

MASTER OF ARTS COMPULSORY PAPERS

**M.A. Compulsory Paper
Paper-I
MICRO ECONOMIC ANALYSIS**

PREAMBLE

This paper analyses the economic behaviour of individuals, firms and markets. It is mainly concerned with the objective of equipping the students in a rigorous and comprehensive manner with the various aspects of consumer behaviour and demand analysis, production theory and behaviour of costs, the theory of traditional markets and equilibrium of firm in modern non-profit maximizing framework. The paper also deals with the micro and macro theories of distribution, welfare economics, general equilibrium in closed and open systems and analysis of economic behaviour under uncertainty.

Module 1 : Introduction and Basic Concepts

Basic Economic Problem — Choice and Scarcity; Deductive and Inductive Methods of Analysis; Positive and Normative Economics; Economic Models; Characteristics of Equilibrium and Disequilibrium Systems.

Module 2 : Demand Analysis

Elasticities (price, cross, income) of demand — theoretical aspects and empirical estimation; elasticity of supply; Theories of demand — utility; indifference curve (income and substitution effects, Slutsky theorem, compensated demand curve) and their applications; Revealed preference theory; Revision of demand theory by Hicks; Characteristics of goods approach; consumer's choice involving risk; Indirect utility functions (duality theory); Recent developments in demand analysis (pragmatic approach and linear expenditure systems); Consumer's surplus; Inter-temporal consumption; Recent developments in demand; Elementary theory of price formation — demand and supply equilibrium; Cobweb theorem; lagged adjustment in interrelated markets.

Module 3 : Theory of Production and Costs

Production function — short period and long period; law of variable proportions and returns to scale; Isoquants — Least cost combination of inputs; Returns to factors; Economies of scale; Multi-product firm; Elasticity of substitution; Euler's theorem; Technical progress and production function; Cobb-Douglas, CES, VES and Translog production functions and their properties; Empirical work on production functions; Traditional and modern theories of costs — Empirical evidence; Derivation of cost functions from production functions; derived demand for factors.

Module 4 : Price and Output Determination

Marginal analysis as an approach to price and output determination: perfect competition — short run and long run equilibrium of the firm and industry, price and output determination, supply curve; Monopoly — short run and long run equilibrium, price discrimination, welfare aspects, monopoly control and regulation; Monopolistic competition — general and Chamberlin approaches to equilibrium, equilibrium of the firm and the group with product differentiation and selling costs, excess capacity under monopolistic and imperfect competition, criticism of monopolistic competition; Oligopoly — Non-collusive (Cournot, Bertrand, Edgeworth, Chamberlin, kinked demand curve and Stackelberg's solution) and collusive (Cartels and mergers, price leadership and basing point price system) models; Price and output determination under monopsony and bilateral monopoly; Workable competition — Structure, conduct and performance norms.

Module 5 : Alternative Theories of the Firm

Critical evaluation of marginal analysis; Baumol's sales revenue maximization model; Williamson's model of managerial discretion; Marris model of managerial enterprise; Full cost pricing rule; Bain's limit pricing theory and its recent developments including Sylos-Labini's model; Behavioural model of the firm; Game theoretic models.

Module 6 : Distribution

Neo-classical approach — Marginal productivity theory; Product exhaustion theorem; Elasticity of technical substitution, technical progress and factor shares; Theory of distribution in imperfect product and factor markets; Determination of rent, wages, interest and profit; Macro theories of distribution — Ricardian, Marxian, Kalecki and Kaldor's.

Module 7 : Welfare Economics

Pigovian welfare economics; Pareto optimal conditions; Value judgement; Social welfare function; Compensation principle; Inability to obtain optimum welfare — Imperfections, market failure, decreasing costs, uncertainty and non-existent and incomplete markets; Theory of Second Best — Arrow's impossibility theorem; Rawl's theory of justice, equity-efficiency trade off.

Module 8 : General Equilibrium

Partial and general equilibrium, Walrasian excess demand and input-output approaches to general equilibrium, existence, stability and uniqueness of equilibrium and general equilibrium, coalitions and monopolies; Production without consumption — one sector model, homogeneous functions, income distribution; Production without consumption — two sector model, relationship between relative commodity and factor prices (Stolper-Samuelson theorem), relationship between output mix and real factor prices, effect of changes in factor supply in closed economy (Rybczynski theorem), production and consumption.

Module 9 : Economics of Uncertainty

Individual behaviour towards risk, expected utility and certainty equivalence approaches, risk and risk aversion — sensitivity analysis, gambling and insurance, the economics of insurance, cost and risk, risk pooling and risk spreading, mean-variance analysis and portfolio selection, optimal consumption under uncertainty, competitive firm under uncertainty, factor demand under price uncertainty, the economics of search — different models, the efficient market hypothesis, stochastic models of inventory demand; Market with incomplete information, search and transaction costs, the economics of information.

BASIC READING LIST

- Kreps, David M. (1990), A Course in Microeconomic Theory, Princeton University Press, Princeton.
- Koutsoyiannis, A. (1979), Modern Microeconomics, (2nd Edition), Macmillan Press, London.
- Layard, P.R.G. and A.W. Walters (1978), Microeconomic Theory, McGraw Hill, New York.
- Sen, A. (1999), Microeconomics : Theory and Applications, Oxford University Press, New Delhi.
- Stigler, G. (1996), Theory of Price, (4th Edition), Prentice Hall of India, New Delhi.
- Varian, H. (2000), Microeconomic Analysis, W.W. Norton, New York.

ADDITIONAL READING LIST**Module 1**

- Baumol, W.J. (1982), Economic Theory and Operations Analysis, Prentice Hall of India, New Delhi.
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.

Module 2

- Baumol, W.J. (1982), Economic Theory and Operations Analysis, Prentice Hall of India, New Delhi.
- Green, H.A.G. (1971), Consumer Theory, Penguin, Harmondsworth.
- Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory : A Mathematical Approach, McGraw Hill, New Delhi.
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.

Module 3

- Da Costa, G.C. (1980), Production, Prices and Distribution, Tata McGraw Hill, New Delhi.
- Healthfields and Wibe (1987), An Introduction to Cost and Production Functions, Macmillan, London.
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.

Module 4

- Archibald, G.C. (Ed.) (1971), Theory of the Firm, Penguin, Harmondsworth.
- Da Costa, G.C. (1980), Production, Prices and Distribution, Tata McGraw Hill, New Delhi.
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.

Module 5

- Archibald, G.C. (Ed.) (1971), Theory of the Firm, Penguin, Harmondsworth.
- Bain, J. (1958), Barriers to New Competition, Harvard University Press, Harvard.

Module 6

- Bronfenbrenner, M. (1979), Income Distribution Theory, Macmillan, London.
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.

Module 7

- Broadway, R.W. and N. Bruce (1984), Welfare Economics, Basil Blackwell, London.
- Graff, J. De V. (1957), Theoretical Welfare Economics, Cambridge University Press, Cambridge.

- Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory : A Mathematical Approach, McGraw Hill, New Delhi.
- Mishan, E.J. (1969), Welfare Economics : An Assessment, North Holland, Amsterdam.

