

DEPARTMENT OF ECONOMICS
HIMACHAL PRADESH UNIVERSITY
SUMMER HILL SHIMLA-171005

M.A. ECONOMICS (COURSES)

First semester

Course-I Microeconomics

Course-II International Economics

Course-III Elementary Mathematical Economics

Second semester

Course-IV Macro Economics

Course-V Money and
Banking

Course-VI Basic Statistics

Third semester

Course-VII Economics of Development and Planning

Course-VIII History of Economic Thought

Course-IX Any one from the following optional
courses

- i) Agricultural Economics
- ii) Regional Economics
- iii) Economics of Population
- iv) Basic Econometrics

Fourth semester

Course-X Indian Economy

Course-XI Public Finance

Course-XII Any one from the following optional courses

- i) Labour Economics
- ii) Industrial Economics
- iii) Environmental Economics

Unit –I

Role and significance of assumption in economic models, Empirical testing of economic models. Theory of Demand: Utility analysis of demand; Indifference curves theory; Income and substitution effects: The Slutsky theorem; Compensated demand curves; The revealed preference theory.

Unit-II

Theory of Production : Stages of production function; Returns to factor proportions ; Return to scale; Elasticity of substitution; Technical progress and production function ; Cost and Revenue Analysis (traditional and modern theories of cost). Equilibrium of the firm-marginal analysis: Optimum factor combination and product combination

Unit-III

Market Structures and Pricing Process : Equilibrium of firm and industry under perfect competition ; Monopoly; bilateral monopoly; and Monopolistic competition ; Excess capacity and imperfect competition: Pricing and output behaviour under oligopoly : Collusive and non-collusive models: Extensions of the oligopoly : models : Models of Bamuel, Marris and willamson.

Unit-IV

Theory of Distribution: The Marginal Productivity Theory of Distribution; The adding up Problem and Euler's theorem. Modern theory of distribution. Theory of Rent : Ricardian and Modern. Theories of Interest : Classical, Neo-classical, Keynesian and IS-LM curve theories Theories of Wages : Wage determination under perfect and imperfect competition; wage determination under trade unionism. Theories of profits. Classical, Marxian and Kaleski's theories.

Unit- V

Welfare Economics : Marshallian and Robbinsian concepts Pigouian Welfare Economics. New Welfare Economics: Pareto's optimum and externalities; Compensation principle and social welfare function.

SUGGESTED READINGS

Unit – I

- Baumol. W.J.(1982) Economic Theory and Operations Analysis, 4ed, Prentice Hall of India, New Delhi.
- Friedman. M. (1953). Essays in Positive Economics, Chicago University Press, Chicago.
- Koutsoyiannis, A. (1985). Modern Microeconomics, Macmillan, London.
- Gould, J.P. and C.E. Ferguson. Micro-Economic Theory. Irwin, Homewood , Illinois.
- Deaton, A. S. & J. Muellbauer(1980). Economics and Consumer Behaviour, Cambridge University Press, Cambridge.
- Gravel H. and R. Rees (1981). Microeconomics, Longman, London
- Hirshleifer, J. (1976). Price Theory and Applications., Prentice Hall, New Delhi.
- Varian, H. (1978). Microeconomic Analysis, W.W. Norton, New York.
- Green, H.A.J. Consumer Theory. Philips L. Applied Consumption Analysis.
- Kreps , D.M. (1992). A Course in Micro Economic Theory., Prentice Hall of India, New Delhi.

Unit-II

- Da Costa, G.C. (1980) . Production, Prices and distribution, Tata Mc Graw Hill, New Delhi
- Ferguson, C.E. (1968). Microeconomic Theory. Cambridge University Press, London.
- Jones, H. G. (1976). An Introduction to the Modern Theories of Economic Growth, Mc Grow Hill Koga-Kusha, Tokyo.
- Koutsoyiannis, A. (1986) . Modern Microeconomics, Macmillan, London.
- Gold, J.P. and C.E. Ferguson. Micro Economic Theory, Irwin Homewood.
- Koutsoyiannis, A. (1985) . Modern Microeconomics, Macmillan, London
- Hendirson, R. and Quandt, R. Micro Economics Theory. Mcgraw Hill.

Unit –III

- Stigler, G. (1966) , The Theory of Price, 3e, Macmillan Co., New York.
- Friedman, R. Price Theory. Kalyani Publishers, Ludhiana.
- Archibald, G.C. , Ed. (1971), Theory of the Firm, Penguin Books, Harmondsworth.
- Da Costa, G. C. (1980), Production, Prices and Distribution, Tata Mc. GrawHill, New Delhi.
- Kamerschen, D.R. (Ed), (1969). Readings in Microeconomics, John Wiley and Sons, New York.
- Kogiku, K. C. (1971). Microeconomics Models, Harper andRow, New York.

Unit-IV

- American Economics Association (1950), Readings in the Theory of Income Distribution, George Allen and Unwin, London.

- Bronfrenbrenner, M. (1971). Income Distribution : Theory Macmillan, London.
- Da Costa, G. C. (1980). Production Prices and Distribution, Tata McGrawHill, New Delhi.
- Koutsoyiannis, A. (1985) Modern Microeconomics, Macmillan, London.
- P.R.G. Layard and A.A. Wallers, Micro Economics Theory, McGraw-Hill, New York.

Unit-V

- American Economic Association (1979). Readings in Welfare Economics, R.D. Irwin and Co., Homewood , IL.
- Bruce, N. and R. Boadway (1984). Welfare Economics, Basil Blackwell , Oxford.
- Mishan, E.J. (1969) . Welfare Economics: An Assessment, North-Holland, Amsterdam.
- Guirk, J. and R. Saposnick (1963). Introduction to General Equilibrium and Welfare Economic, McGraw-Hill, New York.
- Kotsoyiannis, A. (1985). Modern Microeconomic, Macmillan, London.
- Graaff. J. De V. (1957). Theoretical Welfare Economics. (Cambridge University Press.) Vikas Publishing House, New Delhi

COURSE-II

INTERNATIONAL ECONOMICS

Maximum Marks:100

Unit-I

Need for a separate theory of international trade. Theories of international trade classical, Neo-classical, Heckscher-Ohlin and Factor price equalization theories. Empirical verification of Classical and Heckscher-Ohlin theories, Factors reversal and Leontief paradox. Emmanuel's theory of unequal exchange.

Unit-II

Impact of dynamic factors on international trade changes in tastes, technology, factor endowments. Rybeznski theorem and transportation costs. Derivation of offer curves-Marshall-Edgeworth, Mill and Meade. Terms of trade and measurement of gains from trade. Secular deterioration in the terms of trade of developing countries. Aid versus trade controversy.

Unit-III

Commercial Policy: Free trade versus protection. Theory of tariffs; partial effects and effects on income distribution. Stolpher-Samuelson theorem. Optimum tariff, nominal and effective tariffs, infant industry tariff. Quotas and other quantitative restrictions. State trading. Multiple exchange rates. Trade policies of developing countries. Theory of custom union –trade creation and trade diversion. The SAARC and the WTO framework. The WTO's and the developing countries.

Unit-IV

International Monetary Theory : Balance of payments and its adjustment. Maintenance of internal balance-Elasticities and absorption approaches. Exchange rate determination and adjustments. Foreign trade multiplier. Foreign repercussions and stability problem. Flexible versus fixed exchange rate system.

Unit-V

Capital requirements of developing countries. Development of International Monetary system since the 1970s and its reform, International reserves and problems of liquidity, IMF and the SDRs.

Short-term International finance-its nature and magnitude; its merits and demerits for the developing countries.

SUGGESTED READINGS

Unit-I

- American Economic Association (1970). Reading in the Theory of International Trade, George Allen and Unwin, London.
- Chacholiad, S. M. (1978). International Trade Theory and Policy, McGraw Hill, Kogakusha, Tokyo.
- Clement, M.O., R.P. Fister and K. Rothwell, (1967), Theoretical Issues in International Economics, Constable Publication, London
- Kindelberger, C.P., (1976), International Economics, R.D. Irwin, Homewood.
- Hellar, R.H. , International Trade Theory and Evidence, Prentice Hall of India, New Delhi.
- Roy, P.N., (1986), International Trade Theory and Practice, Willey Eastern Ltd., New Delhi.
- Sodersten, B., (1980), International Economics, 2nd Edition, Macmillian, London.

Unit - II

- American Economic Association, (1968), Readings in International Economics, Allen and Unwin, London.
- Bhagwati, Jagdish, (1969), Trade Tariff and Growth.
- Ellsworth, P.T. and Clarke Leith, (1975), The International Economics, Richard D. Irwing Inc., Homewood.
- Meier, G.M. (1970) . Leading Issues in Economics Development, Oxford University Press, Delhi.
- Roy. P. N. (1986) . International Trade Theory and Practice, Willy Eastern Limited, New Delhi.
- Sodersten, Bo. (1970) . International Economics. Macmillan Press, London.
- Harbert G.Gurbel (1977) . International Economics, Richard D., Irwin, Homewood, Illinois.

