



# University of Rajasthan Jaipur

## SYLLABUS

### M.A. Economics (Semester Scheme)

I & II Semester      2021-22

III & IV Semester    2022-23



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By Registrar  
University of Rajasthan  
Jaipur

**Revised Syllabus of M.A. Economics (Semester Scheme)**

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 course and rest twelve elective core courses. Each paper of three hour during 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 questions (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) - Macroeconomics 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

**Courses for Semester –II****Compulsory Core Courses (CCC)**

Paper V (ECO 201) - Microeconomics Theory-II

Paper VI (ECO 202) - Macroeconomics Theory-II

Paper VII (ECO 203) – Statistical Methods

**Elective Core 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 Economics-II

Paper ECO B05 : Mathematical Economics-II

Paper ECO B06 : Indian Financial 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-I

Paper X (ECO 302) – International Trade Theory

Paper XI (ECO 303) – Economics of Development and Growth-I

#### **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-I

Paper ECO C03 : Indian Economics Development and Policy-I

Paper ECO C04 : International Finance

Paper ECO C05 : Health Economics-I

Paper ECO C06 : Computer Application in Economics-\*

### **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

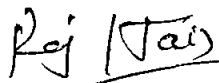
Paper ECO D03 : Indian Economics Development and Policy-II

Paper ECO D04 : Survey Method

Paper ECO D05 : Health Economics-II

Paper ECO D06 : History of Economic Thought

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## Semester -I

### Compulsory-Core Courses

#### **Paper-I (ECO 101) Microeconomics Theory -1**

##### **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, Oxford University Press, New Delhi.
4. Hal R. Varian: Microeconomic Analysis, WW. Norton & Company Inc in New York.

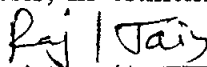
#### **Paper-II (ECO 102) Macroeconomic Theory -1**

##### **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-

  
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Neo-Classical Theory of Investment, Stock Market and Tobins' 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 Friedman and 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, Person Education.
2. Richard, T Froyen. Macro Economics: Theories and Policies, Pearson Education.
3. P. Edgmond. Macroeconomics. PHI. New Delhi.
4. Gregory Mankiw Macroeconomics. CBS Publishers, New Delhi.
5. Robert J Gorden Macroeconomics. Harper Collins.

### **Paper–III (ECO 103) 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**

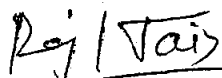
Integration: Indefinite and Definite; Applications, First order Difference and Differential Equations and their Application in Economics

#### **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, Macmillan, London.
2. Edward T. Dowling : Mathematics for Economics, Schanum's Outline series, McGraw-hill Book Co., New Delhi.
3. Laxmi Narain Nathuramka : Arthshastra Mein GanitkePrayog (Hindi) Ramesh Book Deopt. Jaipur
4. B.C Mehta and G.M.K Madnani: Mathematics for Economists, Sultan Chand & sons, New Delhi.

  
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5. Alpha C. Chiang : Fundamental Methods of Mathematical Economics, McGraw Hill, Tokyo
6. Balwant Kandoi: Mathematics for Business and Economics with Application, Volume –I & 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. Deflection of Ozone Layer: Green House Effect, Global Warming and Climate Change, Acid rain, Urban Pollution and Urban Health.

### **Module -3**

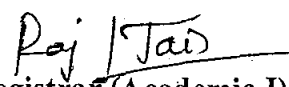
Economic Theory and Measurement of Environmental Benefits . Demand for Environmental Service – Willingness to Pay and Willingness to Accept.

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.

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

## (ECO A02): Demography-I

### Module 1

Introduction to Population Study: Its Nature and Scope; Relationship with other disciplines; Sources of Demographic Data: Census of India; Vital Registration System, Sample Surveys; Dual report system; Population registers; International Publications. Population growth in India. Recent census findings on demographic characteristics. Population theories: Malthus; Optimum population theory; Theory of Demographic Transition.

### Module 2

Fertility: Basic Terms; sources of Data; Basic Measures: Crude Birth Rate, General Fertility Rate, Age specific fertility rate, Total Fertility Rate; Measures of Reproduction: Gross Reproduction Rate, Net Reproduction Rate; Bongaarts Proximate Determinants of Fertility; Social theories of fertility: Social Capillarity; Theory of diffusion, Theory of change and response, Liebenstein theory; Becker's theory, Caldwell wealth flows theory, UN Threshold hypothesis.

