

# **ST. XAVIER'S COLLEGE, RANCHI**

*(AN AUTONOMOUS COLLEGE OF RANCHI UNIVERSITY)*

## **SYLLABUS FOR M.A. ECONOMICS**

**SESSION: 2011-2013**

**DEPARTMENT OF ECONOMICS**

## COURSE OUTLINE

### 1<sup>ST</sup> YEAR

SEMESTER-I				SEMESTER-II			
PAPER NO.	CODE	TITLE	MARKS	PAPER NO.	CODE	TITLE	MARKS
I	EC101	Theory of Consumer Behaviour and Production	100	VII	EC201	Theories of Market	100
II	EC102	Macro Economic Theory -I	100	VIII	EC202	Macro Economic Theory -II	100
III	EC103	Public Economics	100	IX	EC203	Financial Institutions and Markets	100
IV	EC104	Indian Public Finance	100	X	EC204	Welfare Economics	100
V	EC105	India's Foreign Trade & International Institution	100	XI	EC205	Indian Economic Development	100
VI	EC106	Elementary Mathematical Economics	100	XII	EC206	Statistics and Econometrics	100

**2<sup>ND</sup> YEAR**

SEMESTER-III				SEMESTER-IV			
PAPER NO.	CODE	TITLE	MARKS	PAPER NO.	CODE	TITLE	MARKS
XIII	EC301	Growth Economics	100	XIX	EC401	Economics of Development	100
XIV	EC302	International Trade	100	XX	EC402	Research Methodology	100
XV	EC1A303 EC1B303	Optional – I	100	XXI	EC5A403 EC5B403	Optional - V	100
XVI	EC2A304 EC2B304	Optional – II	100	XXII	EC6A404 EC6B404	Optional - VI	100
XVII	EC3A305 EC3B305	Optional – III	100	XXIII	EC7A405 EC7B405	Optional - VII	100
XVIII	EC4A306 EC4B306	Optional – IV	100	XXIV	EC8A406 EC8B406	Optional - VIII	100
OPTIONAL PAPERS							
GROUP - A				GROUP - B			
PAPER NO.	TITLE		MARKS	PAPER NO.	TITLE		MARKS
XV EC1A303	Advance Mathematical Economics – I		100	XV EC1B303	Theories of Agricultural Economics		100
XVI EC2A304	Advance Mathematical Economics – II		100	XV IEC2B304	Economics of Rural Market		100
XVII EC3A305	SINGLE EQUATION MODEL		100	XVII EC3B305	THEORIES OF DEMOGRAPHY		100
XVIII EC4A306	SIMULTANEOUS EQUATION MODELS		100	XVIII EC4A306	Population Dynamics		100
XXI EC5A403	OPERATION RESEARCH IN ECONOMICS		100	XXI EC5B403	INDIAN AGRICULTURE PROBLEMS AND POLICIES		100
XXII EC6A404	GROWTH MODELS AND FLUCTUATIONS		100	XXII EC6B404	Globalisation and Agriculture		100
XXIII EC7A405	ECONOMETRICS:QUALITATIVE AND DYNAMIC ECONOMETRICS		100	XXIII EC7B405	POPULATION GROWTH AND DEVELOPMENT		100
XXIV EC8A406	TIME SERIES and MULTI VARIATE ANALYSIS		100	XXIV EC8B406	INDIAN DEMOGRAPHY AND POPULATION POLICY		100

**TOTAL:                      PAPERS – 24,                      MARKS – 2400,                      OPTIONAL - 08**

<b>Semester</b>	<b>I</b>
<b>Paper No.</b>	<b>I</b>
<b>Title</b>	<b>Theory of Consumer Behaviour and Production</b>

### **Unit – 1: Consumer Behaviour and Demand Analysis**

- 1.1 Theories of demand –utility; indifference curve (income and substitution effects; Slutsky theorem, compensated demand curve) and their applications;
- 1.2 Indirect utility demand functions (Hicksian and Marshallian)
- 1.3 Elasticity (price, cross, income) of demand and elasticity of supply;
- 1.4 Revealed Preference theory;
- 1.5 Revision of demand theory by Hicks; Consumer’s Surplus;
- 1.6 Inter-temporal consumption;
- 1.7 Recent developments in demand; Elementary theory of price formation demand and supply equilibrium; Cobweb theorem; lagged adjustment in interrelated markets

### **Unit - 2: Theory of Production and Cost**

- 2.1 Marginal productivity, rate of technical substitution, elasticity of input substitution
- 2.2 Production function – short period and long period; Law of Variable Proportions and Returns to Scale;
- 2.3 Isoquants least cost combination of inputs; Leontief’s Isoquants,
- 2.4 Returns to factors; Economics of Scale and scope, learning curve; Multiproduct Firm;
- 2.6 Cobb-Douglas, CES, VES;
- 2.7 Empirical work on, Production Function;
- 2.8 Traditional and Modern theories of cost

### **Basic Reading List:**

1. Microeconomics (fifth edition) by Robert S Pindyck and Daniel L Rubinfeld, Prentice Hall..
2. Microeconomic Theory: Basic Principles and Extensions (eighth edition) by Walter Nicholson, South Western Thomson Learning, 2002.
3. Microeconomic Analysis (third edition) by Hal R Varian, W.W. Norton and Co.
4. Baumol: Economic theory and operations analysis
5. Koutsoyiannis: Modern Microeconomics
6. G S madala: Microeconomics
7. Price Theory and Applications, (fifth edition) by Steven E Landsburg, South Western Thomson Learning, 2002.
8. Readings in Microeconomics, by Breit, William and Hochman, Harold M., Rinehart and Winston Inc., 1968.

<b>Semester</b>	<b>I</b>
<b>Paper No.</b>	<b>II</b>
<b>Title</b>	<b>Macro Economic Theory – I</b>

**Unit – 1: Micro foundations:**

- 1.1 Macroeconomics: micro foundations, aggregation problem, macro economic problems;
- 1.2 Structure of national accounts, key concepts in measurement for both closed and open economies, computational issues, input-output accounting.

**Unit – 2: Consumption Function:**

- 2.1 Absolute Income Hypothesis, Relative Income Hypothesis, Permanent Income and Life Cycle Hypotheses,
- 2.2 Consumption under Uncertainty – Modern approach.

**Unit – 3: Investment Function:**

- 3.1 Keynesian Approach,
- 3.2 Accelerator Theory
- 3.3 Neo-Classical Theory of Investment
- 3.2 Tobin's Q Theory of Investment.

**Unit – 4: Demand for Money:**

- 4.1 Quantity theory of money, Keynesian approach,
- 4.2 Patinkin and the Real Balance Effect
- 4.2 Baumol and Tobin's contribution,
- 4.3 Friedman's restatement of quantity theory of money, revival of monetarism.

**Unit – 5: Supply of Money :**

- 5.1 Financial intermediation — a mechanistic model of bank deposit determination;
- 5.2 A behavioural model of money supply determination,
- 5.3 A demand determined money supply process;
- 5.4 High powered money and Money multiplier
- 5.5 Budget deficits and money supply; money supply and open economy; control of money supply, seignorage.

**Basic Reading List:**

1. Ackley,G. (1978), Macroeconomics : Theory and Policy, Macmillan, New York.
2. SB Gupta: monetary Planning for India
3. SB Gupta: Monetary Economics Institutions Theory and Policy
4. Donberg and McDougal
5. Belley: National Income and Price
6. Lockett
7. Victoria S
8. Shikhtar
9. Blackhouse, R. and A. Salansi (Eds.) (2000), Macroeconomics and the Real World (2 Vols.), Oxford University Press, London.
10. Branson, W.A. (1989), Macroeconomic Theory and Policy, (3rd Edition), Harper and Row, New York.
11. Dornbusch, R. and F. Stanley (1997), Macroeconomics, McGraw Hill, Inc., New York.
12. Hall, R.E. and J.B. Taylor (1986), Macroeconomics, W.W. Norton, New York.
13. Heijdra, B.J. and V.P. Fredericck (2001), Foundations of Modern Macroeconomics, Oxford University Press, New Delhi.

14. Jha, R. (1991), Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd., New Delhi.
15. Romer, D.L. (1996), Advanced Macroeconomics, McGraw Hill Company Ltd., New York.
16. Scarfe, B.L. (1977), Cycles, Growth and Inflation, McGraw Hill, New York.
17. Shapiro, E. (1996), Macroeconomic Analysis, Galgotia Publications, New Delhi.
18. Surrey, M.J.C. (Ed.) (1976), Macroeconomic Themes, Oxford University Press, Oxford

<b>Semester</b>	<b>I</b>
<b>Paper No.</b>	<b>III</b>
<b>Title</b>	<b>PUBLIC ECONOMICS</b>

**Unit- 1. Introduction -**

- 1.1 Market Failure and Rationale for Government Intervention;
- 1.2 The Role of the Government in a Changing Perspective
- 1.3 Provision of Private Goods, Public Goods, Social Goods, Merit Goods and Mixed Goods.
- 1.4 Public Goods: Pure and Impure Public Goods; Samuelson Condition, Free Rider Problem, Lindahl Solution;

**Unit- 2. Principles of Taxation –**

- 2.1 Principle of Fiscal Neutrality, Excess Burden, Doctrine Principle of Equity, Benefit Principle, Bowen and Lindhal Models, Ability to pay Principle, Administrative Efficiency .
- 2.2 Application of Taxation Principles in Developing Countries.
- 2.3 Meaning, Types and Measurement of Taxable Capacity.