8Module 8

- Da Costa, G.C. (1980), Production, Prices and Distribution, Tata McGraw Hill, New Delhi.
- Green, H. and V. Walsh (1975), Classical and Neo-Classical Theories of General Equilibrium, Oxford University Press, London.
- Hansen, B. (1970), A Survey of General Equilibrium Systems, McGraw Hill, New York.
- Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory : A Mathematical Approach, McGraw Hill, New Delhi.
- Quirk, J. and R. Saposnik (1968), Introduction to General Equilibrium Theory and Welfare Economics, McGraw Hill, New York.
- Weintrub, E.R. (1974), General Equilibrium Theory, Macmillan, London.

Module 9

- Arrow, K.J. and M.D. Intrilligator (Eds.) (1981), Handbook of Mathematical Economics, Vol. I, North Holland, Amsterdam.
- Borch, K.H. (1968), The Economics of Uncertainty, Princeton University Press, Princeton.
- Diamond and Rothschild (Eds.) (1978), Uncertainty in Economics, Academic Press, New York.
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.

**M.A. Compulsory Paper
Paper-II
MACRO ECONOMIC ANALYSIS**

PREAMBLE

Macroeconomics or aggregative economics analyses and establishes the functional relationship between the large aggregates. The aggregate analysis has assumed such a great significance in recent times that a prior understanding of macroeconomic theoretical structure is considered essential for the proper comprehension of the different issues and policies. Macroeconomics now is not only a scientific method of analysis; but also a body of empirical economic knowledge.

The paper entitled “Macro Economic Analysis” equips the students at the postgraduate level to understand systemic facts and latest theoretical developments for empirical analysis.

Module 1 : National Income and Accounts

Circular Flow of Income in two-, three- and four-sector economy; different forms of national income accounting — social accounting, input-output accounting, flow of funds accounting and balance of payments accounting.

Module 2 : Consumption Function

Keynes’ psychological law of consumption — implications of the law; short-run and long-run consumption function; Empirical evidence on consumption function; Income-consumption relationship — absolute income, relative income, life cycle and permanent income hypotheses.

Module 3 : Investment Function

Marginal efficiency of investment and level of investment; Marginal efficiency of capital and investment — long run and short run; The accelerator and investment behaviour — impact of inflation; Influence of policy measures on investment — empirical evidence.

Module 4 : Supply of Money

Financial intermediation — a mechanistic model of bank deposit determination; A behavioural model of money supply determination, a demand determined money supply process; RBI approach to money supply; High powered money and money multiplier; budget deficits and money supply; money supply and open economy; control of money supply.

Module 5 : Demand for Money

Classical approach to demand for money — Quantity theory approach, Fisher's equation, Cambridge quantity theory, Keynes's liquidity preference approach, transaction, precautionary and speculative demand for money — aggregate demand for money; Derivation of LM curve.

Module 6 : Neo-classical and Keynesian Synthesis

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

Module 7 : Post-Keynesian Demand For Money

Post-Keynesian approaches to demand for money — Patinkin and the Real Balance Effect, Approaches of Baumol and Tobin; Friedman and the modern quantity theory; Crisis in Keynesian economics and the revival of monetarism.

Module 8 : Macroeconomics in an Open Economy

Mundell-Fleming model — Asset markets, expectations and exchange rates; Monetary approach to balance of payments.

Module 9 : Theory of Inflation

Classical, Keynesian and Monetarist approaches to inflation; Structuralist theory of inflation; Philips curve analysis — Short run and long run Philips curve; Samuelson and Solow — the natural rate of unemployment hypothesis; Tobin's modified Philips curve; Adaptive expectations and rational expectations; Policies to control inflation.

Module 10 : Business Cycles

Theories of Schumpeter, Kaldor, Samuelson and Hicks, Goodwin's model; Control of business cycles — relative efficacy of monetary and fiscal policies.

Module 11 : New Classical Macroeconomics

The new classical critique of micro foundations, the new classical approach; Policy implications of new classical approach — empirical evidence.

BASIC READING LIST

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

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

ADDITIONAL READING LIST

Module 1

- Edey, M. and A.T. Peacock (1967), National Income and Social Accounts, Hutchinson University Library, London.
- Powelson, J.P. (1960), National Income And Flow of Funds Analysis, McGraw Hill, New York.
- Rao, V.K.R.V. (1983), India's National Income : 1950 to 1980, Sage Publications, New Delhi.
- Ruggles, R. and N. Ruggles (1956), National Income Accounts and Income Analysis, McGraw Hill, New York.
- United Nations (1974), Year Book of National Account Statistics.

Module 2

- Duesenberry, J.S. (1949), Income, Saving and the Theory of Consumer Behaviour. Harvard University Press, Harvard.
- Friedman, M. (1957), The Theory of Consumption Function, Princeton University Press, Princeton.
- Keynes, J.M. (1936), The General Theory of Employment, Interest and Money, Macmillan, London.
- Mueller, M.G. (1966), Readings in Macroeconomics, Holt Rinehart and Winston, New York.

Module 3

- Gordon, R. and S.G. Harris (1998), Macroeconomics, Addison Wesley.
- Culbertson, J.M. (1968), Macroeconomic Theory and Stabilization Policy, McGraw Hill, Kogekosh, Tokyo.

Module 4

- Chakravarty, S.C. (1985), Report of the Committee to Review the Working of the Monetary System, Reserve Bank of India, Bombay.
- Gupta, S.B. (1995), Monetary Planning in India, Oxford University Press, New Delhi.
- Gurley, J. and E.S. Shaw (1960), Money in a Theory of Finance, Brookings Institution, Washington.
- Mckinen, G.E. (1978), Money, The Price Level and Interest Rates, Prentice Hall of India, New Delhi.
- Reddy, Y.V. (2000), A Review of Monetary and Financial Sector Reforms in India — A Central Banker's Perspective, UBSPD, New Delhi.

Module 5

- Friedman, M. (1956), Studies in the Quantity Theory of Money, The University of Chicago Press, Chicago.
- Keynes, J.M. (1936), The General Theory of Employment, Interest and Money, Macmillan, London.
- Laidler, D.E.W. (1977), Demand for Money : Theory and Evidence, Dum-Don Valley, New York.
- Mckinen, G.E. (1978), Money, The Price Level and Interest Rates, Prentice Hall of India, New Delhi.

Module 6

- Leijonhufvud, A. (1968), On Keynesian Economics and Economics of Keynes, Oxford University Press, London.
- Levacic, R. and A. Rebman (1986), Macroeconomics : An Introduction to Keynesian and Neo-classical Controversies, Macmillan, London.
- Mankiw, N.G. and D. Romer (Eds.) (1991), New Keynesian Economics, (2 Vols.), MIT Press, Cambridge.
- Rakshit, M. (1998), Studies in the Macroeconomics of Developing Countries, Oxford University Press, New Delhi.

Module 7

- Friedman, M. (1956), Studies in the Quantity Theory of Money, The University of Chicago Press, Chicago.
- Hicks, J.R. (1974), The Crisis in Keynesian Economics, Oxford University Press, New Delhi.
- Jha, R. (1999), Contemporary Macroeconomic Theory and Policy, New Age International (P) Ltd., New Delhi.
- Laidler, D.F.W. (1977), Demand for Money : Theory and Evidence, Dum-Don Valley, New York.
- Leijonhufvud, A. (1968), On Keynesian Economics and Economics of Keynes, Oxford University Press, London.
- Patinkin, D. (1965), Money, Interest and Prices, Harper and Row, New York.