### Module 3

**Mortality:** Basic Concepts and terms; Measures: Crude Death rate, Age specific death rate, Infant mortality rate; Maternal mortality; Causes of death; Reasons for mortality decline in developing countries. Mosley and Chen's Framework for Child Survival. Morbidity: Concept and need; Measures: Incidence rate, Attack rate, Secondary Attack rate, Prevalence rate, Case fatality rate. Comparison of Demographic and epidemiological transition; Epidemiology traid and web causation models in epidemiology.

### Reading List

1. Bhende, Asha A. and Tara Kanitkar (2004) Principles of Population Studies, Mumbai: Himalaya Publishing House, Chapter8, Pp.241-288.
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<sup>th</sup> edition.
4. Pathak, K.B. and F.Ram (1998) Techniques of Demographic Analysis, Mumbai: Himalaya Publishing House, Chapter 4 Pp.108-153 and Chapter8, Pp.339-372
5. National Family Health Surveys

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6. Srinivasan K. (1998) Basic Demographic Techniques and Applications. New Delhi: Sage Publications. Chapter IV, Pp.59-85
7. United Nations, (1973): The Determinants and Consequences of Population Trends, Vol. I, Population Studies, No. 50, Chapter VII, 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 Organization 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 ; Historical 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- Product Relations : 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**

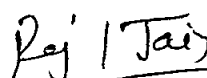
Agricultural Transformation: Schultz Theory of Transformation of Traditional Agriculture, Agricultural Transformation: India Experience

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- Price Factors 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. IA Agricultural Production, Amersterdam, Elsevier Sciences B.V., 2002.
2. Bruce L. Gardener and Gordon C. Rausser (Eds): Handbook of Agricultural Economics vol.-IB Marketing, Distribution and Consumption, Amersterdam, Elsevier Science B.V., 2002.
3. Bruce L Gardener and Gordon C. Rausser (Ed.): Handbook of Agricultural Economics Vol., 2A Agricultural and Its External Linkages, Amersterdam. Elsevier Science B.V., 2002.

  
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4. Bruce L. Gardener and Gordon C. Rausser (Ed.): Handbook of Agricultural Economics Vol., 2B Agricultural 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. Ghatak Subrata and Ken ingersent: Agriculture and Economic Development , Harvester 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, Marries, 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 Behavior and Potential Competition. Limit Price and Contestable Markets. Non- price Competition with reference to Adverting .

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.

  
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## (ECO A05) : Mathematical Economics –I

### Module -1

Theory of Consumer Behavior-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 Function : 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 Behavior of a Firm- Constrained Cost Minimization, Constrained Output Maximization and Profit Maximization.

### Module -3

Input Demand Functions – Properties and Derivation of Producers 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. Quantt: 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

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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.

## 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. Harendra Badhav (ed.) Challenges to Indian Banking Competition. Globalization and Financial Markets. McMillan.
5. N.S. Yher: Non-Performing Advances in Banks. Skylark , New Delhi.
6. Report of the committee (Narsimham) 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 Banking in India (latest edn.)
10. Hanson and Kathuria (ed): A financial Secor for the 21<sup>st</sup> Century. Oxford. University press.
11. Y.V Reddy Monetary and Financial Sector Reforms in India. UBSPD. New Delhi.

## (ECO A07) : 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.

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## 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: The Expected Value and its Properties. Univariate distribution: Binominal, Poisson, Rectangular geometric, Hyper geometric and multinominal distribution.

## 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. Gamma, Beta 1 & Beta 2 type distributions. 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.