**Unit- 3. Impact and Incidence of Taxes**

- 3.1 Concept of Impact and Incidence
- 3.4 Theories of Shifting and Incidence
- 3.5 Shifting under Different Market Conditions.

**Unit- 4. Public Expenditure**

- 4.1 Wagner’s Law
- 4.2 Wiseman – Peacock Hypothesis
- 4.3 Pure Theory of Public Expenditure
- 4.4 Social Cost- Benefit Analysis

**Unit- 5. Public Debt.**

- 5.1 Classical, Keynesian and Post – Keynesian Approaches of Public Debt.
- 5.2 Burden of Public Debt.
- 5.3 Public Debt Management

**Basic Reading List:**

1. Richard A. Musgrave (1989), Public Finance in Theory and Practice McGraw Hill Book Company, New York.
2. Buchaman J.M. (1970), The Public Finances, Richard D.Irwin, Homewood.
3. Jha H. (1998), Modern Public Economics, Routledge, London.
4. Singh S.K. (1986) Public Finance in Developed and Developing Countries, S.Chand and Company Ltd, New Delhi.
5. Chelliah R.J. (1971), Fiscal Policy in Underdeveloped Countries.
6. Hemlata Rao (2006) Fiscal Federalism –Issues and Policies, New Country Publications, New Delhi.
7. Atkinson A.B. and J.E. Siglitz (1980). Lectures on Public Economics, Tata MacGraw Hill, New Delhi.
8. R K Lekhi
9. Government of India, Reports of the Tax Reforms Committee.

10. Government of India, Budget Documents (Various years).
11. Govinda Rao M. and Sen Tapas K. Fiscal Federalism in India: Thoery and Practice, 1996.
12. Mundle, Sudipto (ed.) Public Finance-Policy Issues for India, Oxford Uni. Press, 1997.
13. Srivastava, D. K. (Ed.) Fiscal Federalism in India: Contemporary Challenges and Issues Before Eleventh Finance Commission, 2001.
14. Reserve Bank of India, Hand Book of Statistics on Indian Economy (Various issues).
15. Reserve Bank of India, State Finances (Various Issues).

<b>Semester</b>	<b>I</b>
<b>Paper No.</b>	<b>IV</b>
<b>Title</b>	<b>INDIAN PUBLIC FINANCE</b>

#### **Unit- 1: Fiscal Federalism**

- 1.1 Principles of multi-unit finance;
- 1.2 Fiscal federalism in India;
- 1.3 Vertical and horizontal imbalance;
- 1.4 Assignment of function and sources of revenue;
- 1.5 Constitutional provisions; Finance Commission and Planning Commission;
- 1.6 Resource transfer from Union to States — Criteria for transfer of resources;
- 1.7 Centre-State financial relations in India;
- 1.8 Problems of states' resources and indebtedness;
- 1.9 Transfer of resources from Union and States to local bodies.

#### **Unit-2: Indian Public Finances**

- 2.1 Indian tax system;
- 2.2 Revenue of the Union, States and local bodies;
- 2.3 Major taxes in India: base of taxes, direct and indirect taxes, taxation of agriculture,expenditure tax, reforms in direct and indirect taxes, taxes on services;
- 2.4 Non-tax revenue of Centre, State and local bodies;
- 2.5 Analysis of Central and State government budgets; Lack of flexibility in Central and State budgets, shrinking size of development finance through budgets;
- 2.5 Trends in public expenditure and public debt;
- 2.6 Fiscal crisis and fiscal sector reforms in India;
- 2.7 Reports of Finance Commissions in India.

#### **Basic Reading List :-**

- 1.Tripathy R.N. Public Finance in Underdeveloped Countries.
2. Dr. Joshi P.L. Zero Base Budgeting Technology in Government, Dhruv and Deep Books, Bombay.
3. Dr.Tyagi B.P., Public Finance, Jai Prakash Nath Pub.Meerat (UP).
4. Mithani D.M. Principles of Public Finance and Fiscal Policy Himalaya Publishing House, New Delhi.
5. Ruddar Datt and K.P.M. Sundharam (2006), Indian Economy, S.C.Chand and Company Ltd, New Delhi.
6. Ashutosh Ravavikar, Fiscal Deficit and Inflation in India, Macmillan India Ltd. New Delhi.
7. Chelliah, R.J. Towards Sustainable Growth: Essays in Fiscal and Financial Sector Reforms in India, Oxford University Press, 1996
8. Government of India, Reports of the Tax Reforms Committee.

9. Government of India, Budget Documents (Various years).
10. Govinda Rao M. and Sen Tapas K. Fiscal Federalism in India: Theory and Practice, 1996.
11. Mundle, Sudipto (ed.) Public Finance-Policy Issues for India, Oxford Uni. Press, 1997.
12. Srivastava, D. K. (Ed.) Fiscal Federalism in India: Contemporary Challenges and Issues Before Eleventh Finance Commission, 2001.
13. Reserve Bank of India, Hand Book of Statistics on Indian Economy (Various issues).
14. Reserve Bank of India, State Finances (Various Issues).

<b>Semester</b>	<b>I</b>
<b>Paper No.</b>	<b>V</b>
<b>Title</b>	<b>INDIA'S FOREIGN TRADE AND INTERNATIONAL INSTITUTIONS</b>

**India's Foreign Trade & International Institution**

**Unit- 1: India's Foreign Trade and Investments:**

- 1.1 Pattern and structure of India's foreign trade; Terms of trade;
- 1.2 Foreign investment flows;
- 1.3 India's balance of payments account and correction policies;
- 1.4 Foreign debt situation.

**Unit- 2: Policy Framework and Promotional Measures:**

- 2.1 India's foreign trade and investment policy; Policy making body and mechanism;
- 2.2 Export promotion measures and infrastructure support – export and trading, houses,
- 2.3 Export promotion schemes and incentives;
- 2.4 Institutional arrangements for export promotion;
- 2.4 Export processing/special economic zones, 100% EOUs.

**Unit- 3: International Financial Movements**

- 3.1 International trade and financial institutions – IMF, World Bank & WTO.
- 3.2 Foreign investment and their impact on the Indian Economy.
- 3.3 Role of Multinational corporation.

**Basic Readings:**

1. Mithani D.M. (1997), International Economics, Himalaya publishing House, Mumbai
2. Economic Survey, Govt. of India.
3. Export-import Policy and Other Documents, Govt. Of India.



4. Mannur, H.G., International Economics, 2 nd ed., Vikas Publishing House,. New Delhi, 1999.
5. Bhagwati, J.N. : International Trade : Selected Readings, McMillan University . Press, 1998.

<b>Semester</b>	<b>I</b>
<b>Paper No.</b>	<b>VI</b>
<b>Title</b>	<b>Elementary Mathematical Economics</b>

### **UNIT-1: Differentiation and Optimisation :**

- 1.1 Limits and continuity
- 1.2 Techniques of differentiation
- 1.3 Economic Applications of Differentiation- Constrained maximisation

### **UNIT-2: Integration:**

- 2.1 Techniques of Integration
- 2.2 Economic applications- CS, PS, PV, CV.

### **UNIT-3: Differential Equations:**

- 3.1 First order Differential Equations : Variable separable case, homogenous case, standard linear differential equations,
- 3.2 Economic Applications.

### **UNIT-4: Linear Programming:**

- 4.1 linear Algebra, Convex Set, basis, Vector Analysis
- 4.2 Matrices: Types, Inverse, Crammer's Rule
- 4.3 Linear Programming : Setting up of the problem, various definitions,
- 4.4 Solution by graphical method.

### **Basic Reading List:**

1. Chiang, A.C. (1984) : Fundamental Methods of Mathematical Economics, McGraw Hill, 3rd Edition.
2. Allen, R.G.D. (1983) : Mathematical Analysis for Economists, Macmillan.
3. Aggarwal, S. C. and R.K. Rana : Basic Mathematics for Economists, V.K. (India) Enterprises, New Delhi.