Module 8

- Gordon, R. and S.G. Harris (1998), Macroeconomics, Addison Wesley, Massachusetts.
- Mankiw, N.G. and D. Romer (Eds.) (1991), New Keynesian Economics, (2 vols.), MIT Press, Cambridge.

Module 9

- Frisch, H. (1983), Theories of Inflation, Cambridge University Press, Cambridge.
- Hagger, A.J. (1977), Inflation : Theory and Policy, Macmillan, London.
- Hudson, J. (1982), Inflation : A Theoretical Survey and Synthesis, George Allen and Unwin, London.
- Sheffrin, S.M. (1996), Rational Expectations, Cambridge University Press, Cambridge.

Module 10

- Gordon, R.A. (1961), Business Fluctuations, Harper and Row.
- Gordon, R.A. and L.R. Klein (Eds.) (1965), Readings in Business Cycles, Irwin, Homewood.
- Hicks, J.R. (1950), A Contribution to the Theory of Trade Cycles, Clarendon Press, Oxford.
- Lucas, R. (1981), Studies in Business Cycle Theory, M.I.T. Press, Cambridge, Massachusetts.

Module 11

- Taylor, L. (1983), Structuralist Macroeconomics, Basic Books, New Longman.
- Turnovsky, S.J. (1977), Macroeconomic Analysis and Stabilization Policy, Cambridge University Press, Cambridge.

**M.A. Compulsory Paper
Paper-III
QUANTITATIVE METHODS**

PREAMBLE

The main objective of this paper is to train the students to use the techniques of mathematical and statistical analysis, which are commonly applied to understand and analyze economic problems. The emphasis of this paper is on understanding economic concepts with the help of mathematical methods rather than learning mathematics itself. Hence in this paper a student will be initiated into various economic concepts, which are amenable to mathematical treatment. The paper also deals with simple tools and techniques, which will help a student in data collection, presentation, analysis and drawing inferences about various statistical hypotheses.

Module 1 : Mathematical Methods — 1

Concept of function and types of functions; Limit, continuity and derivative; Rules of differentiation; Interpretation of revenue, cost, demand, supply functions; Elasticities and their types; Multivariable functions; Concept and types of production functions; Rules of partial differentiation and interpretation of partial derivatives; Problems of maxima and minima in single and multivariable functions; Unconstrained and constrained optimization in simple economic problems; Simple problems in market equilibrium; Concept of integration; Simple rules of integration; Application to consumer's surplus and producer's surplus; Growth rates and simple properties of time path of continuous variables.

Module 2 : Mathematical Methods — 2

Determinants and their basic properties; Solution of simultaneous equations through Cramer's rule; Concept of matrix — their types, simple operations on matrices, matrix inversion and rank of a matrix; Concept of vector — its properties; Matrices and vectors; Concept of quadratic forms — Eigen roots and Eigen vectors; Introduction to input-output analysis; Difference equations — Solution of first order and second order difference equations; Applications in trade cycle models; Growth models and lagged market equilibrium models.

Module 3 : Mathematical Methods — 3

Linear programming — Basic concept; Formulation of a linear programming problem — Its structure and variables; Nature of feasible, basic and optimal solution; Solution of linear programming through graphical and simplex method; Statement of basic theorems of linear programming; Formulation of the dual of a programme and its interpretation; Shadow prices and their uses; Concept of duality and statement of duality theorems; Concept of a game; Strategies — simple and mixed; Value of a game; Saddle point solution; Simple applications.

Module 4 : Statistical Methods — 1

Meaning, assumptions and limitations of simple correlation and regression analysis; Pearson's product moment and spearman's rank correlation coefficients and their properties; Concept of the least squares and the lines of regression; Standard error of estimate; Partial and multiple correlation and regression (applications only); Methods of estimation of non-linear equations — parabolic, exponential, geometric, modified exponential, Gompertz and logistic relationships.

Module 5 : Statistical Methods — 2

Deterministic and non-deterministic experiments; Various types of events — classical and empirical definitions of probability; Laws of addition and multiplication; Conditional probability and concept of interdependence; Baye's theorem and its applications; Elementary concept of random variable; Probability, mass and density functions; Expectations, moments and moment generating functions; Properties (without derivations) of Binomial, Poisson and Normal distributions.

Module 6 : Statistical Methods — 3

Basic concept of sampling — random and non-random sampling; Simple random; stratified random and p.p.s. sampling; Concept of an estimator and its sampling distribution; Desirable properties of an estimator; Formulation of statistical hypotheses — Null and alternative; Goodness of fit;

Confidence intervals and level of significance; Hypothesis testing based on Z, t, χ^2 (Chi-square) and F tests; Type 1 and Type 2 errors.

BASIC READING LIST

- Allen, R.G.D. (1974), Mathematical Analysis for Economists, Macmillan Press and ELBS, London.
- Chiang, A.C. (1986), Fundamental Methods of Mathematical Economics, McGraw Hill, New York.
- Gupta, S.C. (1993), Fundamentals of Applied Statistics, S. Chand & Sons, New Delhi.
- Handry, A.T. (1999), Operations Research, Prentice Hall of India, New Delhi.
- Speigal, M.R. (1992), Theory and Problems of Statistics, McGraw Hill Book Co., London.
- Taha, H.A. (1997), Operations Research : An Introduction (6th Edition), Prentice Hall of India Pvt. Ltd., New Delhi.
- Yamane, Taro (1975), Mathematics for Economists, Prentice Hall of India, New Delhi.

ADDITIONAL READING LIST

Module 1

- Baumol, W.J. (1984), Economic Theory and Operations Analysis, Prentice Hall, Englewood Cliffs, New Jersey.
- Monga, G.S. (1972), Mathematics and Statistics for Economists, Vikas Publishing House, New Delhi.
- Vygodsky, G.S. (1971), Mathematical Handbook (Higher Mathematics), Mir Publishers, Moscow.

Module 2

- Mathur, P.N. and R. Bharadwaj (Eds.) (1967), Economic Analysis in Input-Output Research, Input-Output Research Association of India, Pune.

Module 3

- Hadley, G. (1962), Linear Programming, Addison Wesley Publishing Co., Massachusetts.
- Kothari, C.R. (1992), An Introduction to Operations Research, Vikas Publishing House, New Delhi.
- Mustafi, C.K. (1992), Operations Research : Methods and Practice, Wiley Eastern, New Delhi.

Module 4

- Chou, Y. (1975), Statistical Analysis, Holt, Reinhart and Winston, New York.
- Croxton, Crowden and Klein (1971), Applied General Statistics, Prentice Hall of India, New Delhi.
- Millar, J. (1996), Statistics for Advanced Level, Cambridge University Press, Cambridge.
- Nagar, A.L. and R.K. Das (1993), Basic Statistics, Oxford University Press, New Delhi.

Module 5

- Chou, Y. (1975), Statistical Analysis, Holt, Reinhart and Winston, New York.
- Goon, A.M., M.K. Gupta and B. Dasgupta (1993), Fundamentals of Statistics, Vol. 1, The World Press Ltd., Calcutta.

- Hogg, R.V. and A.T. Craig (1970), Introduction to Mathematical Statistics (3rd Edition), Macmillan Publishing Co., New York.