### Books Recommended:

1. A.M. Goon, M.K. Gupta and B. Dasgupta, An outline of Statistical Theory (Vol. I) 4<sup>th</sup> Ed., World Press Kolkata, 2003.
2. S.C. Gupta and V.K. Kapoor, Fundamentals of Mathematical Statistics, 11<sup>th</sup> Ed., Sultan Chand and Sons, latest edition
3. R.V. Hogg, A.T. Craig, and J.W. Mckean, Introduction to Mathematical Statistics, 6<sup>th</sup> Ed., Pearson Education 2005.
4. A.M. Mood, F.A Graybill and D.C. Boes, Introduction to the Theory of Statistics, 3<sup>rd</sup> Ed., Tata Mc Graw Hill Publication, 2007.
5. V.K. Rohtagi and A.K Md.E. Saleh, An Introduction to Probability and Statistics, 2<sup>nd</sup> Edition, John Wiley and Sons, 2009.
6. S.A. Ross Introduction to Probability Models, 9<sup>th</sup> 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. D.C. Montgomery, E.A Peak and G.G. Vinning, Introduction to Linear Regression Analysis, 3<sup>rd</sup> Ed., John Wiley and Sons, 2006.
9. Koutsoyinnannis 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 (ECO 201) – Microeconomics Theory- II**

##### **Module –I**

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 Failures. Asymmetric information – Market Signaling Moral Hazard. The Principal – Agent Problem

##### **Books Recommended :**

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

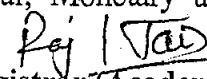
#### **Paper VI (ECO 202) – Macroeconomic Theory-II**

##### **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 and Role 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- Fleming Model: Analysis of Fiscal, Monetary and Trade

  
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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.Edgmond, Macreconomics, PHI, New Delhi
5. Gregory Mankiw, Macroeconomics, CBS Publishers. New Delhi
6. Roben J. Gorden, Macroeconomics. Harper Collins

### Paper VII (ECO 203) - Statistical Methods

#### Module-I

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
2. KailasNath Nagar: SankhyikiKeMool Tatva (Hindi) MeenashiPrakashan, Meerut.
3. A.L.Nagar & R.K Das: Basic Statistics, Oxford University 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:

  
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## (ECO B01) : Environmental Economics-II

### Module-I

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.

### 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.

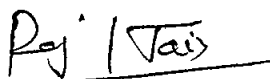
### Books Recommended :

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

## (ECO B02) : Demography –II

### Module -1

Sex and Age structure: Factors affecting sex ratio and age structure of population, Age Pyramid; Population Ageing and its economic implications. Life table: Introduction, Types, columns, Method of Construction of Abridged Life Tables based on Conventional method; Model life table: Concept and four types of Model Life Tables (United Nations Model Life Tables, Coale and Demeny's regional Model Life Tables, Brass Logit Life table, New UN Model Life Tables for developing countries)

  
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## Module -2

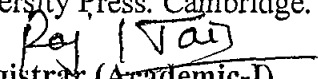
Migration: Concept and Basic terms; Sources of data, Direct and Indirect methods of measuring internal migration. Differential migration. General theories of internal migration. Everett Lee's conceptual framework for migration analysis. Urbanization: Concept, Degree and tempo of Urbanization. Standardization: Direct and Indirect Standardization of Crude Birth and Death Rates;

## Module 3

Gender: Understanding Gender, Feminist theory (Liberal Feminism, Marxist, Post Modern, Radical Feminism); Women Empowerment: Concept, Process and Approaches; Gender Development Index, Gender Empowerment Measure; Gender Differentials in Access to resources: Education, Employment, Female labor participation, Household headship and Political representation of women; Domestic violence. National Population Policy;

## Reading List

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).
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<sup>th</sup> edition.
7. 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. Cambridge.

  
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## (ECO B03) : Agricultural Economics-II

### Module-1

Agricultural Finance: Financial Characteristics of Agriculture, Imperfect information [Agency Relationship, Adverse Selection and Moral Hazard] and Enforcement Problems in Credit Markets: Segmented Rural Credit Markets. Resolving Information and Incentive Problems; Managing Borrower's 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 Domestic and 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 Plane.

### 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. I A: Agricultural Production. Amsterdam. Elsevier Science B. V. 2002.
3. Bruce L., Gardener and Gordon C. Rausser (Eds.) Handbook of Agricultural Economics Vol. I B: Marketing. Distribution and Consumption. Amersterdam. Elsevier Science B.V., 2002.
4. Bruce L. Gardender and Gordon C. Rausser (Eds.) Handbook of Agricultural Economics Vol.2 A: Agricultural and its External Linkages, Amersterdam, Elsevier Science B. V., 2002.