4. E. Silberg: Structure of Microeconomics: A Mathematical approach

<b>Semester</b>	<b>II</b>
<b>Paper No.</b>	<b>VII</b>
<b>Title</b>	<b>Theories of Market</b>

**Unit – 1: Market Power, Market Structure and Externalities**

- 1.1 Perfect competition short run and long run equilibrium of the firm and industry, price and output determination, supply curve; Economic efficiency and welfare, price controls and shortages, tax incidence analysis, trade restrictions.
- 1.2 Source of monopoly power, measuring monopoly power, social cost of monopoly power, models of monopoly, profit maximization and output choice, monopoly and product quality, price discrimination, regulation of monopoly contestable markets,
- 1.3 Oligopoly with a fixed number of firms, traditional models of oligopoly (Cournot, Stackelberg, Bertrand, Edge Worth, Chamberlain, kinked demand curve) and collusive (cartels and mergers, price leadership and basing point price system), product differentiation;
- 1.4 Sources of externalities, solutions to the externalities problem, attributes of public goods, pricing of public goods.
- 1.5 Monopolistic competition general and Chamberlain approaches to equilibrium, equilibrium of the firm and the group with product differentiation and selling cost, excess capacity under monopolistic and imperfect competition, criticism of monopolistic competition;
- 1.6 Price and output, determination under Monopsony and bilateral monopoly; workable competition structure, conduct and performance norms.

**Unit – 2: Game Theory and Competitive Strategy**

- 2.1 Gaming and strategic decisions, non-cooperative versus cooperative games,
- 2.2 Nash equilibrium, repeated games, sequential games, threats-commitments-credibility, entry deterrence, bargaining, auctions,
- 2.3 Game theory models of pricing.

**Unit – 3: Factor Markets and Markets with Asymmetric Information**

- 3.1 Competitive factor markets, profit maximization and derived demand, comparative statics of input demand,
- 3.2 Marginal productivity and determinants of factor shares,
- 3.3 Monopsony in input markets, monopoly in the supply of inputs
- 3.4 Implications of asymmetric information, market signaling, moral hazard,

**Basic Reading List:**

1. Microeconomics (fifth edition) by Robert S Pindyck and Daniel L Rubinfeld, Prentice Hall.
2. Microeconomic Theory: Basic Principles and Extensions (eighth edition) by Walter Nicholson, South Western Thomson Learning, 2002.
3. Microeconomic Analysis (third edition) by Hal R Varian, W.W. Norton and Co.
4. R Bilas
5. A Koutsoyiannis: Microeconomics
6. Baumol: Microeconomic Analysis
7. A Sen
8. Henderson and Quandt
9. Stonier and Hague: Economics
10. Bawel Samuel

11. Price Theory and Applications, (fifth edition) by Steven E Landsburg, South Western Thomson Learning, 2002.
12. Readings in Microeconomics, by Breit, William and Hochman, Harold M., Rinehart and Winston Inc., 1968.

<b>Semester</b>	<b>II</b>
<b>Paper No.</b>	<b>VIII</b>
<b>Title</b>	<b>Macro Economic Theory - II</b>

**UNIT-1: Neo-classical and Keynesian Synthesis:**

- 1.1 Neo-classical and Keynesian views on interest;
- 1.2 The IS-LM model;
- 1.3 Extension of IS-LM model with government sector; Relative effectiveness of monetary and fiscal policies;
- 1.4 Extension of IS-LM models with labour market and flexible prices.

**UNIT-2: Inflation :**

- 2.1 Various concepts of Inflation: Core, Headline, Threshold,
- 2.2 Its causes and effects,
- 2.3 Quantity theory view, Keynes' view.
- 2.4 Phillips curve analysis, long run Phillips curve,
- 2.5 Monetarist and Structuralist views of inflation.
- 2.6 Inflation and Growth

**UNIT-3: Trade Cycle Theories :**

- 3.1 Accelerator-multiplier interaction models,
- 3.2 Theories of Schumpeter, Kaldor, Samuelson and Hicks, Investment and Savings;
- 3.3 Control of business cycles — relative efficacy of monetary and fiscal policies.

**UNIT-4: Monetary and Fiscal Policies :**

- 4.1 Objectives, conflicts among objectives,
- 4.2 Mundell model, Swan model.
- 4.3 Recent Developments : Monetarism. New-classical macroeconomics :  
Rational expectation revolution and Real business cycle theory.  
New-Keynesian macroeconomics.

**Basic Reading List:**

1. Ackley,G. (1978), Macroeconomics : Theory and Policy, Macmillan, New York.
2. Blackhouse, R. and A. Salansi (Eds.) (2000), Macroeconomics and the Real World (2 Vols.), Oxford University Press, London.
3. Branson, W.A. (1989), Macroeconomic Theory and Policy, (3rd Edition), Harper and Row, New York.
4. Dornbusch, R. and F. Stanley (1997), Macroeconomics, McGraw Hill, Inc., New York.
5. Hall, R.E. and J.B. Taylor (1986), Macroeconomics, W.W. Norton, New York.
6. Heijdra, B.J. and V.P. Fredericck (2001), Foundations of Modern Macroeconomics, Oxford University Press, New Delhi.
7. Jha, R. (1991), Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd., New Delhi.

8. Romer, D.L. (1996), Advanced Macroeconomics, McGraw Hill Company Ltd., New York.
9. Scarfe, B.L. (1977), Cycles, Growth and Inflation, McGraw Hill, New York.
10. Shapiro, E. (1996), Macroeconomic Analysis, Galgotia Publications, New Delhi.
11. Surrey, M.J.C. (Ed.) (1976), Macroeconomic Themes, Oxford University Press, Oxford.

<b>Semester</b>	<b>II</b>
<b>Paper No.</b>	<b>IX</b>
<b>Title</b>	Financial Institutions and Markets

#### **UNIT-1: NATURE AND ROLE OF FINANCIAL SYSTEM.**

- 1.1 Money and finance, money and near money.
- 1.2 Nature and structure of financial system.
- 1.3 Functions of the financial market.
- 1.4 Indicators of Financial development.

#### **UNIT-2: COMMERCIAL BANKING**

- 2.1 Functions of Commercial Banking
- 2.2 Credit Creation and It's Limitations
- 2.3 Investment banking, Personal Banking, Merchant banking,
- 2.4 Investment policy of commercial Bank.
- 2.5 Financial Inclusion- Development of Social Banking

#### **UNIT-3: CENTRAL BANKING**

- 3.1 Functions of Central Bank
- 3.2 Instruments of Credit controls
- 3.3 Monetary Policy

#### **UNIT-4: NON BANKING FINANCIAL INTERMEDIARIES**

- 4.1 Definition and types of NBFIs.
- 4.2 Measures to control NBFIs operations
- 4.3 Money Lenders and defects in their lending operations
- 4.4 Microfinancing Institutions

#### **UNIT-5: FINANCIAL MARKETS IN INDIA**

- 5.1 Indian Money Market – structure and characteristics
- 5.2 Sub Markets – Call Money Market, Treasury bill Market, commercial bill market, Certificate of Deposits, Commercial Papers, Discount Market
- 5.3 Indian Capital Market – Structure and types.
- 5.4 Role of SEBI ( Securities and Exchange Board of India) and IRDA (Insurance Regulatory Development Authority)

**Basic Reading List:**

- 1) Bhole L. M. Financial institutions and Markets. Tata McGraw Hill com. New Delhi
- 2) Johnson. H. J. Financial Institutions and Markets. Mc Graw Hill New York.
- 3) Khan M. Y. Indian financial system. Tata Mc Graw Hill New Delhi
- 4) Prasad K. N. Development of India's financial system. Samp and sons New Delhi.
- 5) Money, Banking, International trade and public finance by D. M. Mithani.
- 6) Central banking in underdeveloped Money Market – by Sen S. N.

<b>Semester</b>	<b>II</b>
<b>Paper No.</b>	<b>X</b>
<b>Title</b>	<b>WELFARE ECONOMICS</b>

**UNIT 1. CONSUMER SURPLUS AND WELFARE ECONOMICS**

- 1.1 Marshallian welfare economics
- 1.2 Concept of Consumer's Surplus, measurements difficulties involved, Criticism
- 1.3 Hick's Four Consumer's surpluses,
- 1.4 Consumer's Surplus and Tax-Bounty Analysis.

**UNIT 2. PARETIAN WELFARE ECONOMICS**

- 2.1 Pareto optimality – Optimum exchange conditions, The Production optimum,  
The consumption optimum
- 2.2 Concepts of Contract curve and production Possibility Frontier,
- 2.3 Top level optimum; Infinite number of non-comparable Optima vs. unique social optima.

**UNIT 3. COMPENSATION CRITERIA**

- 3.1 Contributions of Barone, Kaldor and Hicks.
- 3.2 The Scitovsky double criterion.
- 3.3 Concept of community indifference map.

**UNIT 4. VALUE JUDGEMENT AND WELFARE ECONOMICS**

- 4.1 Samuelson's utility possibility curve.
- 4.2 Bergson's social welfare function.
- 4.3 Arrow's Impossibility theorem.

## UNIT 5. RECENT APPROACHES

- 5.1 Second best optima
- 5.2 Marginal cost pricing
- 5.3 Cost-benefit analysis, Interdependent utilities.
- 5.4 Dynamic welfare economics.