Module 6

- Hogg, R.V. and A.T. Craig (1970), Introduction to Mathematical Statistics (3rd Edition), Macmillan Publishing Co., New York.
- Millar, J. (1996), Statistics for Advanced Level, Cambridge University Press, Cambridge.
- Sukhatme, P.V. and B.V. Sukhatme (1970), Sampling Theory of Survey with Applications, Iowa State University Press, Ames.

M.A. Compulsory Paper
Paper-IV
PUBLIC ECONOMICS

PREAMBLE

Role and functions of the Government in an economy have been changing with the passage of time. The term 'Public Finance' has traditionally been applied to the package of those policies and operations which involve the use of tax and expenditure measures while budgetary policy is an important part to understand the basic problems of use of resources, distribution of income, etc. There are vast array of fiscal institutions — tax systems, expenditure programmes, budgetary procedures, stabilization instruments, debt issues, levels of government, etc., which raise a spectrum of issues arising from the operation of these institutions. Further, the existence of externalities, concern for adjustment in the distribution of income and wealth, etc. require political processes for their solution in a manner which combines individual freedom and justice. This paper combines a thorough understanding of fiscal institutions with a careful analysis of the issues which underline budgetary policies in general and Indian experience in particular.

Module 1: Introduction

Role of Government in organized society; Changing perspective — government in a mixed economy: public and private sector, cooperation or competition; Government as an agent for economic planning and development; Government as a tool for operationalizing the planning process; private goods, public goods, and merit goods; Market failure — imperfections, decreasing costs, externalities, public goods; Uncertainty and non-existence of futures markets; Informational assymetry — Theory of second best.

Module 2: Public Choice

Private and public mechanism for allocating resources; Problems for allocating resources; Problems of preference revelation and aggregation of preferences; Voting systems; Arrow impossibility

theorem; An economic theory of democracy; Politico-eco-bureaucracy; Rent seeking and directly unproductive profit seeking (DUP) activities.

Module 3: Rationale for Public Policy

Allocation of resources — provision of public goods; Voluntary exchange models; Impossibility of decentralized provision of public goods (contributions of Samuelson and Musgrave); Demand-revealing schemes for public goods — Contributions of Clarks, Groves and Leyard, Tiebout model, theory of club goods; Stabilization Policy — Keynesian case for stabilization policy; Uncertainty and expectations; Failure of inter-temporal markets; Liquidity preference; Social goals; Poverty alleviation; Provision of infrastructural facilities, removing distributional inequalities and regional imbalances.

Module 4: Public Expenditure

Wagner's law of increasing state activities; Wiesman- Peacock hypothesis; Pure theory of public expenditure; Structure and growth of public expenditure; Criteria for public investment; Social cost-benefit analysis — Project evaluation, Estimation of costs, discount rate; Reforms in expenditure budgeting; Programme budgeting and zero base budgeting.

Module 5: Taxation

Theory of incidence; Alternative concepts of incidence — Allocative and equity aspects of individual taxes; Benefit and ability to pay approaches; Theory of optimal taxation; Excess burden of taxes; Trade off between equity and efficiency; Theory of measurement of dead weight losses; The problem of double taxation.

Module 6: Public Debt

Classical view of public debt; Compensatory aspect of debt policy; Burden of public debt; Sources of public debt; Debt through created money; Public borrowings and price level; Crowding out of private investment and activity; principles of debt management and repayment.

Module 7: Fiscal Policy

Objectives of fiscal policy — full employment, anti-inflation, economic growth, redistribution of income and wealth; Interdependence of fiscal and monetary policies; Budgetary deficits and its implications; Fiscal policy for stabilization — automatic vs. discretionary stabilization; Alternative measures of resource mobilization and their impact on growth, distribution and prices; Balanced budget multiplier.

Module 8: Fiscal Federalism

Principles of multi-unit finance; Fiscal federalism in India; Vertical and horizontal imbalance; Assignment of function and sources of revenue; Constitutional provisions; Finance Commission and Planning Commission; Devolution of resources and grants; Theory of grants; Resource transfer from Union to States — Criteria for transfer of resources; Centre-State financial relations in India; Problems of states' resources and indebtedness; Transfer of resources from Union and States to local bodies.

Module 9: Indian Public Finances

Indian tax system; Revenue of the Union, States and local bodies; 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; Non-tax revenue of Centre, State and local bodies; Analysis of Central and State government budgets; Lack of flexibility in Central and State budgets, shrinking size of development finance through budgets; Trends in public expenditure and public debt; Fiscal crisis and fiscal sector reforms in India; Reports of Finance Commissions in India.

BASIC READING LIST

- Atkinson, A.B. and J.E. Siglitz (1980), Lectures on Public Economics, Tata McGraw Hill, New York.
- Auerbach, A.J. and M. Feldstern (Eds.) (1985), Handbook of Public Economics, Vol. I, North Holland, Amsterdam.

- Buchanan, J.M. (1970), The Public Finances, Richard D. Irwin, Homewood.
- Goode, R. (1986), Government Finance in Developing Countries, Tata McGraw Hill, New Delhi.
- Houghton, J.M. (1970), The Public Finance : Selected Readings, Penguin, Harmondsworth.
- Jha, R. (1998), Modern Public Economics, Routledge, London.
- Menutt, P. (1996), The Economics of Public Choice, Edward Elgar, U.K.
- Musgrave, R.A. (1959), The Theory of Public Finance, McGraw Hill, Kogakusha, Tokyo.
- Musgrave, R.A. and P.B. Musgrave (1976), Public Finance in Theory and Practice, McGraw Hill, Kogakusha, Tokyo.
- Shoup, C.S. (1970), Public Finance, Aldine, Chicago.
- Shome, P. (Ed.) (1995), Tax Policy : Handbook, Tax Division, Fiscal Affairs Department, International Monetary Fund, Washington D.C.

ADDITIONAL READING LIST

Module 1

- Cornes, R. and T. Sandler (1986), The Theory of Externalities, Public Goods and Club Goods, Cambridge University Press, Cambridge.
- Duff, L. (1997), Government and Market, Orient Longman, New Delhi.
- Herber, B.P. (1967), Modern Public Finance, Richard D. Irwin, Homewood.
- Spulber, N. (1998), Redefining the State, Cambridge University Press, Cambridge.

Module 2

- Buchanan, J.M. (1968), The Demand and Supply of Public Goods, Rand McNally, Chicago.

- Mueller, D.C. (1979), Public Choice, Cambridge University Press, Cambridge.
- Spulber, N. (1998), Redefining the State, Cambridge University Press, Cambridge.
- Stiglitz, J.E. (1986), Economics of Public Sector, Norton, New York.

Module 3

- Dorfman, R. (Ed.) (1970), Measuring the Benefits of Government Investment, Brookings Institution, Washington.
- Duff, L. (1997), Government and Market, Orient Longman, New Delhi.
- Friedman, A. (1986), Welfare Economics and Social Choice Theory, Martins Nijhoff, Boston.
- Glennester, H. and J. Hills (1998), The State of Welfare : The Economic and Social Spending, Oxford University Press, London.

Module 4

- Mishan, E.J. (1982), Cost-Benefit Analysis : An Informal Introduction, George Allen and Unwin, London.
- Peacock, A. and D.J. Robertson (Eds.) (1963), Public Expenditure : Appraisal and Control, Oliver and Boyd, Edinburgh.
- Phyr, P. (1970), Zero Base Budgeting : A Practical Management Tool for Evaluating Expenses, John Wiley, New York.
- Premchand, A. (1966), Control of Public Expenditure in India, Allied Publishers, New Delhi.
- Sahni, B.S. (Ed.) (1972), Public Expenditure Analysis: Selected Readings, Rotherdam University Press.