Unit-III

- American Economic Association, (1968), Readings in International Economic, Allen and Unwin, London.
- Bhagwati, J. (1968) . Theory and Practice of Commercial Policy, Princeton University Press, New York.
- Chacholiades. M. (1975). International Trade Theory and Policy, McGraw Hill Kogakusha, Tokyo.
- Lipsay, R.G. (1970). The Theory of Customs Union, Wiedenford and Necolson, London.
- Meade, J. E. (1968). Theories of International Economic Policy, Vol. II, Oxford University Press, London.

- Meier, G. M. (1968) The International Economics of Development, Harper and Row, New Delhi.
- Robson, P. (Ed) (1979). International Economic Integration, Penguin, Harmondsworth.
- Roy, P. N. (1968). International Trade Theory and Practice, Wiley Eastern Ltd. New Delhi.
- Sodersten, Bo.(1980) International Economics, 2nd Macmillan, London. Unit-IV
 - Caves, R.E. and Jones (1973) World Trade and Payments: An Introduction, Little Brown Company, Boston.
 - Chacholiades, M. (1978). International Monetary Theory and Policy, McGraw Hill, New York.
 - Meade, J.E. (1970) Theory of International Economic Policy, Vol. I. E.L.B. S. London.
 - Mundell, R. (1968) International Economics, Macmillan, New York.

Unit-V.

- Heller, R. (1974). International Monetary Economics, Prentice Hall India, New Delhi.
- Machiup. F. (1970) . International Monetary Economics, George Allen and Unwin, London.
- Meier. G.M. (1982) Problems of a World Monetary Order, 2 e Oxford University Press, New York.
- Scamell, W.M.(1975) , International Monetary Policy, Bretton wood and Alter, MacMillen, London.
- Salvatore, D. (1987). International economics, 2/e, Macmillan, New York
- Brown, W.B. and J.S. Hegendorn, (1994). International Economics : Theory and Context. Addison Wesley Publishing Co., New York.

Course-III

ELEMENTARY MATHEMATICAL ECONOMICS

Maximum Marks:100

Unit-I SETS, CONTINUITY AND DIFFERENTIATION

The concept of Sets; Subsets and Equality of sets, set operations (Union, Intersection and Difference). Type of function (constant, polynomial, rational and non-algebraic). Functions of one Variable: Limits, continuity and differentiations of functions of a single variable. Derivative of a composite function, Parametric function, logarithmic function, Exponential and inverse functions. Concave and convex functions. Derivative of higher order. Partial Derivatives and total derivative Homogenous functions and Euler's Theorem. Maxima and Minima of functions of single variable. Profit maximization and cost minimization. Constrained optimization of function with two variables. Constrained utility maximization, constrained minimization and the interpretation of the Lagrange multiplier.

Unit –II DIFFERENTIAL AND DIFFERENCE EQUATIONS

Introduction, non-linear and linear differential equations of the first order and first degree. Solutions of differential equations when variables are separable, homogenous equations and non-homogenous equations, exact differential equations and linear equations. Solution of linear differential equations of second with constant coefficient.

Finite difference, difference equations. Solutions of homogeneous linear difference equation with constant coefficients, linear first-order difference equations, Linear second order difference equations with constant coefficients.

Application of differential and difference equations in economic models (dynamics of market price, Solow growth model, cob-web model, multiplier-accelerator interaction model, Domar growth model).

Unit –III ANALYTIC GEOMETRY

Introduction of a Straight Line, section formula, the gradient of a straight line, the equation of a straight line in intercept form, two-point form. Circle : The general equation of a circle, Parabola: equation of a parabola, the points of intersection of line and a parabola. Equation of a rectangular hyperbola. Problems based on applications of analytic geometry in economics.

Integration of function of one variable by parts and substitution. Integration of logarithmic and exponential functions. Definite integral and area between two curves. Simple applications of integration to the relationship between marginal functions and total functions, Consumer's surplus and producer's surplus. Investment and capital formation and the present value of a continuous flow.

Unit –IV MATRICES AND DETERMINANTS

Their properties, addition, subtraction and multiplication of matrices. Transpose of a Matrix. Some special forms of square matrices-Trace, Idempotent matrix, Sub-matrix of a matrix. Inverse of a matrix and solution of equations using both the inverse of a matrix and Cramer's rule. Rank of a Matrix (Numerical relating to inverse of a matrix and Cramer's rule should be confined to matrix of order 3×3).

Unit-V THE INPUT-OUT-PUT MODEL

Its assumptions, technological coefficient matrix, closed and open input – output model, the Hawkins-Simon conditions. Solving the input-output models both open and closed using the inverse matrix.

An Introduction to Linear Programming

Linear equations, slack variables. Feasible and basic solutions. Degeneracy. Solving the primal and Dual with simplex method. Interpretation of the linear programming results.

SUGGESTED READINGS

- Taro Yamane, Mathematics for Economists: An Elementary Survey, Prentice Hall of India, New Delhi .
- R.G.D. Allen. Mathematical Analysis for Economists, MacMillan, India Limited, Delhi.
- Alpha C. Chiang. Fundamental Methods of Mathematical Economic Analysis, McGraw-Hill Book Company London.
- Badal Mukherji and V. Pandit. Mathematical Methods for Economic Analysis, Allied Publishers Pvt.Ltd. , New Delhi.
- Chris Berchenhal and Paul Grount, Mathematics for Modern Economics, Heritage Publishers, New Delhi.
- D. Bose, An Introduction to Mathematical Economics, Himkya Publishing House, Bombay.
- Dorfman, R., Linear Programming and Economic Analysis, McGraw Hill
- Hadley, G. Linear Programming, Narosa Publishing House, New Delhi.

- Baumol, W.J., Economic theory and Operations Analysis, Prentice Hall, New Delhi
- Budniek, Applied Mathematics for Business economics and social Sciences, 2nd Ed., McGraw Hill.
- Dowling. Mathematics for Economists, McGraw Hill
- Nicholson. Mathematics for Business Economics, McGraw Hill.
- Burmeister, E., and R Dobell, Mathematical Theories of Economic Growth.

Course: IV

MACRO ECONOMICS

Maximum Marks:100

Unit-I

Micro Foundations of Macro Economics. The basic classical model of income and employment determination. The basic Keynesian model ; equilibrium in product and money markets. Multiplier process and the different concepts of multiplier ; balanced budget theorem. Macro Economic Theories of Consumption : Keynesian theory; Relative income, Permanent income, and Life cycle income hypotheses. Pigou effect and real balance effect on consumption demand.

Unit-II

Macro Economic Theories of Investment : The Keynesian Post-Keynesian, New-Keynesian, and the financial theory of investment determination. Lags in investment. Portfolio disequilibrium and the transmission mechanism. The Demand for Money ; The classical, Keynesian and Post-Keynesian approaches.

Unit-III

The supply of Money and Definitions of Money Supply: Inside and outside money, the neutrality of money Equilibrium in money market. The classical and Keynesian dichotomies and their resolution by Patinkin's real balance effect and through IS-LM model respectively. Keynesian and post-Keynesian theories of rate of interest.

Unit-IV

Growth Models : Harrod-Domar model; Neo – classical model; Golden rule of accumulation; Optimal growth turnpikes. Theories of Trade Cycles : Multiplier-Accelerator interaction model, Kaldor and Hicks' models. Determination of General Price Level; Classical and Keynesian approaches. Theories of Inflation ; Demand – pull and cost-push inflation; short and long-run Phillips curve analysis; The Keynesian, the monetarist and the rational expectations analysis.

Unit-V

Keynesian and monetarist perspectives on monetary, fiscal and income policies. Stabilisation policies : Rules Vs Discretion: lagged effects of policies and role of expectations. Crowding out effect and government

budget constraint. Rational expectations and effectiveness of stabilisation policies.

SUGGESTED READINGS

Unit-I

- Bronson, W.H., (1985). Macro-Economic Theory and Policy, Universal Book Stall, New Delhi.
- McConnell, C.R. and H.C. Gupta (1987). Introduction to Macroeconomics, Tata-Mcgraw Hill, Delhi.
- Dornbusch, R. and S. Fischer (1987). Macroeconomics, 4e, McGrawHillKogakusha Tokyo.
- Edgmand, M.R. (1983). Macroeconomics : Theory and Policy, Prentice Hall of India, New Delhi.
- Shapiro, Edward (1984). Macroeconomic Analysis, Galgotia Publication , New Delhi.

Unit-II

- Bronson, W.H., (1985). Macro-Economic Theory and Policy, Universal Book Stall, New Delhi.
- Dornbusch, R. and S. Fischer (1987). Macroeconomics, 4e, McGrawHillKogakusha Tokyo
- Tunankar, P.N. (1972) .Investment : Theories and Evidence, Macmillan , London.
- Laidler, D. (1972). Demand for Money Theory and Evidence, Allied Publishers, New Delhi.
- Surrey. M. J.C. ed. (1976). Macroeconomic Themes, Oxford University Press, Oxford.
- Shapiro, Edward (1984). Macroeconomic Analysis, Galgotia Publication , New Delhi.