### BASIC READING LIST:

- 1) Arrow, K. J. (1951), Social choice and Individual Values, Yale University Press, New Haven.
- 2) Baumol, W. J. (1965), Welfare Economics and the Theory of the State (Second Edition) Longmans, London.
- 3) Baumol, W. J. (Ed.) (2001), Welfare Economics, Edward Elgar Publishing Ltd U K.
- 4) Broadway, R. W. and N. Bruce (1984), Welfare Economics, Basil Blackwell, Oxford.
- 5) Duesenberry, J. S. (1949), Income, Saving and the Theory of consumer Behaviour, Harvard University Press, Cambridge, Mass.
- 6) Feldman, A. M. (1980), Welfare Economics and Social Choice theory Martinus Nijhoff, Boston.
- 7) Graaff J. de V. (1957), Theoretical Welfare Economics, Cambridge University Press, Cambridge.
- 8) Little, I. M. D. (1939), A. Critique of Welfare Economics (2nd Edition), Oxford University press, Oxford.
- 9) Marshall, A. (1946), Principles of Economics, Macmillan, London.
- 10) Myint, H. (1948), Welfare Economics, Macmillan, London.
- 11) Nicholas, B. (Ed.) (2001), Economic Theory and the Welfare state, Edward Elgar Publishing Ltd., U. K.
- 12) Pigou, A. C. (1962), The Economics of Welfare (4th Edition) Macmillan.

13) Quirk, J. and R. Saposnik (1968), Introduction to General Equilibrium theory and Welfare Economics, McGraw Hill, New York.

14) Samuelson, P. A. (1947), Foundations of Economic Analysis, Harvard University Press, Cambridge, Mass.

<b>Semester</b>	<b>II</b>
<b>Paper No.</b>	<b>XI</b>
<b>Title</b>	<b>INDIAN ECONOMIC DEVELOPMENT</b>

### **Unit – 1: Overview**

1.1 State of the Economy at the Beginning of the Fifties - Policy of Planned Development – Growth and Structural Change till the 'eighties – Evolution of Controls and Obstacles to Fast Growth – New Economic Policy – Performance of the Economy since 1991 – Major Aspects of Transformation.

### **Unit – 2: Agricultural and Rural Sector**

Review of Agricultural Growth – Land Reforms – Agricultural Research and Green Revolution – Review Price and Other Policies relating to Agriculture; Policy Initiatives needed in relation to Agriculture and Rural Sector – Non-Farm Activities, Diversification and Exports – Impact of Liberalisation and WTO; Investment in agriculture and Irrigation – Water Policy – Other strategies.

### **Unit – 3: Industrial Service and Infrastructure Sectors**

The Growth and Maturing of Indian Industry since Liberalisation – Productivity Growth and Rise in Competitiveness – Exports – Rise of Service Industry – India and I.T. – Policy regarding Public Enterprises – Disinvestment and Partial Privatisation – Impact of WTO and Trade Liberalisation – State of Infrastructure – Reforms: Restructuring, Pricing and Regulation – Promoting Investment in Infrastructure – Public – Private Partnership.

### **Unit – 4: Social Development**

Human Development Indicators: Review of Change since early Fifties – Wide Regional Variations – Measurement of Poverty – Extent of Reduction in Poverty – Demographic Transition – Regional Differences – Health Services, Health Policy; Education Policy; Financing of Health and Education – Employment and Unemployment Trends; Employment Guarantee Scheme – Long-term Policy to reduce Poverty and Unemployment.

### **Texts:**

1. Kapila, Uma (ed.) Indian Economy Since Independence, Academic Foundation, 2001.

2. Jalan, Bimal (ed.) The Indian Economy: Problems and Prospects, Penguin Books. 1992.
3. Virmani, A. (2004). Accelerating Growth and Poverty Reduction: A Policy Framework for Indian Development. Academic Foundation, New Delhi.

**References:**

1. Rangarajan, C. (2004): Select Essays on Indian Economy. Vol.1&2. Academic Foundation, New Delhi.
2. Krueger Anne (ed.) Economic Policy Reforms and the Indian Economy. Oxford University Press 2003.
3. Mohan, Rakesh (ed.) Facets of the Indian Economy, Oxford University Press. 2003.
4. Chakravarty, Sukhamoy. Development Planning: The Indian Experience. Oxford University Press. 1987.
5. Joshi, Vijay and I.M.D.Little. India's Economic Reforms 1991-2001, Oxford University Press. 1998.
6. Indira Gandhi Institute of Development Research, India Development Reports: 1997, 1999, 2002, Oxford University Press.
7. Planning Commission, National Human Development Report, Oxford University Press, 2002.
8. Planning Commission, Ninth and Tenth Five Year Plans, Government of India.
9. NCAER. India Infrastructure Report.
10. Acharya, Shankar India's Economy. Academic Foundation 2003.
11. Ahluwalia, M. and et al. Ed. (2002). Macroeconomics and Monetary Policy: Issues for a Reforming Economy. OUP, New Delhi.
12. Virmani, Arvind (2004). Economic Reforms: Policy and Institutions. Some Lessons from Indian Reforms. ICRIER Working paper No.121..
13. Virmani, Arvind (2004). India's Economic Growth: From Socialist Rate of Growth to Bharatiya Rate of Growth. ICRIER Working Paper No.122.
14. Virmani, Arvid (2004). Sources of India's Economic Growth: Trends in Total Factor Productivity. ICRIER Working Paper No. 131.
15. Rao, M. Govinda. Ed. (2002). Development, Poverty, and Fiscal Policy: Decentralization of Institutions. OUP, New Delhi.
16. Also RBI Annual Report; Economic Survey; Ex-Im Policy; Important Committee Reports.



<b>Semester</b>	<b>II</b>
<b>Paper No.</b>	<b>XII</b>
<b>Title</b>	<b>Statistics and Econometrics</b>

**Unit – I: Probability and Random Variables:**

- 1.1 Definitions and axioms of probability,
- 1.2 Probability set functions; probability density functions, distribution and characteristic functions;
- 1.3 Conditional probability.

**Unit – II: Some Well-known Distributions:**

- 2.1 Binomial, Poisson, Uniform, Normal,
- 2.2 t, F, and Chi-square,
- 2.3 Bivariate Normal Distribution.

**Unit – III: Sampling Methods, Sampling Distributions and Limiting Distributions:**

- 3.1 Random sampling,
- 3.2 Sampling distributions of the mean and the variance.
- 3.3 Limiting distributions, stochastic convergence, the Central Limit Theorem.

**Unit- IV: Statistical Inference:**

- 4.1 Point and interval estimation.
- 4.2 Unbiasedness, asymptotic unbiasedness, consistency, and efficiency of estimators.
- 4.3 Testing of hypotheses, errors of first and second kind, power of the test,

**Unit- V: Simple Linear Regression:**

- 5.1 Method of least squares,

5.2 Properties of OLS estimators and goodness of fit.

5.3 Gauss Markov Theorem.

**Basic Reading List:**

1. Robert V. Hogg and Elliott A. Tanis: Probability and Statistical Inference, 7th edition (2006).
2. Robert V. Hogg and Allen T. Craig: Introduction to Mathematical Statistics, 3rd edition.
3. James Stock and R.W. Watson: Introduction to Econometrics (International edition 2007)
4. Jeffrey Wooldridge: Introductory Econometrics: A Modern Approach, (2006)
5. T. Yamane: Statistics
6. P.G. Hoel: Introduction to Statistics, Mathematical Statistics
7. Kenney & Keeping: Mathematics of statistics (vol I & II)
8. Bedarbern

<b>Semester</b>	<b>III</b>
<b>Paper No.</b>	<b>XIII</b>
<b>Title</b>	<b>Growth Economics</b>

**Module 1 Introduction**

- 1.1 Economic growth and Economic Development
- 1.2 Indicators of Economic growth – various indices, capability approach
- 1.3 Factors affecting economic growth - capital, labour & technology.