Module 5

- Bird, R. and O. Oldman (1967), Readings on Taxation in Developing Countries, the John Hopkins University Press, Baltimore.

- Cutt, J. (1969), Taxation and Economic Development in India, Frederick A Praegar Publishers, New York.
- Kaldor, N. (1955), An Expenditure Tax, George Allen and Unwin, London.
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**M.A. Compulsory Paper
Paper-V
INDIAN ECONOMIC POLICY**

PREAMBLE

The objective of this Paper at the postgraduate level would be to sharpen the analytical faculty of the student, by highlighting an integrated approach to the functioning aspects of the Indian economy, keeping in view the scope for alternative approaches. Such an analysis is essential because the Indian economy is a unique amalgam of alternative competing and often conflicting theories and a proper understanding of its working is imperative if the student is to comprehend the ramifications that underlie most of the observed phenomena in the Indian economic set-up. The emphasis of the paper is on overall social, political and economic environment influencing policy decisions. To develop all these themes, the course is divided into specific modules.

Module 1: Economic Development and its Determinants

Approaches to economic development and its measurement — sustainable development; Role of State, market and other institutions; Indicators of development — PQLI, Human Development Index (HDI), gender development indices.

Module 2: Planning in India

Objectives and strategy of planning; Failures and achievements of Plans; Developing grass-root organizations for development — Panchayats, NGOs and pressure groups.

Module 3: Demographic Features, Poverty and Inequality

Broad demographic features of Indian population; Rural-urban migration; Urbanization and civic amenities; Poverty and Inequality.

Module 4: Resource Base and Infrastructure

Energy; Social infrastructure — education and health; Environment; Regional imbalance; Issues and policies in financing infrastructure development.

Module 5: The Agricultural Sector

Institutional Structure — land reforms in India; Technological change in agriculture — pricing of agricultural inputs and output; Terms of trade between agriculture and industry; Agricultural finance policy; Agricultural Marketing and Warehousing; Issues in food security — policies for sustainable agriculture.

Module 6: The Industrial Sector

Industrial policy; Public Sector enterprises and their performance; Problem of sick units in India; Privatisation and disinvestment debate; Growth and pattern of industrialisation; Small-scale sector; Productivity in industrial sector; Exit policy — issues in labour market reforms; Approaches for employment generation.

Module 7: Public Finances

Fiscal federalism — Centre-state financial relations; Finances of central government; Finances of state governments; Parallel economy; Problems relating to fiscal policy; Fiscal sector reforms in India.

Module 8: Money, Banking and Prices

Analysis of price behaviour in India; Financial sector reforms; Interest rate policy; Review of monetary policy of RBI; Money and capital markets; Working of SEBI in India.

Module 9: External Sector

Structure and direction of foreign trade; Balance of payments; Issues in export-import policy and FEMA; Exchange rate policy; Foreign capital and MNCs in India; The progress of trade reforms in India.

Module 10: Economic Reforms

Rationale of internal and external reforms; Globalisation of Indian economy; W.T.O. and its impact on the different sectors of the economy; Need for and issues in good governance; Issues in competition and safety nets in Indian economy.

BASIC READING LIST

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Module 1

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Module 2

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Module 3

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- Chelliah, Raja J. and R. Sudarshan (1999), Income, Poverty and Beyond : Human Development in India, Social Science Press, New Delhi.
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Module 9

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**M.A. Compulsory Paper
Paper-VI
ECONOMICS OF GROWTH AND DEVELOPMENT**

PREAMBLE

The study of economic development has gained importance because of sustained interest of the developing countries in uplifting their economic conditions by restructuring their economies to acquire greater diversity, efficiency and equity in consonance with their priorities. While few success stories can be counted, many have grappled with chronic problems of narrow economic base, inefficiency and low standard of living. For this and other reasons, there have been many approaches to economic development. In recent times, besides hardcore economic prescriptions to development, concerns hitherto relegated to background like education, health, sanitation and infrastructural development, have found a place of pride in explaining the preference of various economies.

Modules incorporated in this paper are devoted to the theories of growth and development, social and institutional aspects of development, importance of agriculture, and the rationale and pattern of industrialization in developing countries. The other important issues in the context of development such as infrastructure-linkages, role of international trade, importance of domestic macroeconomic policies, investment criteria, and relevance of planning have been included in the modules of this paper.

Module 1: Economic Growth — I

Economic growth and development — Factors affecting economic growth : capital, labour and technology; Growth models — Harrod and Domar, instability of equilibrium; Neo-classical growth models — Solow and Meade, Mrs. Joan Robinson's growth model; Cambridge criticism of Neo-classical analysis of growth, The capital controversy.

Module 2: Economic Growth — II

Technological progress — embodied and disembodied technical progress; Hicks, Harrod; learning by doing, production function approach to the economic growth; Total factor productivity and growth accounting; Growth models of Kaldor and Pasinetti, optimal savings and Ramsay's rule, golden rule of accumulation, two-sector model of Ujawa, Stability of equilibrium; money in economic growth, Tobin, Levhari, Patinkin and Johnson; Endogenous growth; Intellectual capital: role of learning, education and research; AK model — Explanations of cross country differentials in economic growth.

Module 3: Social and Institutional Aspects of Development

Development and underdevelopment — Perpetuation of underdevelopment; Poverty — Absolute and relative; Measuring development and development gap — Per capita income, inequality of income, Human development index and other indices of development and quality of life — Food security, education, health and nutrition; Human resource development; Population problem and growth pattern of population — Theory of demographic transition; Population as limits to growth and as ultimate source — Population, poverty and environment; Economic development and institutions — markets and market failure, state and state failure, issues of good governance.

Module 4: Theories of Development

Classical theory of development — contributions of Adam Smith, Ricardo, Malthus and James Mill; Karl Marx and development of capitalistic economy — theory of social change, surplus value and profit; Immutable laws of capitalist development; Crisis in capitalism — Schumpeter and capitalistic development; innovation — role of credit, profit and degeneration of capitalism; Structural analysis of development; Imperfect market paradigm.

Module 5: Approaches to Development

Partial theories of growth and development — vicious circle of poverty, circular causation, unlimited supply of labour, big push, balanced growth, unbalanced growth, critical minimum effort thesis,

low-income equilibrium trap; Dualism — technical, behavioural and social; Ranis and Fei model; Dixit and Marglin model, Kelly et. al. Model; Dependency theory of development; Structural view of development.

Module 6: Sectoral Aspects of Development

Role of agriculture in economic development; Efficiency and productivity in agriculture, New technology and sustainable agriculture; Globalization and agricultural growth; Rationale and pattern of industrialization in developing countries; The choice of techniques and appropriate technology and employment; Efficiency of small-scale vs. large-scale production; Terms of trade between agriculture and industry; Infrastructure and its importance; Labour markets and their functioning in developing countries.

Module 7: Trade and Economic Development

International trade as engine of growth; Static and dynamic gains from trade; Prebisch, Singer and Myrdal thesis vs. free trade; Export-led growth; Dual gap analysis; Balance of payments; Tariffs and effective protection; Post-GATT international economic order; WTO and developing countries.