Unit-III

- Bronson, W.H., (1985). Macro-Economic Theory and Policy, Universal Book Stall, New Delhi.
- Chakravarty, S. (1985). Report of the Reserve Bank of India Committee to Review the Monetary System, Reserve Bank of India, Bombay.
- Dornbusch, R. and S. Fischer (1987). Macroeconomics, 4e, McGrawHillKogakusha Tokyo
- Gupta, S.B. (1983). Monetary Economics, S. Chand & Co, Delhi.
- Surrey, M. J.C. ed. (1976). Macroeconomic Themes, Oxford University Press, Oxford.
- Shapiro, Edward (1984). Macroeconomic Analysis, Galgotia Publication , New Delhi.

Unit-IV

- Bronson, W.H., (1985). Macro-Economic Theory and Policy,

Universal Book Stall, New Delhi.

- Jones, H.G. (1976). An Introduction in Modern Theories of Economic Growth, McGraw Hill Kogikusha Tokyo.
- Scarfe, B.L. (1977). Cycles, Growth and inflation, McGraw Hill, New York.
- Sen, A.K. (Ed.) (1970). Growth Economics, Penguin. Harmondsworth.
- Shapiro, Edward (1984). Macroeconomic Analysis, Galgotia Publication, New Delhi.
- Kotwal, O.P. (1987). Theories of Inflation. A critical Survey. Tata McGraw-Hill publishing Co. New Delhi.

Unit-V

- Dorbnbusch, R. and S. Fischer (1987). Macroeconomic, 4ed. McGraw-Hill Kogakusha, Tokyo.
- Evans, M.K. (1960), Macroeconomic Activity. Harper and Row. New York.
- Hall, R.E. and J.B. Tayler (1986) . Tayler (1986). Macroeconomics, W. W. Norton New York.
- Turnovsky, S.J. (1977). Macroeconomic Analysis and Stabilisation Policy. Cambridge University Press, Cambridge.

Course - V
MONEY AND BANKING

Maximum Marks : 100

Unit – 1

Basic Concepts : Different approaches to the definition of money; Types, role and functions of money inside money and outside money; Measures of Money supply. Traditional quantity theory of money Fisher's equation of exchange; Cambridge cash balance approach; Keynes reformulation of quantity theory of money; Modern quantity theory; Friedman's approach.

Unit – II

Theory of Commercial and Central Banking : Money markets and capital markets; commercial banks. Theories of commercial banking; Process of credit creation; Non-bank financial intermediaries (NBFI's); Objectives and role of central banks in economic development; The currency and credit schools; Quantitative and qualitative methods of credit-controls.

Unit – III

The Theories of Demand and Supply of Money : Theories of demand for money; Classical Keynesian and Monetarist. Theories of money supply; The 'H' Theory of money Supply; Money multiplier process and its determinants; Commercial banks and the money multiplier; Factors affecting 'H' RBI analysis of money supply; Control of the money stock; Money stock and interest rates; monetary equilibrium : money in equilibrium and Non-equilibrium states; Neutrality of money.

Unit – IV

Principles of Monetary Policy : Monetary Policy: Its meaning, objectives, framework, targets and indicators of monetary policy; Transmission mechanism of monetary. Policy; Restrictive Vs. accommodating monetary policy; Need and effectiveness of monetary policy; Lags in monetary policy; Role of monetary policy in developing countries; Monetary and credit planning; Monetarist and Keynesian views on monetary policy.

Unit – V

Indian Money Market and International Financial Institutions: India and NBARD. Reserve Bank of India (RBI); Its working, functions, performance and

role in the economic development of India; RBI's monetary policy; International Financial Institutions IMF, IBRD (World Bank), Asian Development Bank (ADB). International Development Association (IDA).

SUGGESTED READINGS

Unit – I

- Gupta, S. B. (1983). Monetary Economics, 2/e. S. Chand. & Co., New Delhi.
- Harris, L. (1985). Monetary Theory, McGraw-Hill, New York, Goodhart, C. (1977). Money Information & Uncertainty, 2/e, Macmillan, London.
- Friedman, M. (Ed.) (1956). Studies in the Quantity Theory of Money, University of Chicago Press, Chicago.
- Laidler, d. (1977). Demand for Money, 2/e., Dun-Donnelly, New York.

Unit – II

- Gupta, S. B. (1983). Monetary Economics, 2/e, S. Chand & Co., New Delhi.
- Mitra, S. (Ed.) (1970). Money and Banking, Random House, New York.
- Savors, R. S. (1978). Modern banking, 7/e, Oxford University Press, Delhi.
- Chandler, L. V. and S. N. Goldfield (1977). Economics of Money & Banking, 7/e, Harpar and Row, New York.
- Radcliffe Committee (1959). Report of the Committee on the Working of the monetary System. Macmillain, London.

Unit – III

- Gupta, S. B. (1983). Monetary Economics, 2/e, S. Chand & Co. New Delhi.
- Reserve Bank of India (1977). Money Supply : Concepts Compliation and Analysis, RBI Bulletin, January, Bombay.
- Gibson, W. E. and G. Kaufman, (Ed.) (1975). Monetary Economics : Readings on current Issues, 2/e, Tata McGraw-Hill, New Delhi.

Unit – IV

- Gupta, S. B. (1979). Monetary Planning for India, Oxford University Press, Delhi.
- Gupta, S. B. (1983). Monetary Economics, 2/e, S. Chand and Co., New Delhi.
- Mitra, s. (Ed.) (1970). Money and banking, Random House, New York.
- Gibson, W. E. and G. Kaufman, (Ed.) (1975). Monetary Economics, 2/e, Tata McGraw-Hill, New Delhi.

Unit – V

- Chick, V. (1977). The Theory of Monetary Policy, 2/e, Basil Blackwell, Oxford.
- Culbertson, J. M. (1971). Macro Economic Theory and Stabilization Policy, McGraw-Hill, New York.
- Gibson, W. E. and G. Kaufman, (Ed.) (1975). Monetary Economics, 2/e, Tata McGraw-Hill, Delhi.
- Mitra, S. (Ed.) (1970). Money and Banking, Random House, New York.

Course: VI

BASIC STATISTICS

Maximum Marks:100

Unit: I

Measure of Central Tendency, Dispersion, Skewness and Kurtosis. Correlation; Meaning and methods of measuring correlation, Karl Pearson's method, Spearman's Rank Correlation coefficient, Limitations of Correlation analysis. Linear Regression; relation between correlation coefficient and regression coefficients, Fitting of regression equations, Standard error of estimates.

Unit: II

The General Linear Regression Model

An Introduction to the matrix formulation and solution of the general linear regression Model. Solution for a model with one dependent and two independent variables. Prediction for simple regression models of demand, supply, production and cost. Multiple and partial correlations and regressions. Relationship between the measures of multiple correlation and measures of partial correlation, Beta coefficients.

Unit III

Elements of Probability Theory

The Concept of Probability Distribution and a Density function. Mathematical expectation, Binomial distribution, the Normal distribution, Some properties of the normal distribution. Sampling and sample designs: simple random sampling, stratified random sampling, systematic sampling and cluster sampling. Large samples. Tests of significance. Limitation of sampling; procedure of testing hypothesis: Region of acceptance and rejection, two tailed and one tailed tests, Type I and Type II errors. Non Parametric Tests: The sign test, rank sum test, the Mann-Whitney U test, advantages and limitations of non parametric tests.

Unit IV

Tests of Significance

Standard error of the mean, Student's "t" distribution and its properties, Use of the "t" distribution to test hypothesis of the population means. Chi Square: general features of Chi Square (χ^2), chi square as a test of goodness of fit, chi square as a test of independence. Contingency table and Yate's correction for continuity, testing homogeneity of several independent estimates of population variance. Analysis of variance;

meaning, assumptions and techniques of analysis of variance, one way and two way analysis of variance problem. Inter relationship between “t”, Chi square and F tests.

Unit V

Analysis of Time Series

Meaning and components of time series, Methods of estimating trend – the semi average method, the moving average method and the least squares method. Fitting of straight line, second and third degree equations. Fitting of the modified exponential curve, Gompertz curve and the logistic curve. Measurement of Seasonal, Cyclical and irregular variations.

Index numbers: Meaning, problems in construction of index numbers. Classification of index numbers, unweighted price index numbers, relative of aggregate method and average of price relatives, Weighted price index numbers: Laspeyre’s, Paasche’s and Fisher’s ideal index numbers. Time reversal test and factor reversal test and chain based index numbers. Uses and limitations of index numbers.