**Module- 2: Some Growth Models-I**

- 2.1 The Harrod - Domar Models
- 2.2 Mead's Neo - classical model of Economic Growth
- 2.3 The Solow Model of Long-Run Growth
- 2.4 Cambridge Criticism of Neo-classical analysis of Growth

**Module- 3: Some Growth Models-II : Models of technical change**

**[neutral & non-neutral technical change embodies and disembodied technical change]**

- 3.1 Kaldor's Model of Growth
- 3.2 The Pasinetti Model of Profit & Growth
- 3.3 Joan Robinson's model of Capital Accumulation
- 3.4 Total Factor Productivity & Growth accounting
- 3.5 Intellectual capital - learning by doing ; role of Learning, education & research Entrepreneurship in Economic Development

**Basic Reading List:**

1. Theories of Economics of Growth & Development - Adelman (Stanford Uni. Press)
2. An Introduction Development Economics - S. Ghatak (Allen & Ulwin)
3. Economic Development - J. Hogendorn (Addison Wesley)
4. Economic Development - C. P. Kindleberger (McGraw Hill)
5. The Economic of Underdeveloped Countries - H. Myint (OUP)
6. Economic Development - M. P. Todaro
7. Leading Issues in Economic Development - G. M. Meier (OUP)
8. Growth & Development - A. P. Thirwal (McMillan)

9. Nussbaum, Sen The Quality of Life  
Ruttan Is War Necessary for Economic  
Growth? Military Procurement and  
Technology Development

**Additional Reading List :**

1. Human Development Report, (UN) , various issues
2. World Development Report From (World Bank )

<b>Semester</b>	<b>III</b>
<b>Paper No.</b>	<b>XIV</b>
<b>Title</b>	<b>International Trade</b>

**Unit- 1: Theoretical Foundations of International Trade:**

- 1.1 Reasons for international trade: Mercantilist and neo-mercantilist view;
- 1.2 Theories of international trade: Absolute and comparative advantage theories;
- 1.3 Heckscher-Ohlin theory of trade and Neo Heckcher- Ohlin theorem. Leontief paradox
- 1.4 Samuelson's Factor Price Equalization Theory, Stolper-Samuelson's theorem,
- 1.5 New Theories of Intra- industry trade and economies of Scale. Modern theories of trade;

**UNIT - 2: GAINS FROM INTERNATIONAL TRADE AND THEIR MEASUREMENT:**

- 2.1 Nature of Gains – Sources of Gains – Factors determining Gains – Potential Gains  
and Actual Gains – Criteria of Measuring Gains from International Trade-  
Size of country and Gains from International Trade.
- 2.2 Terms of Trade: Concepts – Theory of Reciprocal Demand  
by J.S. Mill- Marshall- Edgeworth Theory of Offer Curves-  
Factors Affecting Terms of Trade-
- 2.3 Terms of Trade and Economic development-
- 2.4 Technical Progress and Terms of Trade.

### **Unit- 3: Instruments of Commercial Policy:**

3.1 Theories of exchange rate determination, Short Run and Long Run determinations,

PPP, Fixed and Flexible

Exchange control – meaning objectives & methods of exchange control.

3.2 Free Trade vs. Protective Trade-

3.3 Tariffs: Classification, Effects, Optimum Tariff, Retaliation

3.4 Import Quotas: Nature and Purpose, Effects,

3.5 Quotas Vs. Tariffs Exchange Control: Objectives, Procedure, Methods

3.6 Miscellaneous Techniques: Price Discrimination or Dumping, Subsidies,

Cartels, Commodity Agreements

### **Unit- 4: Theoretical Aspects of Economic Integration:**

4.1 Free trade area, customs union and common market;

4.2 Theory of customs union; Trade creation and diversion effects.

### **Unit- 5: Balance of Payment Account:**

5.1 Concept and significance of balance of payments account;

5.2 Theories of balance of payments,

5.3 Current and capital account components and accounting system;

5.4 Disequilibrium in Balance of Payments: Kinds, Causes,

5.5 Measures- Adjustment Process to Disequilibrium in Balance of Payments

5.6 Foreign Trade Multiplier

### **Basic Reading List:**

1. Hazari, R. Bharat, Micro Economic Foundations of International Trade, Croom Helm, London and Sydney.
2. Letiche, John M., International Economics: Policies and Theoretical Foundations, Academic Press, New York.
3. Mannur, H.G., International Economics, 2 nd ed., Vikas Publishing House,. New Delhi, 1999.
4. Salvatore, D., International Economics, John Wiley & Sons, 2001.

5. Sodersten, BO, International Economics, 2 nd ed., McMillan, London
6. Bhagwati, J.N. : International Trade : Selected Readings, McMillan University . Press, 1998.
7. Bhagwati, J. (Ed.) (1981), International Trade, Selected Readings, Cambridge University Press, Massachusetts
8. Kindleberger: International Economics

<b>Semester</b>	<b>IV</b>
<b>Paper No.</b>	<b>XIX</b>
<b>Title</b>	<b>Economics of Development</b>

**Module- 1: Theories of Economic Development**

- 1.1 Adam Smith's theory
- 1.2 The Ricardian theory
- 1.3 Mill's theory
- 1.4 The Marxian theory
- 1.5 The Schumpeterian theory

**Module- 2: Approaches to Development**

- 2.1 Nurkse's Theory of Disguised Unemployment as a saving potential
- 2.2 Lewis' Theory of Unlimited Supplies of labour
- 2.3 Fei - Ranis Theory
- 2.4 Jorgenson's Neo-classical Model of a Dual Economy
- 2.5 Endogeneous Growth Models

**Module- 3: Some Other Approaches to Development**

- 3.1 Leibenstein's critical minimum effort Thesis
- 3.2 Nelson's Low - level equilibrium Trap
- 3.3 The Big push Theory
- 3.4 The Doctrine of Balanced Growth
- 3.5 The Concept of Unbalanced Growth
- 3.7 Dualistic Theories
- 3.8 Dependence theory of Development

**Basic Reading List:**

1. Theories of Economics of Growth & Development - Adelman (Starford Uni. Press)
2. An Introduction Development Economics - S. Ghatak (Allen & Ulwin)
3. Economic Development - J. Hogendorn ( Addison Wesley)
4. Economic Development - C. P. Kindleberger (McGraw Hill)
5. The Economic of Underdeveloped Countried - H. Myint (OUP)
6. Economic Development - M. P. Todaro
7. Leading Issues in Economic Development - G. M. Meier (OUP)
8. Growth & Development - A. P. Thirwal (McMillan)
9. Economic Development Higgins

**Additional Reading List :**

1. Human Development Report, (UN)
2. World Development Report, (World Bank)

<b>Semester</b>	<b>IV</b>
<b>Paper No.</b>	<b>XX</b>
<b>Title</b>	<b>Research Methodology</b>

**UNIT – 1: INTRODUCTION:**

- 1.1 Major concepts of Research Methodology.
- 1.2 Various Steps in Scientific Research,

**UNIT-2: RESEARCH DESIGN:**

- 2.1 Concept and Importance in Research – Features of a good research design –
- 2.2 Framing of Questionnaire, Hypothesis, Research questions
- 2.3 Exploratory Research Design – concept, types and uses,
- 2.4 Descriptive Research Designs – concept, types and uses.
- 2.5 Experimental Design: Causal relationships,
- 2.6 Concept of Independent & Dependent variables, concomitant variable,  
extraneous variable, Treatment, Control group.

**UNIT-3: SAMPLING:**

3.1 Concepts of Statistical Population, Sample, Sampling Frame, Sampling Error,  
Sample Size, Non Response.

3.2 Characteristics of a good sample.

3.3 Probability Sample – Simple Random Sample, Systematic Sample,  
Stratified Random Sample & Multi-stage sampling.

3.4 Non Probability Sample – Judgment, Convenience, Quota & Snowballing methods.

3.5 Determining size of the sample – Practical considerations in sampling and sample size.

#### **UNIT –4: MEASUREMENT & ATTITUDE SCALING TECHNIQUES:**

4.1 Concept of measurement– what is measured? Problems in measurement in  
economic research – Validity and Reliability.

4.2 Levels of measurement – Nominal, Ordinal, Interval, Ratio.

4.3 Concept of Scale – Rating Scales viz. Likert Scales, Semantic Differential  
Scales, Constant Sum Scales, Graphic Rating Scales

4.4 Ranking Scales – Paired Comparison & Forced Ranking.

#### **UNIT – 5: RESEARCH REPORTS:**

5.1 Structure and Components of Research Report, Types of Report,

5.2 Layout of a Research Paper

#### **Basic Reading List:**

1. Wilkinson & Bhandarkar: METHODOLOGY AND TECHNIQUES OF SOCIAL RESEARCH.
2. Pauline Vyoung: SCIENTIFIC SOCIAL SURVEYS AND RESEARCH.
3. Panneerselvam, R., RESEARCH METHODOLOGY, Prentice Hall of India, New Delhi, 2004.
4. Kothari: RESEARCH METHODOLOGY.
5. Festinger. L & D. Katz: RESEARCH METHODS IN BEHAVIOURAL SCIENCE.
6. Sellitz, et al: RESEARCH METHODS IN SOCIAL RELATIONS.
7. M. Blaug: RESEARCH METHODS IN ECONOMICS

## **OPTIONAL PAPERS**

### **GROUP - A**

#### **EC1A303: Advance Mathematical Economics – I**

##### **Module I**

Theory of Consumer's Behaviour: Cardinal and Ordinal Utility analysis; Slutsky equation; Compensated and normal demand functions; Income Substitution and Price effects; Different types of utility functions – homogeneous and homothetic utility function; Seperable and additive utility function; Indirect –utility function and duality theorem; CES Utility function; Linear expenditure systems; Consumer behaviour under risk and uncertainty.

##### **Module II**

Theory of Production: Concept and types of Production function; Properties of Cobb-Douglas and CES Production function; Cost function; modern approach to the theory of costs; Simple derivation of short and long run cost functions; Laws of returns and returns to scale.

##### **Module III**

Producer's equilibrium: Constrained optimization of a producer; Expansion path and ridge lines; Input demand functions; Adding – up theorem; Technical progress through production function; Analysis of Joint profit maximization and multi product firm; Production possibility curve.