Module 8: Macroeconomic Policies and Development

Role of monetary and fiscal policies in developing countries — Prior savings, inflation and growth — Empirical evidence; External resources — FDI, aid vs. trade, technology inflow; MNC activity in developing countries; Borrowings — domestic and external; Burden of borrowing — IMF and World Bank policies in developing countries.

Module 9: Allocation of Resources

Need for investment criteria in developing countries — present vs., future, Alternative investment criteria; Cost-benefit analysis, Shadow prices, Project evaluation and UNIDO guidelines.

Module 10: Planning and Development

Need for planning — democratic, decentralized and indicative planning, micro-level planning; Review of Indian Plan models and planning.

BASIC READING LIST

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ADDITIONAL READING LIST

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- Barrow, R. and X. Sela-I, Martin, Economic Growth, McGraw Hill, New York.
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- Meadows, D.H. et. al. (1972), The Limits to Growth, Universe Books, New York.
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Modules 3 & 4

- Dasgupta, P. (1993), An Enquiry into Well-being and Destitution, Clarendon Press, Oxford.
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- Meier, G.M. and D. Seers (Eds.) (1987), Pioneers in Development, Oxford University Press, New York.
- Myrdal, G. (1957), Economic Theory and Underdeveloped Regions, Duckworth, London.
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Module 5

- Campbell, N. and F. Burton (Eds.) (1994), Japanese Multinationals, Routledge, New York.
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Module 7

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- Kuznets, Simon (1971), Economic Growth of Nations, Total Output and Production Structure, Harvard University Press, Cambridge, Mass.
- Little, I.M.D. (1982), Economic Development : Theory and International Relations, Basic Books, New York.
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- Bhagwati, J. and P. Desai (1970), India : Planning for Industrialization, Oxford University Press, London.
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**M.A. Compulsory Paper
Paper-VII
INTERNATIONAL TRADE AND FINANCE**

PREAMBLE

The course provides a deep understanding about the broad principles and theories, which tend to govern the free flow of trade in goods, services and capital — both short-term and long-term — at the global level. Besides, preparing the students about the relevance and limitations of these principles, the contents of the paper spread over different modules, lay stress on the theory and nature of the subject which, in turn, will greatly help them to examine the impact of the trade policies followed both at the national and international levels as also their welfare implications at macro level and the distribution of gains from trade to North and South with particular reference to India. The study of the paper under the present era of globalization will train the students about the likely consequences on income, employment and social standards and possible policy solutions as the world will move into the 21st century.

Module 1: Theory of International Trade

The pure theory of international trade — Theories of absolute advantage, comparative advantage and opportunity costs, modern theory of international trade; Theorem of factor price equalization; Empirical testing of theory of absolute cost and comparative cost — Heckscher-Ohlin theory of trade. Kravis and Linder theory of trade, Role of dynamic factors, i.e., changes in tastes, technology and factor endowments in explaining the emergence of trade; The Rybczynski theorem — concept and policy implications of immiserizing growth; Causes of emergence and measurement of intra-industry trade and its impact on developing economies.

Module 2: Measurement of Gains and Theory of Interventions

Measurement of gains from trade and their distribution; Concepts of terms of trade, their uses and limitations; Hypothesis of secular deterioration of terms of trade, its empirical relevance and policy implications for less developed countries; Trade as an engine of economic growth; Welfare

implications — Empirical evidence and policy issues; The Theory of Interventions (Tariffs, Quotas and non-tariff barriers); Economic effects of tariffs and quotas on national income, output, employment, terms of trade, income distribution; Balance of payments on trading partners both in partial and general equilibrium analysis. The political economy of non-tariff barriers and their implications; nominal, effective and optimum rates of tariffs — their measurement, impact and welfare implications; Trade under imperfectly competitive market.

Module 3: Balance of Payments

Meaning and components of balance of payments; Equilibrium and disequilibrium in the balance of payments; The process of adjustment under systems of gold standard, fixed exchange rates and flexible exchange rates; Expenditure-reducing and expenditure-switching policies and direct controls for adjustment; Policies for achieving internal and external equilibrium simultaneously under alternative exchange rate regimes; A critical review of the monetary approach to the theory of balance of payments adjustment; Foreign trade multiplier with and without foreign repercussions and determination of national income and output; Relative merits and demerits of fixed and flexible exchange rates in the context of growth and development in developing countries.

Module 4: The Theory of Regional Blocs

Forms of economic cooperation; Reforms for the emergence of trading blocks at the global level; Static and Dynamic effects of a customs union and free trade areas; Rationale and economic progress of SAARC/SAPTA and ASEAN regions. Problems and prospects of forming a customs union in the Asian region. Regionalism (EU, NAFTA); Multilateralism and WTO; Rise and fall of gold standard and Bretton-woods system; Need, adequacy and determinants of international reserves; Conditionality clause of IMF; Emerging International Monetary System with special reference to Post-Maastricht developments and developing countries; Reform of the International Monetary System, India and developing countries; Theory of short-term capital movements and East-Asian Crisis and lessons for developing countries; International trade and financial institutions— Functions of GATT/WTO (TRIPS, TRIMS), UNCTAD, IMF, World Bank and Asian Development Bank — Their achievements and failures; WTO and World Bank from the point of view of India.

Module 5: Trade Policies in India

Trade problems and trade policies in India during the last five decades; Recent changes in the direction and composition of trade and their implications; Rationale and impact of trade reforms since 1991 on balance of payments, employment and growth. Problems of India's international debt; Working and regulations of MNCs in India; Instruments of export promotion and recent import and export policies and agenda for future.

BASIC READING LIST

- Bhagwati, J. (Ed.) (1981), International Trade, Selected Readings, Cambridge, University Press, Massachusetts.
- Carbough, R.J. (1999), International Economics, International Thompson Publishing, New York.
- Chacholiades, M. (1990), International Trade : Theory and Policy, McGraw Hill, Kogakusha, Japan.
- Dana, M.S. (2000), International Economics : Study, Guide and Work Book, (5th Edition), Routledge Publishers, London.
- Dunn, R.M. and J.H. Mutti (2000), International Economics, Routledge, London.
- Kenen, P.B. (1994), The International Economy, Cambridge University Press, London.
- Kindleberger, C.P. (1973), International Economics, R.D. Irwin, Homewood.
- King, P.G. (1995), International Economics and International Economic Policy : A Reader, McGraw Hill International, Singapore.
- Krugman, P.R. and M. Obstfeld (1994), International Economics : Theory and Policy, Glenview, Foresman.

- Salvatore, D. (1997), International Economics, Prentice Hall, Upper Saddle River, N.J., New York.
- Soderston, Bo (1991), International Economics, The Macmillan Press Ltd., London.

ADDITIONAL READING LIST

Module 1

- Bhagwati, J. (Ed.) (1981), International Trade : Selected Readings, Cambridge University Press, Mass.
- Corden, W.M. (1965), Recent Developments in the Theory of International Trade, Princeton University Press, Princeton.
- Greenway, D. (1983), International Trade Policy, Macmillan Publishers Ltd., London.