SUGGESTED READINGS

- Taro Yamane. Statistics, Harper International.
- M.R. Spiegel. Theory and Practice of Probability and Statistics, Schaum’s outline series, McGraw Hill.
- A.L. Nagar and R.K. Das. Basic Statistics, Oxford University Press, New Delhi.
- George Snedecar and W.G. Chockrane. Statistical Methods. Oxford & IBH, New Delhi.
- F.E. Croxton, D.J. Cowden and Sidney Klein. Applied General Statistics, Prentice Hall of India, New Delhi.
- S.P. Gupta. Statistical Methods, Sultan Chand & Sons, New Delhi.
- S.P. Singh. (1996). Statistics. S. Chand & Company, New Delhi.
- B.L. Agarwal, (1977). Basic Statistics, New Age International Limited, New Delhi.
- H.M. Walker and J. Lev. (1953) . Statistical Inference, Holt, Rinehart and Winston, Oxford and IBH Publishing Company, Calcutta.
- Damodar Gujarati. Basic Econometrics, Second Edition, L.R. Klein. Introduction to Econometrics .

Course – VII
Economics of Development and Planning

Maximum Marks: 100

Unit – I

Economic growth, development and sustainable economy. Various traditional and modern criteria and measure of development, Major features of structural change and economic development. Measurement of absolute poverty and income inequality. Growth and equality trade –off.

Unit – II

Classical, Marxian and Schumpeterian theories of economic development. Stages of economic growth (Rostow and Marx). Approaches to the theory of underdevelopment and development underdevelopment. The big-push theory; Critical minimum effort thesis, Low level equilibrium trap. Lewis and Ranis- Fei models of economic development.

Unit – III

Planning and the market mechanism State intervention vs. liberalization, and privatization debate. The core areas of State intervention under liberalization. Process of plan formulation. Investment criteria for plan projects, cost-benefit analysis. Determination of size, growth rate and priorities in planning. Use of input-output and linear programming techniques in planning.

Unit – IV

Models in economic planning: policy models, projection models and development planning models. Models underlying various Indian Plans: Harrod Domar model; Mahalanobis model, and the model underlying current Five Years Plan. Resource mobilization for planning : Domestic resources; mobilization of resources through fiscal measures and monetary regulation. Savings and inflationary finance. External resources-Dual gap analysis and foreign borrowings. Foreign borrowings Vs. foreign direct investment.

Unit – V

India's Five Year Plans : Objectives, strategies, achievements and constraints. Decentralized planning and people's participation. Saving-investment rates-trends and problems. The policy debate in the post liberalization period debate-general down sizing of the public sector and disinvestments in public sector

undertaking MNCs Vs. Swadeshi movement benefits and pitfalls of globalization and international finance.

SUGGESTED READINGS

Unit – I

- Ghatak, S. (1986). An introduction to Development Economic, Allen & Unwin, London.
- Ahluwalia M. S. et.al. (1979). Growth and Poverty in Development Countries, Journal of Development Economics, Vol. G, No.3.
- Meler, G. M. (Ed.) (1984). Leading Issues in Economic Deveopment, Oxford University Press, New York.
- Higgins, B. (1950). Economic Development, Norton, New York.
- Beacker G. (1975). Human Capital, Columbia University Press, New York.
- Blaug, Mark. (1974). Education and the Employment Problem in Developing Countries, International Labour Office, Geneva.
- Thakur Dalip S. (1986). Poverty, Inequality and Unemployment in Rural India. B. R. Publishing corporation, New Delhi.
- Thakur Dalip S. (1996). Economic Development Growth. And distributive Justice in Developing Countries: With Special Reference to India, Reliance Publishing House, New Delhi.

Unit – II

- Brahmananda. P. R. and C. N. Vakil (1956). Planning for Expanding Economy, Vora & Co., Bombay.
- Rowtow, W. W. (1956). The Stages of Economic Growth, A Non-communist Manifesto, Cambridge University Press, London.
- Lewis. W. A. (1955). The Theory of Economic Growth, George Allen and Unwin, London.
- Baran, Paul, (1957). The Political Economy of Growth, Monthly Review Pres, New York.
- Myrdal, G. (1957). Economic Theory and Underdeveloped regions, Duckworth, London.
- Thiriwall, A. P. (1978). Growth and Development , Macmillan, London.
- Higgins, B. (1959). Economic Development, Norton, New York.

Unit – III

- Meier, G. M. (1984). Leading Issues in Economic Developmnt, 4e., Oxford University Press, New Your.
- Todaro, M. P. (19710. DevelopemntPlanning : Essentials of Economic Policy, Harper & Row, N. York.
- Tinbergen. B. (1967). Development Planning; McGraw-Hill, New York.
- Chenery H. B. et. al. Ed. (1971). Studies in Development Planning, Harvard Economic Studies, Vol. 136, Harvard University Press, Cambridge, Mas.

- Waterston, A. (1972). Development Planning : Lessons of Experience, John Hopkins Univesity Press, Baltimore.
- Bilzer, C. R. et.al. Economy wide Models and Development Planning, Oxford University Press, Oxford.

Unit – IV

- Sen, A. K. (1962). Choice of Techniques, Basil Blackwell, Oxford.
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- Little, I. M. D. & J. E. Mirrlees (1974). Project Appraisal and Planning for Dveloping Countries, Basic Books, New York.
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- Desgupta, P. et. al. Guidelines for Project Evaluation, UNIDO, New York.
- Meier, G. M., Ed. (1988). Leading Issues in Economic Development, 4e, Oxford University Press, New York.
- Ghatak, S. (1986). An Introduction to Development Economics, Allen & Unwin, London.
- Mishan, E. J. (1975). Cost-Benefit Analysis, 2e, Allen & Unwin, London.
- Thirllwall, A. P. (1976) Financing Economic Deveelopment, Macmillan, London.
- Heller, Pater S., (1975). A Model of Fiscal Behaviour in American Economic Review, Vol. 65, NO. 3.
- Bhatt, V. V. & J. Meceran (1978). Resource Mobilisation in Developing Countries : Financial Limitations and Policies, World Development Report _ 1.
- Todaro, M. P. (1971). Development Planning : Models and Methods, Oxford University Press, New York.

Unit – V

- Kapila, Uma, Ed. (1980). Indian Economy Since Indepndence, Vol.1, Academic Foundation, Delhi.
- Planning Commission, Govt. of India, Five Year Plan Reports. Wadhwa, C. D., Ed., (1988). Some Problems of India's Economic Policy, 2nd Ed., Tata McGraw-Hill, New Delhi.
- M. Todaro, Economic Development in the Third World Longman, London, 1981.

Course – VIII

HISTORY ECONOMIC THOUGHT

Maximum Marks: 100

Unit – I

Mercantilism : Main Principles. Theory of economic development; Views of Keynes, Petty, Hume and Cantillon on Mercantilism: physiocracy : Natural Order, Agriculture and Product net, Social classes. Tableau Economique.

Unit – II

The Classical Period : Economic Thought of Adam Smith, David Ricardo, and J. S. Mill with special reference to their views on value, distribution international trade and economic development; Malthus theory of population; Says law of market. Ricardo Malthus controversy on Say's law of market.

Unit – III

Socialistic Economic Thought : Socialist critique of classical economic thought with special references to the views of Saint Simon, Sirmondi and Proudhon. The Historical critics of Classicism, Karl Marx method of Economic analysis. Marx analysis of economic crises. Transformation Problem.

Unit – IV

The Neo-Classical Period : Similarity and differences between classical and neo-classical thought; The Marginal Revolution with special reference to the contribution of the Austrain School, Leon Walras, Jevons, Wickshell and Marshall.

Unit – V

Post Marshalling Development in Economic Theory : Contribution of Joan Robinson, E. H. Chamberlin; J. M. Keynes and Post Keynesian developments in economic theory.

SUGGESTED READINGS

- Backhouse. R. (1985). A History of Modern Economic Analysis, Basil Blackwell, Oxford.
- Blaug, M. (1988). Economic Theory in Retrospect, 3/e; Cambridge University Press Cambridge.
- Dasgupta, A. K. (1985). Epochs of Economic Theory, Oxford University

Press, Delhi.

- Eakelund R. B. and R. Rebert (1983). A History of Economic Theroy and Method, 2e, McGraw-Hill, New York.
- Gide. C. and G. Rist, (1956). A History of Economic Doctrines, 2e, George Harrop and company, London.
- Gary, A. and A. E. Thompson (1980). The Development of Economic Doctrines,. 2e Longman Group, London.
- Rima, I. (1978). Development of Economic Analysis, 3e, R. D. Irwin, Homewood.
- ROLL, E., (1973). A History of Economic Thought, Faber, London.
- Schumpeter, J. A. (1954). History of Economic Analysis, Oxford University Press, New York.

Course- IX (Optional)
Option i) Agricultural Economics

Maximum Marks:100

Unit-I

Nature and scope of agricultural economics. Role of agriculture in economic development. Interdependence between agriculture and industrial development. Systems of farming Farm size and productivity debate. Land reforms in India.

Unit-II

Agricultural production functions. Input output relationships; factor-factor relationships and product-product relationships. Measures of farm efficiency. Risk and uncertainty in agriculture.

Unit-III

Models of agricultural development (Lewis, Fei-Ranis, Jorgenson, Mellor, Schultz, and Boserup. Models). Technological change and new agricultural strategy (green revolution) in India, Agro-climatic zonal planning in India.