##### **Module IV**



Price determination in various markets: Price determination in Perfect competition; Monopoly; Monopolistic competition; Duopoly; Oligopoly and Monopsony, Pricing of factors of production; Bilateral monopoly.

### **Basic Text**

- Allen, R.G.D. (1976), Mathematical Economics, McMillan, London.
- Henderson, J.M. and R.E. Quandt (1980), Micro Economic Theory: A Mathematical Approach, McGraw Hill, New Delhi.
- Seilbourg, Eugene, The Structure of Economics, A Mathematical Analysis.

### **Supplementary Readings**

- Chung, J.W. (1993), Utility and Production: Theory and Applications, Basil Blackwell, London.
- Ferguson, C.E. (1976), Neo Classical Theory of Production and Distribution.
- Hoy, Michael, John Livernois, Chris McKenna, Ray Rees, Thanasis Stengos, Mathematics for Economists.
- Intrilligator, M.D. (1971), Mathematical Optimization and Economic Theory, Prentice Hall, Englewood Cliffs, New Jersey.

## **EC2A304: Advance Mathematical Economics – II**

### **Module – I**

Market Equilibrium: Single market equilibrium; Market demand functions; Short run and long run market supply functions; External economies and diseconomies; Short run and long run market equilibrium; Differential cost conditions and Rent; An application to taxation; Factor market equilibrium: Demand and Supply functions of factors.

### **Module – II**

The Stability of Equilibrium; Marshallian and Walrasian equilibrium conditions; Static and dynamic stability.

### **Module – III**

The Cobweb and other simple dynamic models; Extensions of the Cobweb Model; A Simple continuous model; Models with Stocks; Time lags in dynamic models.

### **Module – IV**

General Economic Equilibrium: Equilibrium of pure exchange; Equilibrium with fixed production coefficient; General market equilibrium equilibrium; Some problems of comparative statics.

### **Basic Text**

- Allen, R.G.D. (1976), Mathematical Economics, McMillan, London.

- Henderson, J.M. and R.E. Quandt (1980), Micro Economic Theory: A Mathematical Approach, McGraw Hill, New Delhi.
- Seilbourg, Eugene, The Structure of Economics, A Mathematical Analysis.

### **Supplementary Readings**

- Chung, J.W. (1993), Utility and Production: Theory and Applications, Basil Blackwell, London.
- Ferguson, C.E. (1976), Neo Classical Theory of Production and Distribution.
- Hoy, Michael, John Livernois, Chris McKenna, Ray Rees, Thanasis Stengos, Mathematics for Economists.
- Intrilligator, M.D. (1971), Mathematical Optimization and Economic Theory, Prentice Hall, Englewood Cliffs, New Jersey.

## **EC3A305: SINGLE EQUATION MODEL**

### **Module I: Basic Econometrics**

Simple and general regression model; Assumption, estimation and properties of OLS estimators; Gauss Markov Theorem, Estimation of Non linear equations, Analysis of Variance - approach and its implications in Regression analysis;  $R^2$

### **Module II : Assumption of disturbance variable U**

Assumption of disturbance variable U – The assumption of randomness of U; The assumption of zero mean of U; The assumption of homoscedasticity; The assumption of normality of U.

### **Module III : Problems in Regression Analysis I**

Specification Errors ; Errors in measurement

### **Module IV: Problems in Regression Analysis II**

Autocorrelation – Sources, consequences and test for autocorrelation, Autoregressive Schemes, Estimator of autocorrelation parameters.

## **Module V :Heteroscedasticity and Multicollinearity**

Heteroscedasticity and Multicollinearity – Nature, consequences, tests and remedies of Heteroscedasticity; Plausibility, consequences, tests and solutions of Multicollinearity.

### **Basic Text**

- Johnston, J. (1991), *Econometrics Methods*, McGraw Hill Book Co., London.
- Gujarati, D.N. (1995), *Basic Econometrics* (2<sup>nd</sup> Edition), McGraw Hill, New Delhi..
- Koutsoyiannis, A. (1977), *Theory of Econometrics* (2<sup>nd</sup> Edition), The Macmillan Press Ltd., London.

### **Supplementary Readings**

- Amemiya, T. (1985), *Advanced Econometrics*, Harvard University Press, Cambridge, Mass.
- Baltagi, B.H. (1998), *Econometrics*, Springer, New York.
- Kmenta, J. (1997), *Elements of Econometrics* ( Reprint edition), University of Michigan Press, New York
- Johnston, J. (1991), *Econometrics Methods*, McGraw Hill Book Co., London.
- Maddala, G.S. (Ed.) (1993), *Econometrics Application in India*, Oxford University Press, New Delhi.
- Theil, H. (1981), *Introduction to Econometrics*, Prentice Hall of India, New Delhi.

## **EC4A306: SIMULTANEOUS EQUATION MODELS**

### **Module I Simultaneous Equation Models – I**

The simultaneous equation bias and inconsistency of OLS estimators; Structural and Recursive form models; The identification problems – Rules of identification; order and rank condition.

### **Module II Simultaneous Equation Models – II**

Methods of estimating simultaneous equation system; Recursive methods and OLS; Indirect Least Square (ILS); 2SLS ; 3SLS and ML methods – Applications.

### **Basic Text**

- Johnston, J. (1991), *Econometrics Methods*, McGraw Hill Book Co., London.
- Gujarati, D.N. (1995), *Basic Econometrics* (2<sup>nd</sup> Edition), McGraw Hill, New Delhi..
- Koutsoyiannis, A. (1977), *Theory of Econometrics* (2<sup>nd</sup> Edition), The Macmillan Press Ltd., London.

### **Supplementary Readings**

- Amemiya, T. (1985), *Advanced Econometrics*, Harvard University Press, Cambridge, Mass.
- Baltagi, B.H. (1998), *Econometrics*, Springer, New York.

- Kmenta, J. (1997), Elements of Econometrics ( Reprint edition), University of Michidan Press, New York
- Johnston, J. (1991), Econometrics Methods, McGraw Hill Book Co., London.
- Maddala, G.S. (Ed.) (1993), Econometrics Application in India, Oxford University Press, New Delhi.
- Theil, H. (1981), Introduction to Econometrics, Prentice Hall of India, New Delhi.

## **EC5A403: OPERATION RESEARCH IN ECONOMICS**

### **Module I: Linear Algebra**

Vector and Matrix operations; Convex Sets and Basis.

### **Module II: Linear Programming**

Meaning and importance of linear programming ; Graphic method and Simplex method of solution, Primal and Dual problems and solutions, Transportation , storage and other applications of linear programming in Economics.

### **Module III: Game Theory**

Concept of game, Types of games, two person zero sum game, Pay-off Matrix, solutions with pure and mixed strategies, Min- Max theorem, Prisoners dilemma.

### **Module IV: Input Output Analysis**

Open and closed models; static and dynamic models; Simon – Hawkins condition; Testing consistency of planning models.

### **Basic Text**

- Allen, R.G.D. (1976), Mathematical Economics, McMillan, London.
- Arrow, K.J. and M. Intrilligator, (Eds) (1982), Handbook of Mathematical Economics, Vol. 1 2 and 3, North Holland, Amsterdam.
- Hadley, G. (1962), Linear Programming, Addison – Wesley Publishing Co., Massachusetts.
- Intrilligator, M.D. (1971), Mathematical Optimization and Economic Theory, Prentice Hall, Englewood Cliffs, New Jersey.

### **Supplementary Readings.**

- Abel, A., B.S. Bernanke and B. Manabb (1998), Macro Economics, Addison Wesley, Mass
- Barro, R.J. and H. Grossman (1976), Money, Employment and Inflation, Oxford University Press, Oxford.
- Chung, JW. (1993), Utility and Production: Theory and Applications, Basil Blackwell, London.
- Ferguson, C.E. (1976), Neo Classical Theory of Production and Distribution.
- Gravelle, Hugh and Ray Rees, Micro Economics, Pearson Education.
- Hoy, Michael, John Livernois, Chris McKenna, Ray Rees, Thanasis Stengos, Mathematics for Economists.
- Jha, R. (1991), Contemporary Macro Economic Theory and Policy, Wiley Eastern Ltd., New Delhi.
- Kothari, C.R. (1992), An Introduction to Operations Research, Vikas Publishing House Pvt. Ltd., Delhi.

- Nash, J.F. (1996), Essays on Game Theory, Cheltenham, U.K.
- Seilbourg, Eugene, The Structure of Economics, A Mathematical Analysis.
- Taha, H.A.,(1997), Operation Research: An Introduction(6<sup>th</sup> ed.), Prentice Hall of India Pvt. Ltd.

## **EC6A404: GROWTH MODELS AND FLUCTUATIONS**

### **Module I**

Determination of income and fluctuations in income—classical and Keynes macro system ; static and dynamic multiplier ; determinants of investment ; accelerator ; Philips model of multiplier ; multiplier-accelerator model of Philips.