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5. Bruce L. Gardener and Gordon C. Rausser (Eds): Handbook of Agricultural Economics vol.2 B: Agricultural and Policy. Amsterdam, Elsevier Science B.V., 2002.
6. Ghatak Subrata and Ken Ingersent: Agriculture and Economic Development, Harvester 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 Karia and Joseph E. Stieglitz: 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-II**

### **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.

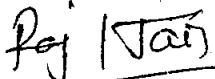
Market Structure and R & D. Allocative Efficiency and Capacity Utilization Indian Industry . Productivity Growth, FDI and Acquisition of Technology in India.

### **Module -3**

MRTTP and Nature of Concentration of Indian Industry. Liberalisation and Privatization 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 Easton 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 Organization (3<sup>rd</sup> Ed.) Princeton Hall, Englewood Cliffs, New Jersey.

  
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6. Martin Stephen: Advanced Industrial Economics. Blackwell Publishers Limited. UK.
7. Bain J.S: Industrial Organization (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. Nayar, Deepak (ed.) Industrial Growth and Stagnation, Oxford University Press.

## (ECO 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 Taxes 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 . Stackelberg Solution, The Market Share Solution and the Kinked Demand Curve Solution Models.

### 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.

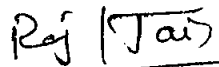
### Module -3

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. Quant: Micro Economic Theory: A Mathematical Approach, McGraw –Hill. London

  
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2. R.G.D. Allen, Mathematical Economics, Macmillan.
3. Alpha C Chiang: Fundamental Methods of Mathematical Economics, McGraw-Hill, Kogakusha, 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.

## **(ECO B06) : Indian Financial System**

### **Module -1**

Financial System – Meaning. Structure and Functions of Financial system. Financial System and economic development. Financial intermediaries and financial markets, Financial Inclusion and Financial literacy.

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, option 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. Harendra Badhav (ed.) Challenges to Indian Banking Competition, Globalisation and Financial Markets. Mc millan.
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.

  
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9. RBI Report on trend and progress of Banking in India (latest Ed.)
10. Hanson and Kathuria (ed.) A financial Sector for the 21<sup>st</sup> Century oxford. University Press.
11. Y.V Reddy Monetary and Finance Sector Reforms in India, UBSPD. New Delhi.

## (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.

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

### Module-2

Analysis of Variance: Analysis of Variance in One-way and Two-Way Classified Data.

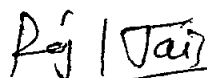
Testing of Statistical Hypothesis and Tests of significance: Simple and Composite hypotheses, Null and Alternative Hypotheses, Critical Region and Power of Test, Kinds of Errors, Level of Significance and Probabilities of Type I and Type II Errors, Large Sample Test, Use of CLT for Testing Single Proportion and Difference of two proportions, Single Mean and difference of Two Means, Tests of Significance based of Chi-Square, t and F Distributions, Computing and Using P-Values for Significance, Non-parametric one sample Tests only.

### 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.

### Books Recommended:

1. A.M. Goon, M.K. Gupta and B. Dasgupta, An outline of Statistical Theory (Vol. I), 4<sup>th</sup> Ed., World Press, Kolkata, 2003.
2. S.C. Gupta and V.K. Kapoor. Fundamentals of Mathematical Statistics, 11<sup>th</sup> Ed., Sultan Chand and Sons, latest edition.
3. R.V. Hogg, A.T. Craig, and J.W. Mckean, Introduction to Mathematical Statistics, 6<sup>th</sup> Ed. Pearson Education, 2005.

  
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4. A.M. Mood, F.A. Graybill and D.C. Boes, Introduction to the Theory of Statistics, 3<sup>rd</sup> Ed. McGraw Hill Publication, 2007.
5. P. Mukhopadhyay, Mathematical Statistics, 2<sup>nd</sup> Ed., Books and Allied(P)Ltd., 2000.
6. G. Casella and R.L. Berger, Statistical inference, 2<sup>nd</sup> Ed. Thomson Duxbury, 2002.
7. J.D. Gibbons and S. Chakraborty, Non Parametric Statistical Inference, 4<sup>th</sup> Ed. Marcel Dekkar, CRC, 2003.
8. M.G. Kendall and A. Stuart, The Advanced Theory of Statistical (Vol. III), Macmillan Publishing Co., Inc., 1997.
9. W.G. Cochran, Sampling Techniques, John Wiley and Sons, New York, 1997.