Unit-IV

Agricultural price policy in India. Criteria to fix agricultural prices. Intersectoral terms of trade. Measures to increase marketable surplus. Functions of agricultural marketing. Efficiency criteria for agricultural marketing. Problems of Indian agricultural marketing . Measures to improve the efficiency of agricultural marketing in India.

Unit-V

Importance of agricultural finance. Source of agricultural finance, Defects of rural money lending system. Problems of agricultural cooperative societies. Government policy for agricultural credit. Problems and suggestions to improve agricultural finance. Causes of rural indebtedness. Measures to reduce rural indebtedness. Objective and impact of integrated rural development programme. Resource mobilisation from agricultural sector.

SUGGESTED READINGS

Unit-I

- Schultz, T. W. (1984), Transforming Traditional Agriculture ,Yale University Press, New Haven.
- Southworth H. and B. F. Johanson (1957). Agricultural Development and Economic Growth. Cornell, University Press, Ithaca, New York.

- Mellor, J. W. (1969) . The Economics of Agrikultural Development Vora & Co., Bombay.
- Eicher, C.K. & L.W. Witt. Agriculture in Economic Development Vora & Co., Bombay.
- Ghatak S. and K. Insergent. (1984). Agriculture and Economic Development, Select Book Service, New Delhi.
- Harris J. (1989). Rural Development: Theories of Peasant Economy and Agraqrain Change, Hutchinson, London.
- Hayami, Y. and V. Ruttan (1971) Agricultural Development : An International Perspective, Johns Hpkins, Baltimore.

Unit-II

- Bishop, C.E. & W. D. Toussaint (1958). Agricultural Economic Analysis John Wiley and sons, New York.
- Dole J.P., V.J. Rhodes & J. F. West (1968). Economics of Agricultural Production, Markets and Policy Richard D. Irwin, Homewood.
- Heady, E.O. and J. Dillon. (1969). Agricultural Production Function, Kalyani Publishers, Ludhiana.
- Heady, E.O. (1968). Economics of Agricultural Production and Resource Use, Prentice Hall of India, New Delhi.
- Sankhyan, P.L. (1968). Introduction to the Economics of Agricultural Production, Prentice Hall, New Delhi.
- Singh. I.J. (1977). Elements of Farm Management Economics, Affiliated East-West Press, New Delhi.
- Johl. S.s. and T.R. Kapoor (1970) . Fundamentals of Farm Business Management, Lalyani Publishers, Ludhina.

Unit-III

- Ghatak, S. and K. Insergent (1984).
- Lehi, R.K. and Jogender Singh (1969). Agrickultural Economics, Kalyani Publishers, Ludhina& New Delhi.
- Soni. R.N. (1995). Leading issues in Agricultural Economics, Shoban Lal NeginChabnd& Co. Jalandhar & Delhi.

Unit-IV

- Acharya S.S. & N.L. Agrawal (1987). Agricultural Marketing in India, Oxford & IBH, New Delhi.
- Dehrman, J.R. (1968) . Supply Response in Under-Developed Agriculture, North-Holland, Publishing Co. , Amsterdam.
- Ghatak, S. and k. Ingersent (1984). Agricultural and Economic Development, Select Book Service, New Delhi.
- Kahlon, A.S. and M.V. George (1985). Agricultural Marketing and Price Policies, Allied Publishers, New Delhi.
- Kohls. R.L. & J.N. Vhl.(1980). Marketing of Agricultural Products, Macmillan, New York.

- Subbarao. K. & Dejenvry (1966). Agriculture Prices, Policies and Income Distribution in India, Oxford University Press Delhi.
- Southworth. H.M. and B. Jofinston (ed) (1967). Agricultural Development and Economic Growth Cornell University Press. Ithaca (USA). Unit-V
- Lekhi, R.K. and Joginder Singh (1996). Agricultural Economics, Kalyani Publishers, New Delhi.
- Soni, R.N. (1995) Leading Issues in Agricultural Economics. Op. cit.
- Lee, W.F., M.D. Boehlje, A.G. Nelson & M.G. Murray (1986). Agricultural Finance, Kalyani Publishers, New Delhi, Ludhiana.
- Reserve Bank of India. All India Debt and Investment Survey, 1981-82, Bombay.

Course-IX
Option (ii) Regional Economics

Maximum Marks:100

Unit-I

Regional Economics, its scope and discipline. Concept of a region, its definition, types and descriptions. Economic behaviour related to space. Factors governing the size. Composition and structure of regional activities. Regional economic theory and economic development. Price and allocation theories in geographical space. Price and investment rules for transportation.

Unit-II

General factors affecting economics of location. Location theories (Thuenen, Weber, Losch, Hoover, Isard and Alonso). Agglomeration economies. General equilibrium theory of industrial location. Locational interdependence. Unit-III Urban spatial structures. Urban growth. Christaller's central place theory. Urban economic base theories. Theories of urban growth. Rank size rule. City size and urban growth. Functional hierarchy in settlements. Role of infrastructure in the process of industrialisation and urbanisation.

Unit-IV

Techniques of Regional Analysis: Location Quotient (1Q) Localisation curve.

Shift and share analysis. Specialisation Quotient. Basic and non basic sectors. Regional flows : migration and mobility of labour, mobility of capital. Interregional savings and capital growth, commodity and service flows. Input - output analysis in regional economies applied to single region economy and inter regional flows. Linear programming models as applied to regional problems. Regional multiplier.

Unit-V

Models of Regional Growth: Growth poles. Export-base theory. Sectoral approach industrial development and regional growth. Stage theory of regional growth. Cumulative causation theory (backwash effects versus spread effects). Balanced versus unbalanced growth strategy for regional development. Transport planning models. Multi-stage planning models: Planning in the context of indivisibilities and scale economies. Specific policy issues, related to regional growth.

SUGGESTED READINGS

- H.W. Richardson. (1968) . Regional Economics. McGraw Hill, New York
- H.D. Nourse. (1968). Regional Economics. McGraw Hill, New York.
- Walter Isard. Location and Space Economy.
- Walter Isard. (1968). Methods of Regional Analysis . MIT Press, Cambridge, Mas.
- Losch. The Economics of Location. Yale University Press, New Haven 1970.
- J. Tinbergen. (1969). The Elements of Space in Development Planning. North Holland ,Amesterdan.
- Q.S. Shrivastave. (1992). Regional Economics. Anmol Publications, New Delhi.
- M.J. Beckman. (1968) . Location theory. Randem House, New York.
- L. Lefieber. (1968). Allocation in Space. North Holland Amsterdam.
- L. Need Leman (ed.) 1968) . Regional analysis. Penguin Harmondsworth.
- H.S. Perloff et. Al. (1960). Regions, Resources and Economic Growth. Johns Hopkins Press, Baltimore.
- J. Friedman and W. Alonso (eds.) (1969) . Regional Development and Planning : A Reader. MIT Press, Cambridge (USA).
- S. Glaister. (1981). Transport Economics. Basil Blackwell, Oxford.
- C.H. S. Sharp. (1973). Transport Economics. MacMillan, London.
- R.D. Dean, et. al. (eds.). (1970). Special Economic Theory, Free Press, New York.
- J.S. Haussen. Optimal Patterns of Location.
- P.A. Steenbrink. (1974) . Optimisation of Transport Networks. John Wiley, New York.C.T. Gray and L.A. Hall, (1979). Public Transportation Planning Operations and Management. Prentice Hall, New Jersey.

Option – iii) ECONOMICS OF POPULATION

Maximum Marks: 100

Unit – I

Early theories of population (Malthus, Ricardo, Marx, J. M. Keynes and others).
Effect of pre-industrial technological and institutional changes on population.
Demographic transition. The concept of optimum population.

Unit –II

Economic Determinants of Fertility : New household economics (Leibenstein theory and Gary Becker's theory). Alternative economic approaches to fertility theory (Easterlin's and Caldwell's theory).

Unit – III

Cost and value of children and their effects on fertility. Supply of children and elements of uncertainty for the parents. Economic determinants of Nuptiality (Marriages and Divorce), Gary Becker's Model. Economic determinants of mortality.

Unit –IV

Economic determinants of migration (Revenstein's Lee's and Todaro's model). Economic consequences of population growth (General views of Malthus, Marx, Simon Kuznets). Economic consequences of population growth (Dual sector models of Lewis, Renis Fei and Jorganson's)

Unit – V

Effects of population growth of savings and investment, population growth and labour supply, population growth and distribution of income. Effects of population growth on educational and human capital input facilities. Economic consequences of slowing population growth and population decline. Policy issues related to population and economic growth.

SUGESSTED REDEANGS

United nations, The Determinants and Consequences of Population Trends, Vol. I, 1973, part of Chapter 2, pp. 33-48.

- Thomas Malthus, A Summary View of the Principle of Population, In D. V. Glass, ed., An Introduction to Malthus, Vatts and Co., London, 1953, pp. 117181.