### **Module II**

Trade cycle models of Samuelson and Hicks ; Goodwin, Kalecki and Philips ; Stabilization policy.

### **Module III**

Growth models – Harrod model ; Neo-classical model of growth; Solow and Meade growth models with technical progress.

### **Module IV**

Difference and differential equations—General solutions of second and third order linear differential equations ; The Laplace transform solution of differential equations by Laplace Transforms ; Algebra of operators and linear systems ; General solutions of second order linear difference equations ; Economic illustrations of difference and differential equations.

## **Basic Text**

- Allen, R.G.D. (1976), Mathematical Economics, McMillan, London.
- Arrow, K.J. and M. Intriligator, (Eds) (1982), Handbook of Mathematical Economics, Vol. 1 2 and 3, North Holland, Amsterdam.
- Hadley, G. (1962), Linear Programming, Addison – Wesley Publishing Co., Massachusetts.
- Henderson, J.M. and R.E. Quandt (1980), Micro Economic Theory : A Mathematical Approach, McGraw Hill, New Delhi.
- Intriligator, M.D. (1971), Mathematical Optimization and Economic Theory, Prentice Hall, Englewood Cliffs, New Jersey.

## **EC7A405: ECONOMETRICS: QUALITATIVE AND DYNAMIC ECONOMETRICS**

### **Module I : Lagged Variables and Distributed Lag Models**

Estimation of distributed lagged models; Exogenous lagged variable – Almon Approach and Granger test; Exogenous Lagged variables – Koyack , PAM and Adaptive expectation model .

## **Module II : Dummy Variable Technique**

Regression with mixture of Quantitative and Qualitative variables, Dummy variables alternative to chow test, Dummy variable in seasonal analysis; Piecewise linear regression.

## **Module III : Qualitative Response Models**

Nature and estimation of qualitative response models, LPM , Logit and Tobit.

### **Basic Text**

- Johnston, J. (1991), Econometrics Methods, McGraw Hill Book Co., London.
- Gujarati, D.N. (1995), Basic Econometrics (2<sup>nd</sup> Edition), McGraw Hill, New Delhi..
- Koutsoyiannis, A. (1977), Theory of Econometrics (2<sup>nd</sup> Edition), The Macmillan Press Ltd., London.

### **Supplementary Readings**

- Amemiya, T. (1985), Advanced Econometrics, Harvard University Press, Cambridge, Mass.
- Baltagi, B.H. (1998), Econometrics, Springer, New York.
- Kmenta, J. (1997), Elements of Econometrics ( Reprint edition), University of Michidan Press, New York
- Johnston, J. (1991), Econometrics Methods, McGraw Hill Book Co., London.
- Maddala, G.S. (Ed.) (1993), Econometrics Application in India, Oxford University Press, New Delhi.
- Theil, H. (1981), Introduction to Econometrics, Prentice Hall of India, New Delhi.

## **EC8A406:TIME SERIES and MULTI VARIATE ANALYSIS**

### **Module I Time Series Analysis**

Stationary, unit roots, co – integration – spurious regression, Dickey Fuller test, Engle Granger test, Random walk model, Forecasting with ARIMA modelling; Box – Jenkins methodology; Vector auto – regression; Problems with VAR Modelling – Applications; Time varying parameters and Kalman filter.

### **Module II Multivariate Analysis**

Multivariate probability distribution, Marginal and conditional probability distribution, multivariate normal distribution and its properties , Discriminant analysis.

### **Basic Text**

- Johnston, J. (1991), Econometrics Methods, McGraw Hill Book Co., London.

- Gujarati, D.N. (1995), Basic Econometrics (2<sup>nd</sup> Edition), McGraw Hill, New Delhi..
- Koutsoyiannis, A. (1977), Theory of Econometrics (2<sup>nd</sup> Edition), The Macmillan Press Ltd., London.

### **Supplementary Readings**

- Amemiya, T. (1985), Advanced Econometrics, Harvard University Press, Cambridge, Mass.
- Baltagi, B.H. (1998), Econometrics, Springer, New York.
- Kmenta, J. (1997), Elements of Econometrics ( Reprint edition), University of Michigan Press, New York
- Johnston, J. (1991), Econometrics Methods, McGraw Hill Book Co., London.
- Maddala, G.S. (Ed.) (1993), Econometrics Application in India, Oxford University Press, New Delhi.
- Theil, H. (1981), Introduction to Econometrics, Prentice Hall of India, New Delhi.

## **GROUP-B**

### **EC1B303: Theories of Agricultural Economics**

#### **MODULE I – Agriculture and Economic Development**

Nature and scope of agricultural and rural economics – traditional agriculture and its modernisation; Role of agricultural in economic development; interdependence between agriculture and industry – some empirical evidence; models of interaction between agro and the rest of the economy; agricultural development, poverty and environment. Mellor's theory; Boserup's theory of agricultural development.

#### **MODULE II – Diversification of Rural Economic Activities**

Livestock economics – livestock resources and their productivity; Problems of marketing; White revolution; Fishery and Poultry development; Forestry, horticulture and floriculture; issues and problems in rural industrialization and development of agro – based industries. Agricultural marketing; marketable surplus; Risk and uncertainty in farming.

#### **MODULE III – Agricultural Production and Productivity**

Agricultural production – resources use and efficiency; Production function analysis in agriculture; Factor combination and resource substitution; Cost and supply curves; Size of farms and laws of returns – theoretical and empirical findings; Farm budgeting and cost concepts; Supply response of individual crops and aggregate supply; Resource use efficiency in traditional agriculture; technical change, labour absorption and gender issues in agricultural services.

#### **MODULE IV – Agricultural Prices**

Marketing and state policy; Agricultural markets and marketing efficiency – marketing functions and costs; market structure and imperfections; Regulated markets; Marketed and marketable surplus; Behaviour of agricultural price – cobweb model; price and income stability; state policy with respect to agricultural marketing; warehousing; prices; taxation and crop insurance; terms of trade between agricultural and non – agricultural prices; need for state intervention; objectives of agricultural price policy – instruments and evaluation; food security in India and public distribution system.

#### **Basic Text**

- Gulati, Ashok and Tim Kelley (2001), Trade Liberalization and Indian Agriculture, Oxford University Press.
- Lekhi, R.K. and Joginder Singh, Agricultural Economics, Kalyani Publications.
- Rao, C.H. Hanumantham (2005), Agriculture, Food Security, Poverty and Environment, Oxford University Press, New Delhi.
- Rane A.A. and A.C. Deorukhkar (2007), Economics of Agriculture, Atlantic Publications.
- Ray, Shovan (ed) (2007), Handbook of Agriculture, Oxford University Press.
- Reddy, S. Subba, P. Raghu Ram, T.V. Neelakant Sastry and I. Bhavani Devi (2006), Agricultural Economics, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.

#### **EC2B304: Economics of Rural Market**

##### **Module I- Rural labour market**

Rural labour supply; interlocking of factor markets; mobility of labour and segmentation in labour, markets, marginalisation of rural labour; nature, extent and trends in rural unemployment; agricultural wages in India; male female wage differences; non agricultural rural employment- trends and determinants; labour in agriculture; land in agriculture.

##### **Module II- Rural finance**

Role of capital and rural credit; organized and unorganized capital markets; rural savings and capital formation; characteristics and sources of rural credit- institutional and non institutional; reorganization of rural credit— cooperatives, commercial banks, regional rural banks; role of NABARD, capital in agriculture.



### **Basic Text**

- Gulati, Ashok and Tim Kelley (2001), Trade Liberalization and Indian Agriculture, Oxford University Press.
- Lekhi, R.K. and Joginder Singh, Agricultural Economics, Kalyani Publications.
- Rao, C.H. Hanumantham (2005), Agriculture, Food Security, Poverty and Environment, Oxford University Press, New Delhi.
- Rane A.A. and A.C. Deorukhkar (2007), Economics of Agriculture, Atlantic Publications.
- Ray, Shovan (ed) (2007), Handbook of Agriculture, Oxford University Press.
- Reddy, S. Subba, P. Raghu Ram, T.V. Neelakant Sastry and I. Bhavani Devi (2006), Agricultural Economics, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.

### **EC3B305: THEORIES OF DEMOGRAPHY**

#### **Module I Introduction to Demography**

Evolution to demography; Meaning, Subject matter and importance of Demography. Types of demographic data; Concepts in population change, population growth, demographic rates and composition of population, Sources of Demographic- Census , meaning, characteristics , importance , methods, problems, sample surveys; Registration.

#### **Module II Demographic Data Base in India**

Census- Nature of information collected—1991,2001; NFHS-I and II; Sample surveys India; Registration system in India

#### **Module III Theories of population – I**

Malthusian Theory; Optimum theory; Theories of Demographic Transition- views of C P Blacker, Karl Marx and Cowgill.

#### **Module IV Theories of Population- II**

Biological Theories of Population; Socio-economic theories of population- views of Marx and Leibenstein; Medows Theory of Population; Euke's Theory of Population.