### Semester- 3

### Compulsory Core Courses

### Paper IX (ECO 301) - 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, 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 :

1. 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.

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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, Thomason South Western.
7. R.K. Lekhi, Public Finance, Kalyani Publishers.

## **Paper X (ECO 302) – 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 Verification of H-O Theory, Leontief Paradox, Meade's General Equilibrium in trade. International Trade under Imperfect 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.

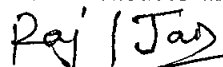
### **Books Recommended:**

1. J. Bhagwati: International Trade, Cambridge University Press, London.
2. R.J. Carbaugh: International Economics, Cengage Learning. 13<sup>th</sup> Edition.
3. D. Salvatore: International Economics, PHI, New York.
4. Rana and Verma International Economics, Vishal Publishing House Ludhiana (Hindi and English).

## **Paper XI (ECO 303) – Economics of Developments 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

  
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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 Economics Development: Agriculture – Industry Interface – Interdependence between Agriculture and Industry; Industrialization and Urbanization (The Models of Lewis Fei and Ranis and Todaro); The Balanced Growth Doctrine (Review of Rosenstein, Nurkse and Lewis); Strategy of Unbalanced (Hirschman's version), and the Reconciliation of the two.

### **Module -3**

Project Evaluation Criteria: Internal Rate of Return, Net Present Value 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:**

1. Meier, Gerald M. and James E. Rauch. Leading issues in economic Developments, Eighth Edition, Oxford University Press, New York
2. Ray, Debraj; Development Economics, Seventh Impression, Oxford University Press, New Delhi.
3. Thirwall, A.P. Growth and Development, Eighth Edition, Palgrave Macmillan, New York.
4. Todaro, Michal P. And Stephen Smith C: Economic Development Eighth Edition, Second Impression, Pearson Education, (Singapore) Pvt. Ltd. Indian Branch, Delhi.
5. Yotopoulos, Pan A. and Nugent Jeffery B: Economics of Development: Empirical Investigations, Harper and Row Publishers, New York.


### **Elective Core Courses**

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

### **(ECO C01) : Economics of Infrastructure – I**

#### **Module-1**

Infrastructure and Economic Development. Infrastructure as a public good. Social and Physical Infrastructure. Special Characteristics of Infrastructural Facilities. Green Infrastructures. Economics of scale of Joint Supply. Marginal Cost Pricing vs Other Methods of Pricing in Public Utilities. Cross Subsidization-Free Prices, Equity and Efficiency.

  
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## Module-2

Modal Cost of Transportation. Principle of Pricing. Public Transportation for Sustainable Development. Transport Management in India. Future Development in Transport Sector. Six Modern Transport System- Metro, Air Connectivity, Green Buses, Railways. Marine and River and Delivery by Drones. Problems of Different Modes of Transport. Infrastructure Development and Reforms in Transport Sector in India.

## Module-3

Structure of Telecommunication Sector. Price Determination. Infrastructure Development and Reforms in Communication. Characteristics and Problems of Postal Services. Fixation of Postal Rates in India. Significance of Telephone and Postal Services in India. Growth of Digital Communication Networks.

### Books Recommended:

1. Dash L.N., Infrastructure Development and The Indian Economy. Atalantic Publisher, New Delhi.
2. Samanta P.K., Mohanty A.K., Ports Infrastructure and Economic Development.
3. India Infrastructure Report 2015 , OUP India Co. (Oxford)
4. Report of Ministry of Human Resources and Development.

## (ECO C02) : ECONOMETRICS –I

### Module -1

Basic Economics: 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, Function of Regression Models Log-Log, Semi-log, Reciprocal Transformation.

### Module -2

Violation of Assumptions: Heteroscedasticity; Multicollinearity and Auto-correlation Speciation 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. Methods of Instrument Variables. Introduction to SPSS Software.

Note: Use of non-programmable calculator is permitted,

### Books Recommended :

1. J. Kmenta: Elements of Economics, University of Michigan Press.
2. Damodar Gujrati: Basic Econometrics, McGraw-Hill Higher Education.

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3. J. Johnston: Econometrics Methods, McGraw-Hill College.
4. G.S. Maddala: Econometrics, John Wiley & Sons.
5. R.S. Pindyck and D.Z. Rubinfeld: Econometrics Methods and Econometrics Forecasts, McGraw-Hill Publishing Co.
6. Rao and Millar: Applied Econometrics, Wadsworth Publishing Company.