- Simon Kuznets, Modern Economic Growth (Yale University Press, New Haven, 1966), Chapter 2, Growth of Population and Product, pp. 34-85.
- John C. Caldwell, Toward a Restatement of Demographic Transition Theory, Population and Development Review, Vol. 2, Nos. 3-4, September and December 1976.
- Gary Becker, An Economic Analysis of Fertility, in National Bureau of Economic Research, Demographic and Economic Change in Developed Countries, (Princeton University Press, 1960), pp. 209-240.
- Ered Arnold, et. al., The Value of Children, A Cross-National Study, Vol. 1 (East-West Population Institute, 1975).
- Thomas P. Espenshade, the value and Cost of Children, Population Bulletin, Vol. 32, No. 1, 1977, pp. 3-32 only.
- Gary S. Becker, A Theory of Marriage, in T. W. Schultz, ed. Economics of the Family (University of Chicago, 1974), pp. 299-344.
- Everett S. Lee, A Theory of Migration, Demography, February 1996.
- Books
- Agarwala, S. N. (1972). India's Population Problem, Tata McGraw-Hill, Bombay.
- Bhende, A. A. and T. Kanitkar. Principles of Population Studies, Himalaya Publishing House, Bombay.
- Bosque, D. J. (1971). Principles of Demography, John Willey, New York.
- Registrar General of India. Census of India, Government of India, New Delhi.
- Coale, A. J. and F. M. Hoover, (1958). Population Growth and Economic Development in Low Income Countries : A Case Study of India's Prospectus, Princeton University Press, Princeton.
- Davis, K. (1972), World Urbanization : 1950-70. Vol. II, Population Monograph Series, No. 9. University of California, Barkely.
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- Smith, P. C. (1983). Trends and differentials in Nuptality in the Population of the Phillipines, Country Monograph Series No. 5 UNESCAP, Bengkok.
- Shryok, H, Siegel, J. S. and Associates (1976). The Methods and Material of Demography, Academic Press, New York.
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- United Nations (1979). Methods of Measuring Internal Migration, Manual VI, UID Publications, New York.
- Weeks, J. R. (1978). Population : An Introduction to Concepts and Issues, Wadsworth Publishing Co., Belmont, Californie.
- Shrivastava, O. B. (1996), Demography and Population Studies, Vikas Publishing House Pvt. Ltd., 2nd Edition.
- Misra, B. D. (1996). An Introduction to Study of Population.
- Pathak, K. B. & ram F. Techniques of Demographic Analysis, Himalaya Publishing House, Bombay.

Course – IX (option-iv) BASIC ECONOMETRICS

Maximum Marks: 100

Unit – I

The Simple Linear Regression Model

Assumptions of ordinary Least Squares (OLS) method, Properties of OLS estimates. Assumption of normality and confidence intervals for the parameters. Tests of significance of the parameter estimates. Tests of hypotheses with parameter estimates, test of goodness of fit with R-square. Desirable properties of estimates. Prediction with a linear regression model. Proof of BLUE properties of estimates (Gauss-Markov theorem). Different types of variables (Dominant, proxy irrelevant and superfluous variables).

Unit – II

General Linear regression Model and Analysis of Variance: general linear regression model. Extension of the linear regression model to non-linear relationships. Applications of analysis of variance and regression. Tests of restriction imposed on the relationship of two or more parameters. The Chow test. Specification errors and specification bias.

Unit – III

Violations of Assumptions of Linear Regression Model:

The Problem of heteroscedasticity, its consequences and some methods to overcome the problem. Auto-correlation, its Sources, consequences and methods to solve the problem. The Durbin-Watson test. Consequences and tests for detection of multicollinearity. The Farrar-Glauber test. Methods to solve the problem of multicollinearity. Errors in Variables: their consequences and solutions. Method of inverse least squares.

Unit – IV Dummy and Lagged Variables:

Analysis with dummy variables as explanatory variables. Lagged variables and distributed lag models; The Koyck model, the adaptive expectation model, the partial adjustment model and the Almon scheme of polynomial lag. The method of instrumental variables. The method of maximum likelihood as applied to regression. The Cramer-Rao lower bound. Regression on dummy dependent variables. The linear probability and the Logit models.

Unit – V Identification and Simultaneous Equation Models:

The Simultaneous equation bias. The problem of identification. Formal rules for identification and choice of econometric methods. Recursive models, Indirect Least Squares model. Two stage least squares (2SLS) and the method of Instrumental Variables.

SUGGESTED READINGS

- Gujarati, D., Basic Econometrics, McGraw-Hill, 2/e, New York.
- Koutsoyiannis, A. Theory of Econometrics, 2/e, Mac-Millan, London.
- Maddala, G. S. Econometrics, MacGraw-Hill, New York.
- Johnston, J. Econometrics Methods, 2/e, MacGraw-Hill, New York.
- Kmenta. J. Elements of Econometrics, Prentice Hall, New Jerry.

COURSE – X
INDIAN ECONOMY

Maximum Marks : 100

Unit – 1

Growth and Structure of Indian Economy Since 1950. Growth of Indian economy since 1950. Measures for raising economic growth. Trends in the nature and magnitude of poverty, inequality and unemployment. Changes in occupational pattern, Demographic trends and economic development. Rate and trend in saving, investment and growth rate.

Unit – II

Growth of Agricultural and Industrial Sectors :

Trends in agricultural production and productivity. Food policy and public distribution system (PDS). Impact of liberalization in agricultural sector. Industrial Growth performance and problems. Industrial concentration; its nature and extent. Cottage and small scale industries. Impact of liberalization and privatization on the industrial sector.

Unit – III

Money Supply, Inflation and Public Policies :

Factors determining interest rates. Money supply and inflation in India. Financial sector reforms during 1990's. recent tax reforms. Growth and structure of subsidies in India. Macro-economic policies – fiscal policy, income policy and stabilization policy. Parallel economy and its implications.

Unit – IV

International Trade Policies :

Composition and directions of India's foreign trade. Factors determining the balance of payment. Disequilibrium in the balance of payment. Causes, consequences and policy measure. India's policies towards foreign capital; collaboration, export promotion and import substitution. Exchange rate policy and the convertibility of Rupee.

Unit – V

Development Policies :

India's planned development; Successes and failures. Policies for social justice (with special reference to the alleviation of poverty, inequality and unemployment). Sectoral policies : Industrial and agrarian. Policies for liberalization and privatization. -----

SUGGESTED READINGS

Unit – I

- Bagchi, A. (1982). The Political Economy of Underdevelopment in India, Cambridge University Press, Cambridge.
- Bardhan, P. (1984). The political Economy of Development in India, Oxford University Press, New Delhi.
- Brahmandnda, P. R. and V. R. Panchumkhi, (Eds) (1987). The Development Process of the Indian Economy, Himalaya Publishing House, Bombay.
- Dandekar, V. M. & N. Rath. Poverty in India; Indian School of Political Economy, Bombay.
- Datta, Bhabatosh (1977). The Contents of Economic Growth, and other eassay, Research India Publication, Calcutta.
- Rao, V. K. R. V. (1983). India's National Income : 1950-1980, Sage Publications, New Delhi.
- Wadhwa, E. (Ed>) (1977). Some Problems of India's Economic Policy, 2e, Tata McGraw-Hill, Publishing Company, Delhi
- Kapila, U., (Ed.) (1988). Indian Economy Since Independence, Vol. – I, Academic foundation, New Delhi.
- N. Aggarwal (1995). Indian Economy Problems of Development and Planning, WishwaParkashan, New Delhi.
- Misra S. K. and Puri V. K. (1993). Indian Economy-its Development Experience, Hinday Publishing House.
- Thakur Dalip S. (1996). Economic Development, Growth and Distributive Justice in Developing Countries with Special reference to India. Reliance Publishing House, New Delhi.

Unit – II

- Barahmananda, P. R. (1980). Growthless Inflation by Mears of Stockless Money, Himalyan Publishing House, Bombay.
- Brahmananda, P. r. & V. R. Panchamukhi (Eds). (1987). The Development Process of the Indian Economy, Himalaya Publishing House, Bombay.
- Chakravarty's (1985). Report of the Reserve bank of India, Committee to review the Working of the Monetary System, reserve bank of India, Bombay.
- Goldsmith, R. W. (1969). Financial Structure and Development, Yale University Press, New Haven.
- Gupta,. S. B. (1979). Monetary Planning for India, Oxford University Press, New Delhi.
- Gupta, S. B. (1983). Monetary Economics, S., Chand and Company, New Delhi.

- Rao, V. K. R. V. A. M. Khusro & C. M. Hanumantharao (1973). Inflation and India's Economic Crisis, Vikas publishing house, Delhi.
- Simha, S. L. N. (1974). Inflation in India, Vora and Co., Bombay.
- Aggarwal A. N. (1995). Indian Economy-Problem of Development and Planning, ViswaParkashan, New Delhi.
- Misra S. K. and Puri V. K. (1993). Indian Economy its Development Experience, Himalaya Publishing House, New Delhi.
- Thakur Dalip S. (1996). Economic Development, Growth and distributive Justice in Developing Countries with Special Reference to India. Reliance Publishing House, New Delhi.