### **Basic Text**

- Bouge, D.J. (1971), Principles of Demography, John Wiley, New York.
- Bhende Asha A. And Tara Kanitkar, Population of Population Studies, Himalaya Publishing House.

- Novell, C., Methods and Models in Demography, Bellhaven , Washington D.C.
- NFHS Report.
- Sharma, Rajendra K., Demography and Population Problems, Atlantic Publications.
- Shyrock, H., et al (1973), The Methods and Materials of Demography, U.S. Deptt. Of Commerce Press, London.
- Srinivasan, K. And A. Shariff (1998), India: Towards Population and Demographic goals, Oxford University Press, New Delhi.

### **Supplementary Readings**

- Chiang, C.L. (1974), Life Tables and Mortality Analysis, WHO, Geneva.
- Pathak, K.B. AND F. Ram, Techniques of Demographic Analysis, Himalaya Publishing House.
- Srinivashan, K., Basic Demographic Techniques and Applications, Sage Publications.

### **EC4B306: Population Dynamics**

#### **Module I**

Fertility- Meaning; Concepts- CBR, ASBR, GFR,TFR,GRR,NRR; Factors affecting fertility; Fertility rates in less and more developed countries.

#### **Module II Mortality**

Meaning ; Concepts – CDR, ASDR, IMR, CMR, MMR, NMR, NNMR ,CSDR, SDR. Factors affecting Mortality; Life tables, stationary and stable population.

#### **Module III Nuptality**

Meaning; Concepts- CMR, SMR, GMR; Determinants of Nuptality; Martial Dissolution.

#### **Module IV Migration**

Meaning; Concepts; Types; Effects; Factors promoting and retarding migration; Theories of Migration- Pull and Push Theory, Lewis’s model of Rural-Urban Migration, Fei-Ranis model of Rural-Urban Migration, Harris – Todaro Model of Migration; Migration in India.

#### **Module IV Urbanization**

Meaning; Causes; Effects; Measures of Urbanization; Urbanization in India.

### **Basic Text**

- Chiang, C.L. (1974), Life Tables and Mortality Analysis, WHO, Geneva.
- Pathak, K.B. AND F. Ram, Techniques of Demographic Analysis, Himalaya Publishing House.

- Srinivashan, K., Basic Demographic Techniques and Applications, Sage Publications.

### **Supplementary Readings**

- Bouge, D.J. (1971), Principles of Demography, John Wiley, New York.
- Bhende Asha A. And Tara Kanitkar, Population of Population Studies, Himalaya Publishing House.
- Novell, C., Methods and Models in Demography, Bellhaven , Washington D.C.
- NFHS Report.
- Sharma, Rajendra K., Demography and Population Problems, Atlantic Publications.
- Shyrock, H., et al (1973), The Methods and Materials of Demography, U.S. Deptt. Of Commerce Press, London.
- Srinivasan, K. And A. Shariff (1998), India: Towards Population and Demographic goals, Oxford University Press, New Delhi.

### **EC5B403: INDIAN AGRICULTURE PROBLEMS AND POLICIES**

#### **Module I—Agricultural growth in India**

Recent trends in agricultural trends in India; interregional variations in growth of output and productivity; cropping pattern shifts; supply of inputs—irrigation , power, seeds , fertilizers; pricing of inputs & role of subsidies; distribution of gains from technological change; role of public investment & capital formation in Indian agriculture; strategy of agricultural development & technological progress; sustainable agriculture—Indigenous practices; biotechnological practices & growth potential.

#### **Module II**

New agricultural strategy, farm mechanisation, food security in agricultural development, farm size & productivity, land reforms in India, farm management, agriculture price determination .

#### **Basic Text**

- Gulati, Ashok and Tim Kelley (2001), Trade Liberalization and Indian Agriculture, Oxford University Press.
- Lekhi, R.K. and Joginder Singh, Agricultural Economics, Kalyani Publications.
- Rao, C.H. Hanumantham (2005), Agriculture, Food Security, Poverty and Environment, Oxford University Press, New Delhi.
- Rane A.A. and A.C. Deorukhkar (2007), Economics of Agriculture, Atlantic Publications.
- Ray, Shovan (ed) (2007), Handbook of Agriculture, Oxford University Press.

- Reddy, S. Subba, P. Raghu Ram, T.V. Neelakant Sastry and I. Bhavani Devi (2006), Agricultural Economics, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.

## **EC6B404: Globalisation and Agriculture**

### **Module I – Agriculture and External sector**

International trade in agricultural commodities; commodity agreements—role of World Trade Organisation; issues in liberalisation of domestic and international trade in agriculture—nature and feature of agri business; role of MNCs; globalisation of Indian economy and problems and prospects of Indian agriculture; impact of WTO on Indian agriculture

### **Module II**

Foreign trade and agricultural development; New Economic Policy and Indian Agriculture; GATT and Indian agriculture.

### **Basic Text**

- Gulati, Ashok and Tim Kelley (2001), Trade Liberalization and Indian Agriculture, Oxford University Press.
- Lekhi, R.K. and Joginder Singh, Agricultural Economics, Kalyani Publications.
- Rao, C.H. Hanumantham (2005), Agriculture, Food Security, Poverty and Environment, Oxford University Press, New Delhi.
- Rane A.A. and A.C. Deorukhkar (2007), Economics of Agriculture, Atlantic Publications.
- Ray, Shovan (ed) (2007), Handbook of Agriculture, Oxford University Press.
- Reddy, S. Subba, P. Raghu Ram, T.V. Neelakant Sastry and I. Bhavani Devi (2006), Agricultural Economics, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.

## **EC7B405: POPULATION GROWTH AND DEVELOPMENT**

### **Module I Population Growth and Projection**

Meaning and causes of population growth; Methods of measurement of population growth; Population Pyramid; Population Projection- Meaning, Importance and methods.

### **Module II Population and Development**

Concept of economic growth and economic development, relationship between population growth and economic development; Concept and measure Human Development; Human Development Index; Population Growth and Human Development.

### **Module III Population Growth and Environment**

Population growth and ecological imbalance; Growing population and environment pollution; Green House Effect and Ozone Depletion; Causes of environmental degradation in India. Measures of check environmental degradation.

### **Module IV Population: Health and Education**

Population Growth and Health, Nutrition and Productivity; relation between population growth and health; population growth and nutrition; population growth and productivity; Qualitative Demography – Role of Education and Health Care on Human race and Human Capital formation.

### **Basic Text**

- Coale, A.J. and E.H. Hoover(1958), Population Growth and Economic Development in low Income Countries – A Case Study of India’s Prospects, Princeton University Press, Princeton.
- Chenery, H. And T.N. Srinivisan (Eds)(1989), Handbook of Development Economics.
- Simon, J. (1992), Population and Development in Poor Countries, Princeton University Press, Princeton.

### **Supplementary Readings**

- Agarwala, S.N. (1972), India’s Population Problems, Tata McGraw Hill, Mumbai.
- Bose, A., (1996), India’s Basic Demographic Statistics, B. Publishing Corporation, New Delhi.
- Chaubey, P.K. (2000), Population Policy in India, Kanishka Publishers .
- Eugene, T. ,Environmental Economics, Vrinda Publications.
- Gulati, S.C. (1988), Fertility in India: An Econometric Study, Sage Publications, New Delhi.

## **EC8B406: INDIAN DEMOGRAPHY AND POPULATION POLICY**

### **Module I**

Changing characteristics of population in India- Size and growth of population in India; Demographic Transition and population explosion in India.

### **Module II**

Trends in Composition and Distribution of India’s population – Sex, age , religion , literacy , life expectancy, occupational structure, rural-urban.

### **Module III**

Demographic Rates in India:- Fertility rates- Trends and Variations; Causes of High Fertility in India. Mortality rates- Trends; Causes of decline in Mortality rates in India. Nuptality rates in India.

#### **Module IV**

Population Policy in India- Evolution of population policy in India- Shift from population control to reproductive and child health approach. Strategies for development of different social groups in India – Children, women and socially disadvantaged groups. Family Planning – Need; Strategies and outcomes; Criticisms and suggestions. National Population Policy 2000, Tasks before the National Population Commission.

#### **Basic Text**

- Agarwala, S.N. (1972), India's Population Problems, Tata McGraw Hill, Mumbai.
- Bose, A., (1996), India's Basic Demographic Statistics, B. Publishing Corporation, New Delhi.
- Chaubey, P.K. (2000), Population Policy in India, Kanishka Publishers .
- Eugene, T. ,Environmental Economics, Vrinda Publications.
- Gulati, S.C. (1988), Fertility in India: An Econometric Study, Sage Publications, New Delhi.

#### **Supplementary Readings**

- Coale, A.J. and E.H. Hoover(1958), Population Growth and Economic Development in low Income Countries – A Case Study of India's Prospects, Princeton University Press, Princeton.
- Chenery, H. And T.N. Srinivisan (Eds)(1989), Handbook of Development Economics.
- Simon, J. (1992), Population and Development in Poor Countries, Princeton University Press, Princeton.