Module 2

- Aggarwal, M.R. (1979), Regional Economic Cooperation in South Asia, S. Chand and Co., New Delhi.
- Barrow, R.J. (1993), Macro Economics, 4th Edition, John Wiley, New York.
- Bhagwati, J. (1988), Protectionism, Cambridge University Press, Mass.
- Clement, M.O., R.L. Pfister and K.J. Rothwell (1969), Theoretical Issues in International Economics, Cosntable Publication, London.
- Corden, W.M. (1974), Trade Policy and Economic Welfare, Clarendon Press, Oxford.
- Goldstein, M. (1998), The Asian Financial Crisis : Causes, Cure and Systematic Implication, Institute for International Economics, Washington, D.C.

- Jackson, J. (1989), The World Trading System, Cambridge University Press, Mass.
- Pomfret, R. (1988), Unequal Trade : The Economics of Discriminatory International Trade Policies, Blackwell Publishers, Oxford.

Module 3

- Crockett, A. (1982), International Money : Issues and Analysis, The ELBS and Nelson.
- Heller, H. Robert (1968), International Monetary Economics, Prentice Hall, India.
- Linder, S.B. (1961), An Essay on Trade and Transformation, Wiley, New York.
- Niehans, J. (1984), International Monetary Economics, John Hopkins University Press, Baltimore.
- Schwartz, A.J. (1987), Money in Historical Perspective, Chicago University Press, Chicago.
- Yeager, L.B. (1976), International Monetary Relations : Theory, History and Policy, Harper and Row, New York.

Module 4

- Aggarwal, M.R. (1979), Regional Economic Cooperation in South Asia, S. Chand and Co., New Delhi.
- Brahmananda, P.R. (1982), The IMF Loan and India's Economic Future, Himalaya Publishing House, Bombay.
- Grable, J.O. (1996), International Financial Markets, Prentice Hall, Englewood Cliffs, New York.
- Kenen, P.B. (1995), Economic and Monetary Union in Europe, Cambridge University Press, UK.

- Kindleberger, C.P. (1996), A History of Financial Crisis : Manias, Panics and Crashes, (3rd Edition), John Wiley and Sons, New York.
- Manmohan Singh (1964), India's Export Trends and the Prospects for Self-sustained Growth, Oxford University Press, New Delhi.
- Mishkin, S.F. (1998), The Economics of Money, Banking and Financial Markets, (5th Edition), Harper Colins Publishers, New York.
- Mundell, R. (1968), International Economics, The Macmillan Company Ltd., New York.
- Nayar, D. (1976), India's Exports and Export Policies in the 1960s, Cambridge University Press.
- Panchmukhi, V.R., K.M. Raipuria and R. Tandon (1987), Money and Finance in World Economic Order (RIS), Indus Publishing Co., Delhi.
- Panchmukhi, V.R. (1978), Trade Policies of India — A Quantitative Analysis, Concept Publishing Company, New Delhi.
- Pomfret, R. (1996), International Trade : An Introduction to Theory and Policy, Basil Blackwell, Oxford.
- Soloman, R. (1982), The International Monetary System 1945-1981, Harper and Row Publishers, New York.
- Tew, B. (1985), The Evaluation of the International Monetary System : 1945-85, Hutchinson.
- Whalley, John (1985), Trade Liberalization Among Major Trading Areas, Cambridge University Press, Mass.

Module 5

- Bhagwati, J. and P. Desai (1970), India : Planning for Industrialization, Oxford University Press, London.

- Brahmananda, P.R. and V.R. Panchmukhi (Eds.) (1987), The Development Process of the Indian Economy, Himalaya Publishing House, Bombay.
- Joshi, V. and I.M.D. Little (1998), India's Economic Reforms, 1999-2000, Oxford University Press, New Delhi.
- Patel, S.J. (1995), Indian Economy Towards the 21st Century, University Press Ltd., India.
- Satyanarayan, B. (1986), India's Trade with Asia and the Far East Countries, B.R. Publishing Corp., New Delhi.
- Verma, M.L. (1995), International Trade, Vikas Publishing House Pvt. Ltd., Delhi.

**M.A. Compulsory Paper
Paper-VIII
ECONOMICS OF SOCIAL SECTOR AND ENVIRONMENT**

PREAMBLE

This course is meant to provide some insights into the application of economic theory in the design and implementation of public policy related to the management of environment and social sectors. The course finds roots in welfare economics, national income accounting, macroeconomic policies and trade and development.

Modules incorporated in this paper are devoted to issues of environmental economics, environmental and social services and the problem of valuation of these services, and designing of instruments and institutions for the management of environment. The models of optimal use of natural resources, macroeconomic issues, sustainable development, environmental resource problems in India and the economics of health and education constitute the other areas of the modules of this paper.

Module 1: Welfare Economics, Social Sectors and Environment

Pareto optimality and competitive equilibrium; Fundamental theorems of welfare economics; Externalities and market inefficiency — externalities as missing markets; property rights and externalities, non-convexities and externalities; Pareto optimal provision of public goods — Lindahl's equilibrium, preference revelation problem and impure and mixed public goods, common property resources.

Module 2: Measurement of Environmental Values

Use values; Option values and non-use values; Valuation methods — Methods based on observed market behaviour; Hedonic property values and household production models (travel cost method and household health production function), Methods based on response to hypothetical markets, contingent valuation methods.

Module 3: The Theory of Environmental Policy

Environmental externalities — Pigouvian taxes and subsidies, marketable pollution permits and mixed instruments (the charges and standards approach), Coase's bargaining solution and collective action; Informal regulation and the new model of pollution control, Monitoring and enforcement of environmental regulation, Environmental institutions and grass root movements; Global environmental externalities and climatic change — Tradable pollution permits and international carbon tax, Trade and environment in WTO regime.

Module 4: Economics of Natural Resource Management and Sustainable Development

Theories of optimal use of exhaustible and renewable resources; Environmental and development trade off and the concept of sustainable development; Integrated environmental and economic accounting and the measurement of environmentally corrected GDP; Macroeconomic policies and environment.

Module 5: Environmental and Natural Resource Problems in India

Mechanism for environment regulation in India; Environmental laws and their implementation; Policy instruments for controlling water and air pollution and forestry policy; People's participation in the management of common and forest lands; The institutions of joint forest management and the joint protected area management; Social forestry — rationale and benefits.

Module 6: Economics of Education

Education as an instrument for economic growth; Human capital — Human capital vs. Physical capital, components of human capital; Demand for education — private demand and social demand, Determinants of demand; Cost of Education — Expenditure on education, private costs and social costs and wastage and stagnation; Benefits of education — Direct and indirect benefits, private and social benefits; Educational planning and economic growth — Cost-benefit analysis, production function models, growth accounting equations of Schultz and Denison, Manpower requirements approach, programming and input-output models; Educational financing — Resource mobilization

and utilization, pricing and subsidies and effects of educational financing on income distribution; Education and labour market — Effects of education, ability and family background on earnings, poverty and income distribution, education and employment; Economics of educational planning in developing countries with special emphasis on India.

Module 7: Health Economics

Health dimensions of development; Determinants of health — poverty, malnutrition and environmental issues; Economic dimensions of health care — demand and supply of health care; Financing of health care and resource constraints; The concept of human life value; Theory and empirical studies of production of health care; Inequalities in health — class and gender perspectives; Institutional issues in health care delivery.