Unit –III

- Bhagwati, J. & P. Desai (1972). India : Planning for industrialization, Oxford University Press, London.
- Bhagwati, J. N. & V. R. Panchamukhi (1976). Foreign trade regimes and Economic Development, Machmillan, Delhi.
- Brahmananda, P. R. & V. R. Manchmukh. The Development Process of the Indian Economy, Himalaya Publishing House, Bombay.
- Little, J. M. D; T. Scitovsky & M. Scott (1970). Industry and Trade in some Developing Countires : A Comparative Study, Oxford University Press, London.
- Nayyar, D. (1976). India's Exports and Export Policies in the 1960's, Cambridge University Press, Cambridge.
- Panchamukhi, V. R. (1978). Trade Policies of India, A Quantitative Analysis, Concepts Publishing Company, New Delhi.
- Wadhwa, C. (Ed.) Some Problems of India's Economic Policy, 2e, Tata McGraw-Hill, Publishing Company.
- Kapila, U. (Ed.). Indian Economy Since Indep3endence, Vol. 2, i.e. Academic Foundation, New Delhi.

Unit – IV

- Brahmananda, P. R. and V. R. Panchmukhi (Ed.) (1987). the Development Process of the Indian Econmy, Himalaya Publishing House, Bombay.
- Chelliah r. (1969). Fiscal Policy in Under-Developed Economy, 2e, George Alen and Unwin, London.
- Chelliah R., et. Al., (1981). TRENDS AND issues in Indian federal Finance, Allied Publishers, New Delhi.
- Gandhi, V. P. (1970). Aspects of India's Tax Structure, company, Bombay.
- Jha, R. (1987). Modern Theory of Public Finance, Wiley Eastern New Delhi.
- Lakdawala, D. T. (1967). Union-State financial relations. Laivani Publishers, Bombay.
- Thavaraj, M. J. K. (1978). Financial Management of the Government, S. Chand and Company, New Delhi.
- Aggarwal A. N. (1995). Indian Economy Problems of Development and Planning, WishwaPrakshan, New Delhi.

- Misra S. K. and Puri V. K. (1993). Indian Economy its Development Experience, Himalaya Publishing House, New Delhi.

Unit – V

- Ahluwalia, I. J. (1985). Industrial Growth in India, Oxford University Press, New Delhi.
- Bhagwati, J. and S. Chakrawarty, (1971). Contribution to Indian Economic Analysis, Lalvani Publishing House, Bombay.
- Brahmananda, P. R. and V. R. Panchamukhi, (Eds.) (1987). The Development Process of the Indian Economy, Himalaya Publishing House, Bombay.
- Chakravarty, S. (1987). Development Planning : The Indian Experience, Clarendon Press, Oxford.
- Gadgil, D. R. (1972). Planning and Economic Policy in India, OrientLongmanPeona.
- Ghosh, a. and S. K. ghosh (1983). Planning Techniques and Indian Plans, Wheeler and Company, Allahabad.
- Jha, L. K. (1980). Economic Strategy for the 80's, Allied Publishers, New Delhi.
- Kapila, U. (Ed.) (1988). Arrested Development in India, Nabigar Publications, New Delhi.
- Aggarwal A. N. (1995). Indian Economy : Problems of Development and Planning, WishwaParkashan, New Delhi.
- Misra S. K. and Puri V. K. (1993). Indian Economy-Its DEvelopment Experience, New Delhi.
- Thakur Dalip S. (1996). Economic Development, Growth And Distributive Justice In Developing Countries With Special Reference to India. Reliance Publishing House, New Delhi.

COURSE – XI
PUBLIC FINANCE

Maximum Marks : 100

Unit – 1

Principles of public Finance:

Principles of maximum Social Advantage. Role of public finance in the developing Economics. Fiscal economics : An overview. Of allocation, distribution and stabilization. Functions. Market failure. Public goods and externalities. Public goods and free-rider problem.

Unit –II

Principles of Taxation :

Meaning and type of taxes; requirements of a good tax structure. Approaches to taxation : micro analysis of direct and indirect taxes; individual income tax, corporation income tax, sales tax including value-added tax and expenditure tax. Incidence of taxes; nature of tax burden and principles of tax incidence. Theories and measures of tax incidence. Effects of taxes on work efforts, savings, investment, and growth. Trade-off between equity and efficiency. Taxable capacity.

Unit – III

Economics of Public Debt and Public Expenditure :

Sources of public debt. Classical theory of public debt. Compensatory aspects of debt policy. Burden of public debt. Management of public debt. Growth of internal and external public debt. in India. Theories of growth of public expenditure. Pattern of public expenditure. Pure theory of public expenditure. Growth of public expenditure in India.

Unit – IV

Reforms in Budgeting System and Stabilization Policies :

Performance and programming budgeting. Classification of budgets. Fiscal policy : traditional and modern views on fiscal policy. Instruments of fiscal policy; built-in-stabilizers and compensatory fiscal policy. Fiscal policy for stability and growth. Fiscal policy and economic development.

Unit – V

Fiscal Federalism : Role of fiscal federalism. Allocation, distribution, and stabilization in a federation. Union-state-local financial relations in India. Growth and composition of statutory and non-statutory financial transfers in India. Nature and extent of deficits in central and State budgets. Policy measures to correct fiscal imbalances. Economic analysis of recent union budgets.

SUGGESTED READINGS

Unit – I

- Badway, R. W. and Bruce, N. (1984). Welfare Economics, Basil Blackwell, Oxford.
- Mishan, E. J. (1986). Introduction to Normative Economics, Oxford University Press, New York.
- Buchanan, J. M. (1968). The Demand and Supply of Public goods, Rand McNally-Chicago.
- Cornes, R. and T. Sandler (1986). The Theory of externalities, Public Goods and club-goods, Cambridge University Press, Cambridge.

Unit – II

- Auerdach, A. J. and Feldstein, M. (Ed.) 1985. Handbook of Public Economics, Vol. I, North Holland, Amsterdam.
- Buchanan, J. M. (1960). Fiscal Theory and Political Economy, Selected essays, University of North Carolina Press Chapel Hill.
- Musgrave, R. A. and Shoup (Eds.) 1970. readings in the Economics of Taxation, George, Allen and Unwin, London.
- Murgrave, R. A. (1995). The Theory of Public Finance, McGraw-Hill, New York.
- Purohit, Matresh C. (1993). Principles and Practices of Value Added Tax, Lessons for Developing Countries, gayatri Publications, Delhi.
- Seligman, E. R. A. (1969). Essays in Taxation, Augustue M. Kelley, New York.
- Musgrave and Musgrave (1985). public Finance in Theory and Practice, McGraw-Hill, New York.

Unit – III

- Aura Movie, D. et. Al. (1964). Economic Growth and External debt, John Hobins, Baltimore.
- Buchanan, J. M. (1958). Principles of Public Debt. AA Defence and Restatement, Richard Irwin, Homewood.
- Houghton, R. W. (ed.). Public Finance, Selected Readings penguin, Harmondsworth.
- Musgrave, R. A. (1977). Essays in Fiscal Federalism, Green Wood Press, Westport.
- Oates, W. E. (1972). Fiscal Federalism, Harcourt Brace and Jovanovich, New York.
- Musgrave, R. A. (1959). The Theory of Public Finance M. C. Graw Hill Kagakusha Tokyo.

- Musgrave, R. A. (1969). Fiscal System, Yale University Press, New Haven.
- Dalaya, C. (1996). Internal Debt of Government of India, Vora and Co., Bombay.
- Williams, Alan (1963). Public Finance and Budgetary Policy George Allen Unwin Ltd. London.

Unit – IV

- Honda, K. L. (1979) Programme and Performance Budgeting, Uppal Publishing House, New Delhi.
- Phyrn, I. (1973). Zero Based Budgeting A Practical Management Tool for evaluation Expenses. Jcan Wiley, New York.
- Thavraj. M. I. R. (1978). Financial Administration in India, Sultan Chand, New Delhi.
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- Shaw, G. K. (1972). Fiscal Policy, Machmillan, London.
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Unit – V

- May, R. J. (1969). Federalism and Fiscal Adjustment, Oxford University Press.
- Oates, W. E. (1972). Fiscal Federalism, Harcourt Brace Javanovich.
- Musgrave, R. A. (1984). Public Finance in Theory and Practice, McGraw-Hil, New York.
- Chelliah, R., et. Al. (1981). Trends and Issues in Indian federal Finance, National Institute of Public Finance and policy, New Delhi.
- Musgrawe. R. A. (1969). Fiscal System, Yale University Press, New haven.
- Durveoy D. N. Ed. (1981). Readings in Indian Public Finance, Chankaya Publications, Delhi.
- Gandhi, V. P. (1970). Some Aspect of Indian Tax Structure An Economic Analysis, Vora and Co. Mombay.
- Chelliah, R. S. (1996). Towards Sustainable Growth, Essays in fiscal and Financial Sector Reforms in India.
- Gulati I. S. (Ed.) (1987). Centre State Budgetary Transforms, Oxford University Press, Bombay.
- Gulati, I. S. (1979). Center-State financial Relations. An assessment of the role of Finance Commission, M. a. University of Baroda.
- Lakdawala, D. T. (1967). Union State Financial Relations. Ialvani Publishing House, Bombay.
- Rao, M. G. and T. Sen (1969). Fiscal Federalism in India, Macmillan, India, New Delhi.

