doctrine wealth of nation laissez faire profits and wages modern revival of Adam Smith critiques of Adam Smith.

Matthus's theory of population and theory of under competition Ricardo – principal of political economy and taxation distribution theory – different routs differences with say on determination of value morden revival and interpretation (Sraffa).

# Module 2:

Critics of the classical school – Sismondi socialist and the nationalist school position senior and the four postulates, J.S. Mill – four prepositions and capital demand and supply bifurcation wage fund.

Rehabilitation by coarseness stationery state version non – competing groups evaluation of socialist thought – utopian socialism saint – Simon own blane, Fourier proudhob scientific socialist.

### Module 3:

Karl - Marx - efforts at scientific socialism organic composition of capital break down of capitalism, reserve army of labour critiques of Marx revival of Marx in economics.

The German Historical School and development of marginalize the neo-classical school Marshall.

Twentieth century economic thought main features (Only the rise of key nesiaanism the rise of mathematical economics dynamics of econometrics) critical evaluation of the development of economic thought Indian economic thought kautilya and Gandhi.

## Books Recommended:

I. H. Haney: A History of Economic Thought

2. Eric Roll: A History of Economic Thought

3. Lionel Robbins : A History of Economic Thought

4. S.K. Srivastava: A History of Economic Thought

5. H.L. Bhatia: A History of Economic Thought

6. V.C. Sinha : आर्थिक विचारों का इतिहास

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