## (ECO CO3) : Indian Economic Development and Policy – 1

### 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 Measure, 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. 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 Nathurmka 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), GOI.
7. Monthly Bulletins RBI.

  
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# (ECO C04) : International Finance

## Module -1

International Finance – Functions, Sources and Uses, International Capital Flows. Foreign 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 Monterrey System and Alternative International Monetary Standards, IMF and Problem of International liquidity.

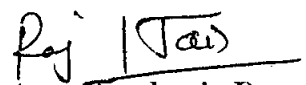
## Module -3

The Theory of Optimum Currency Areas – Growth of Regional Financial Institutions. Reforms in International Monetary System of 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 :

1. Grabbo J. Orlin, International Fincancial markets. Prentice Hall Inc. Engelwood 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 Geoffrey Reed: International Economics MacMillan.
7. Lovi – Maurica: International Financial, Mc Graw-Hill.

  
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# (ECO C05) : Health Economics-I

## Module -1

Introduction to health economics: Concept; the four basic questions; relation between system structure and performance. Health and medical care: An economic perspective: Definition of health; Utility analysis; Medical care; production of good health; Efficiency in health sector and its elements; Pareto efficiency; Economic evaluation of efficiency; Cost and Benefit analysis: Cost identification analysis; Cost benefit analysis (Discounting, value of life, application of cost benefit analysis); Cost effectiveness and cost utility analysis; an application of cost-effectiveness analysis.

## Module- 2

Health care systems and Institutions: Elements of health care system; role and financing methods of third party payers; risk management, reimbursement and consumer cost sharing; the production of medical services. Demand for medical care: Law of demand; relationship between health insurance and demand for medical care; Moral Hazard; elasticities. Medical care production and costs: Short run production function and cost theory of representative medical firm; Long run costs of production; Neo-classical cost theory.

## Module- 3

Demand for Medical Insurance: The conventional theory of demand for private health insurance; Nyman's access theory of demand for private health insurance; Traditional versus managed care insurance product.

Structure, Conduct, performance and market analysis: Relevance of perfectly competitive market to medical care; Monopoly model of market behavior and performance; Monopolistic competition; Oligopoly; Measuring concentration and identifying market power.

## Suggested Readings

1. Rexford E.Snterre and Stephen P. Neum, 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.
3. 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 economics: 3<sup>rd</sup> 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 E 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/ handbook/15740064](http://www.sciencedirect.com/science/handbook/15740064)

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8. David Wonderling, Reinhold Gruen & Nick Black, 2005 Introduction to health economics, Chaptrs 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.

## **(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 form 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, Subtraction, 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 operations 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 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 Applications 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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Compulsory Core Courses

**Paper XIII (ECO 401) – Public Economics – II**

**Module -1**

Public Debt – Sources, Effects, Burden and its Management, 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 Privatization 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 :**

1. R.A. Musgrave and P.B. 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.
8. Chelliah and Kelkar Committee Reports.

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**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. Carbaugh; 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).
5. Soderston and Reed: International Economics, Palgrave Macmillan: 3Rev Ed Edition.

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

**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 & Chenry empirical studies). Living in a Heterogeneous World, World-Islands of Prosperity and How the Other Three Quarters live.

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## Module -2

Theories of Growth: Classical 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 Saving 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 :

1. Chenery, Hollis and Moises Syrquin: Patterns of Developments: 1950-70, Oxford University Press.
2. 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 Economics, 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. Ltd, New Delhi.
6. Thirwall, A.P. Growth and Development, Eighth Edition, Palgrave Macmillan, New York.
7. Thorvaldur Gylfason: Principles of Economic Growth, Oxford University Press.

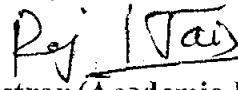
### Elective Core Courses

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. Energy Conservation. Renewable and Non Conventional Sources of Energy. Effect of Energy Shortage. Factor Determining Demand for Energy. Energy Supply and Pricing of Electricity. The Relative Economics of Thermal, Hydel and Nuclear Power Plant. Alternative Energy Sources-Wind Energy, Solar Energy and Bio Mass Energy. Energy Policy in India

  
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## Module-2

Features and Impediments of Infrastructure Financing. Sources of Financing Infrastructure Project-Debt Equity Including Public Private Partnership (PPP). Infrastructure Financing Institutions- Infrastructure Finance Company (IFC), Infrastructure Development Finance Company (IDFC), India Infrastructure Finance Company Limited (HPCL). Risk Management.