BASIC READING LIST

- Baumol, W.J. and W.E. Oates (1988), The Theory of Environmental Policy, (2nd Edition), Cambridge University Press, Cambridge.
- Berman, P. (Ed.) (1995), Health Sector Reform in Developing Countries : Making Health Development Sustainable, Boston: Harvard Series on Population and International Health.
- Blaug, M. (1972), Introduction to Economics of Education, Penguin, London.
- Bromely, D.W. (Ed.) (1995), Handbook of Environmental Economics, Blackwell, London.
- Cohn, E. and T. Gaske (1989), Economics of Education, Pergamon Press, London.
- Fisher, A.C. (1981), Resource and Environmental Economics, Cambridge University Press, Cambridge.
- Hanley, N., J.F. Shogern and B. White (1997), Environmental Economics in Theory and Practice, Macmillan.
- Hussen, A.M. (1999), Principles of Environmental Economics, Routledge, London.
- Jeroen, C.J.M. van den Bergh (1999), Handbook of Environmental and Resource Economics, Edward Elgar Publishing Ltd., U.K.

- Klarman, H.E. (1965), The Economics of Health, Columbia University Press, New York.
- Kolstad, C.D. (1999), Environmental Economics, Oxford University Press, New Delhi.
- Pearce, D.W. and R. Turner (1991), Economics of Natural Resource Use and Environment, John Hopkins University Press, Baltimore.
- Perman, R. Ma and J. McGilvary (1996), Natural Resource and Environmental Economics, Longman, London.
- Sankar, U. (Ed.) (2001), Environmental Economics, Oxford University Press, New Delhi.
- Schultz, T.W. (1971), Investment in Human Capital, Free Press, New York.
- Tietenberg, T. (1994), Environmental Economics and Policy, Harper Collins, New York.

ADDITIONAL READING LIST

Module 1

- Arrow, K.J. (1970), 'The Organization of Economic Activity : Issues Pertinent to Choice of Market versus Non-market Allocation' in Public Expenditure and Policy Analysis, (Ed.), Haveman, R.H. and J. Margolis, Markham, Chicago.
- Crones, R. and T. Sandler (1989), The Theory of Externalities and Public Goods, Cambridge University Press, Cambridge.

Module 2

- Hanley, N. (1997), Environmental Economics in Theory and Practice, Macmillan, London.
- Mitchell, R.C. and R.T. Carson (1993), Using Surveys to Value Public Goods : Resources for the Future, Washington, D.C.
- Smith, V. Kerry (1996), Estimating Economic Values for Nature : Methods for Non-market Valuation, Edward Elgar, Cheltenham, U.K.

Case Studies (India)

- Chopra, K. (1998), Valuation of Bio-diversity within Protected Areas : Alternative Approaches and a Case Study, Institute of Economic Growth, Delhi.
- Hadker, N. et. al. (1997), Willing to Pay for Borivili National Park : Evidence form Contingent Valuation, Ecological Economics, Vol. 21.
- Markandya, A. and M.N. Murty (2000), Cleaning up the Ganges : Cost-Benefit Analysis of Ganga Action Plan, Oxford University Press, New Delhi.

Module 3

- Baland, J.M. and J.P. Plateau (1994), Halting Degradation of Natural Resources : Is There a Role for Rural Communities, Oxford University Press, Oxford.
- Hoel, M. (1997), 'International Coordination of Environmental Policies' in New Dimensions in the Economic Theory of Environment, Carrao Carlo and Domenico Siniscalco (Eds.), Cambridge University Press, Cambridge.
- Larsen, B. and A. Shaw (1994), Global Tradable Carbon Permits, Participation Incentives, and Transfers, Oxford Economic Papers, Vol. 46.
- Ostrom, E. (1990), Governing the Commons : The Evolution of Institutions for Collective Actions, Cambridge University Press, Cambridge
- Whalley, J. and R. Wigle (1997), 'The International Incidence of Carbon Taxes,' in Tietenberg, T. (Ed.), Economics of Global Warming, 1997, Edward Elgar, U.K.

Case Studies (India)

- Chopra, K., G.K. Kadekodi and M.N. Murty (1990), Participatory Development : An Approach to the Management of Common Property Resources, SAGE, New Delhi.
- Mehata, S., S. Mundle and U. Sankar (1995), Controlling Pollution : Incentives and Regulation, SAGE, New Delhi.

- Murty, M.N., A. James. and S. Misra (1999), The Economics of Water Pollution in India, Oxford University Press, New Delhi.

Module 4

- Dasgupta, P.S. and G.M. Heal (1985), Economic Theory and Exhaustible Resources, Cambridge University Press, Cambridge.
- Dasgupta, P.S. and K.G. Maler (Ed.) (1997), Environment and Emerging Development Issues, Cambridge University Press, Cambridge, Mass.
- ESCAP (1997), Accounting and Valuation of Environment — A Primer for Developing Countries, Volume I, United Nations, New York.
- Markandya, A. and J. Richardson (Eds.), The Earth Scan Reader in Environmental Economics, Earth Scan, London.
- United Nations (1993), Integrated Environmental and Economic Accounting, United Nations, New York.

Module 5

- Bhattacharya, R.N. (Ed.) (2001), Environmental Economics : An Indian Perspective, Oxford University Press, New Delhi.
- Chopra, K., G.K. Kadekodi and M.N. Murty (1990), Participatory Development : An Approach to the Management of Common Property Resources, SAGE, New Delhi.
- Chopra, K. and G.K. Kadekodi (1999), Operationalising Sustainable Development : Economic-Ecological Modelling for Developing Countries, Sage, New Delhi.
- Chopra, K. and S.C. Gulati (2000), Migration and the Management of Common Property Resources : A Study in Western India, Sage, New Delhi.
- Kerr, J.M. et. al. (Eds.) (1997), Natural Resource Economics : Theory and Applications in India, Oxford and IBH Publication Co. Pvt. Ltd., New Delhi.

- Mehta, S., S. Mundle and U. Sankar (1995), Controlling Pollution : Incentives and Regulation, SAGE, New Delhi.
- Murty, M.N., A. James and S. Misra (1999), The Economics of Water Pollution in India, Oxford University Press, New Delhi.
- Sengupta, R.P. (2001), Ecology and Economics : An Approach to Sustainable Development, Oxford University Press, New Delhi.

Module 6

- Becker, G.S. (1974), Human Capital (2nd Edition), National Bureau of Economic Research, New York.
- McMohan, W.W. (1999), Education and Development : Measuring the Social Benefits, Oxford University Press, Oxford.
- Padmanabhan, C.B. (1984), Financial Management in Education, Select Books, New Delhi.
- Tilak, J.B.G. (1994), Education for Development in Asia, Sage Publications, New Delhi.
- Vaizey, J. (1962), Economics of Education, Faber and Faber, London.
- Woodhall, M. (1992), Cost Benefit Analysis in Educational Planning, UNESCO, Paris.

Module 7

- Baru, R.V. (1998), Private Health Care in India : Social Characteristics and Trends, Sage Publications, New Delhi.
- Berman, P. and M.E. Khan (1993), Paying for India's Health Care, Sage Publications, New Delhi.
- Panchamukhi, P.R. (1980), Economics of Health : A Trend Report in ICSSR, A Survey of Research in Economics, Vol. VI, Infrastructure, Allied, Delhi.
- World Bank (1993), The World Development Report, 1993 : Investing in Health, Oxford University Press, New York.