## Module-3

Education and Economic Growth. Approaches to Educational Planning –Social Demand, Rate of Return and Manpower Planning Approach. The Case for Universal, Free Elementary Education. Structure of Higher Education. Public and Private Financing of Education. Human Resources and Human Capital Development. Education Policy.

Urban and Rural Water Supply. Development of Social Services.

Health and Economic Development. Health Dimensions of Development. Determinants of Health-Poverty, Malnutrition, Illiteracy and lack of Information. Economics Dimensions of Health Care. Financing of Health Care. National Health Programmes.

### Books Recommended:

1. Dash L.N., Infrastructure Development and The Indian Economy. Atalantic Publisher, New Delhi.
2. Samanta P.K., Mohanty A.K., Ports Infrastructure and Economic Development.
3. India Infrastructure Report 2015 , OUP India Co. (Oxford)
4. Report of Ministry of Human Resources and Development.

## (ECO DO2) : 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 MI. 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).

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### 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. Random Effects: GLS, Testing for Random Effects, Estimation of Dynamic Panel Model. Introduction to E Views Software.

**Note:** Use of non-programmable calculator is permitted.

#### Books Recommended:

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

### (ECO D03) : Indian Economic Development and Policy – II

#### 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 there in, 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 :

1. Arvind Panagaria: India-The Emerging Giant.
2. Rudra Dutt and Sundrram Indian Economy, S. Chand (Latest Ed.) (Hindi and English)
3. A. N. Agrawal: Indian Economy, New Age International Pub. (P) Limited, (Latest Ed.) (Hindi and English).

  
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4. Laxmi Narayan Nathurmk: Bhartiya Arthshastra , College Book House (Latest Ed.)
5. Mishra & Puri: Indian Economy, Himalaya Publishing House (Latest Ed.) Hindi and English)
6. Uma Kapila: Indian Economy.

### **(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. Mutby, Sampling Methods,
2. 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.

### **(ECO D05) : Health Economics- II**

#### **Module- 1**

Health financing: Concept; National Health Accounting Sources and uses of funds Health Budgeting. Health Care Financing system, Sources of Health care spending. Three principles; Relationship of Health spending with health transition, demographic change and epidemiological transition; its indicators; Out of pocket and catastrophic health care expenditure. Health inequalities and its measurement; Determinants of Health.

Risk pooling: concept; ways to pool revenues; level of risk pooling; general revenue based systems; Social health insurance; community health insurance; Re-insurance; Private health insurance

  
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## Module- 2

Resource allocation: Concept; Dimensions; Organization; Provider payment methods: Fees, Capitation, Salary; and, Salary plus bonus; Hospital payment method: Per admission; Diagnostic related grouping; Per-diem; Line-item Budget; Global budget; Contracting: Effect of payment systems on patients

Quality adjusted life years and Disability Adjusted life years: Concept, Computation, Limitation and problems, relationship between the two.

## Module- 3

Instrumental activities of Daily Living and Activities of Daily Living: Concept and scale; Government, health and medical care: Economic reasons and type of government intervention; Market failure in health sector: Concept, Reason and role of Government; National rural health mission; National urban Health mission; Medical tourism in India; Performance of India and Rajasthan on Infant Mortality Rate, Under-five mortality rate, maternal mortality ratio, Life Expectancy.

### Suggested Readings

1. Rexford E. Snrterre and Stephen P. Neum, 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.
3. 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 economics: 3<sup>rd</sup> 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 E Siegel, Lousie B russel, and Milton C Weinstein, 1996, Cost effectiveness in health and medicine, new York: Oxford University Press.
7. Policy document of National Health Mission

## (ECO D06) : History of Economic Thought

### Module -1

Mercantilism Physiocrats, 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 o Adam Smith.

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

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## Module -2

Critics of the classical school – Sismondi socialist and the nationalist school position senior and the four postulates, J.S. Mill – four propositions 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 labour critiques of Marx revival 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:

1. 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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