Course- XII (Any one of the following optional courses)

Option (i) LABOUR ECONOMICS

Maximum Marks : 100

Unit – 1 : Labour Market:

Nature and characteristics of labour markets in developing economics like India. Paradigms of labour market – classical, neo-classical and dualistic; Analysis of demand and supply forces, Demand for labour relating to choice of technology. Supply of labour in relation to growth of labour force. Labour force participation rates.

Unit – II : Employment:

Employment and development relationship Importance of full employment in the context of poverty in the developing countries. Unemployment – concept and measures. Causes of unemployment, Issues relating to employment rationalization, technological change and modernization. Rural unemployment and educated unemployment. Planning of Human capital.

Unit – III : Wage Determination :

Various classical, neo-classical and bargaining theories of wage determination. Various concepts of minimum wages and fair living. Problems of implementation of minimum wages. Wage determination by sectors – Urban and Rural, organized and unorganized. Wage and inflation. Productivity and wage relationship. Profit sharing schemes. Causes of wage differentials in terms of firm, industry, occupation and region.

Unit – IV : Industrial Relations and Trade Unions:

Industrialization and emergence of trade unionism. Growth, structure and pattern of trade unionism. Achievements and failures of trade union movement. Determinants of industrial disputes. Steps to achieve industrial peace. Methods of settlement of industrial disputes : collective bargaining, conciliation, arbitration and labour participation in management.

Unit – V : State and Labour in India :

Increasing role of State in labour matters. Labour policy of the Government. Social Security and Legislative Measures adopted for Socio-economic upliftment of labour. Social security measures for organized visa-vis unorganized sector of labour. Important labour legislations (industrial dispute

act), trade unions act, factories act and employees state insurance act. Problems of rural labour. Government policy towards rural labour and women and child labour. Evaluation of recent employment policy in India.

SUGGESTED READINGS

Unit – I

- Lester, R. A. (1964). Economics of Labour; 2/e Macmillan, New York.
- McCormick, B. & Smith Eds. (1969). The Structure of Labour Markets, Harper and Brothers, New York.

Unit – II

- Bellante, D. and M. Jackson, (1983). Labour Economics, McGraw-Hill, New York.
- McConnel, C. R. and S. L. Brue (1986). Contemporary Labour Economics, McGraw-Hill, New York.
- Das, N. (1960). Unemployment Full Employment and India, Asia publishing House, Bombay.
- Deshpandey, I. K., P. K. Employment Policy in a Developing Economy, Vol. I & II, Macmillan, London.
- Jolly, R. Etal, Eds (1973). Third World Employment : Problems and Strategy, Penguin, Harmondsworth.
- Kannapoo, S. (1983). Employment Problems and Urban Labour Markets In Developing Nations, University of Michigan, Ann Arbor, Michigan.
- Sen, A. R. (1975). Employment, Technology and Development. Oxford, University Press, Delhi.
- Thakur Dalip S. (1986). Poverty, Inequality and Unemployment in Rural India. B. R. Publishing Corporation, New Delhi.

Unit – III

- Deshpande, L. K. & J. C. Sandersara, eds. (1970). Wage Policy and wage determination in India. Bombay University Press, Bombay.
- Dunlop, J. T., eds. (1932). Theory of Wage Determination, Macmillan, London.
- Hicks, J. R. (1932). The Theory of Wages Calarendon Press, Oxford.
- Madan, B. K. (1977). The Real Wages of Industrial Labour in India. Management Development Institute, New Delhi.
- Rees, A. (1973). Economics of Work and Pay, Harper and Row New York.

Unit – IV

- Myres, C. A. (1958). Industrial Relations in India. Asia Publishing House, Bombay.
- Punekar, S. D. (1978). Labour Welfare, Trade Unionism and Industrial Relations, Himalaya Publishing House, Bombay.
- Ramaswamy, F. A. & U. Ramaswamy, (1981). Industry and Labour; Oxford University Press, New Delhi.
- Rees, A. (1962). Economics of Trade unions, J. Nisbet and Company, Digswell.

- Turner, H. A. (1965). Wage Trends, Wage Policies and collective Bargaining, Cambridge University Press, Cambridge.

Unit – V

- Mamoria, C. B. (1966). Labour Problems and Social Welfare in India, Kitab Mahal, Allahbad.
- Ramaswamy, E.A. & U. Ramaswamy (1978). Industrial Relations in India, Machmillan, Delhi.
- Singh, V. R. ed. (1970). Industrial Labour in India, Popular Prakashan, Bombay.
- Vaid, K. N. (1970). Labour Welfare in India, Center for Industrial Relations, Delhi.

Option (ii) INDUSTRIAL ECONOMICS

Maximum Marks : 100

Unit – I

THE SCOPE OF industrial Economics. Organization of industry. Changing forms of industrial organization. Process of industrialization : Rationale, objectives, strategies and policies. Employment implications of industrialization. Appropriate industrial technology for LDCs. Industrialization and economic development. Patterns and phases of industrial growth and changes in industrial structure.

Unit – II

Theory of firm and pricing. Objectives of the firm : profit and non-profit maximizing models of the firm. Basic theory of limit pricing; Marginal cost versus full cost pricing; Allocation of costs in case of joint products; Welfare implications of monopoly pricing. Investment decision; conventional and modern approaches; risk, uncertainty and investment decision. Unit – III

Market structure, conduct and performance and interrelations among them. Industrial concentration: concepts and measurement; Extent, causes and likely effects of concentration. Analysis of diversification, Vertical integration and mergers in industry. Extent of monopoly and concentration in India; Public policy towards industrial concentration and monopoly power in India.

Unit – IV

Industrial location : Theories and factors affecting location; infrastructure for industrialization; Regional growth of industry in India. Tools of public policy. Indian policy for backward areas. Industrial finance in India. Role of term-leading institutions in industrial development of India. Indian capital market.

Unit – V

Issues in Indian industry : Phases of industrial growth and changes in industrial structure India. Public sector rationale and organization; Public sector pricing policies. The question of efficiency in the context of special constraints; Overall performance of public sector in India. The concept of joint-sector in India. The problems of industrial sickness; Capacity utilization. Foreign collaborations; Multinationals in Indian joint ventures abroad. The recent liberalization trends. Large versus small scale industry debate in India.

SUGGESTED READINGS

Unit – I

- Barthwal, R. (1984). Industrial Economics, 2e, Wiley Eastern Ltd., New Delhi.

- Sbaing, Joe (1967). Industrial Organization, 2e, John Wiley, New York.
- Hay, D. H. and D. J. Morris, (1979). Industrial Economics' : Theory and Evidence, Oxford University Press, Oxford.
- Bryce D. Marray (1960). Industrial development. A Guide for Accelerating Economic Growth, McGraw Hill Book Company, New York.
- Thakur, Srinivas V. (1985). Industrialization and Economic Development, Popular Parkashan, Bombay.

Unit – II

- Andrews, p. and T. Wilson, Eds, (1951). Studies in the Price Mechanism, Oxford University Press, London.
- Devine, P. J. et. Al. (1978). An Introduction to Industrial Economics, 3e, George Allen and Unwin, London.
- Koutsoyiannis, a. (1979). Modern Microeconomics, 2e, Macmillan, New York.
- Wiles, P. J. D. (1963). Price-cost and Output, F. Praeger, New York.
- UNIDO (1972). Guidelines for Project Evaluation, UNIDO, Publication, New York.

Unit – III

- Bain, Joe (1967). Industrial Organization, 2e, John Wiley, New York.
- Clarkson., K. W. and R. Miller (1985). Industrial organization, Theory Evidence and Public Policy, McGraw-Hill, Kogkushia, Tokyo.
- Hannah, L. & Kay, J. (1977). CONCENTRATION OF modern Industry, Macmillan, London.
- Scherer, F. M. (1971). Industrial Market Structure and Economic Performance, Chicago University Press, Chicago.

Unit – IV

- Friedrich, S. (1929). Weber's Theory of Location of Industry, Chicago University Press, Chicago.
- Godbole, M. D. (1973). Industrial Dispersal Policies, Allied Publishers, Bombay.
- Isard, W. (1956). Location and Space Economy, John Wiley, New York.
- Menou, KSV (1979). Development of Backward Areas Through Incentives, Asia Publishing House, Bombay.
- Smith, D. M. (1971). Industrial Location : An Economic and Geographic Analysis, John Wiley, New York.
- Gupta, L. C. (1969). The Changing Structure of Industrial Finance in India, Oxford University Press, Delhi.
- Khan M. I. (1981). Indian Financial Systems. Allied publishers, New Delhi.

Unit –V

- Bhagwati J. and P. Desai (1972). India : Planning for Industrialization. Oxford University Press, London.
- Ghosh, P. K. (1977). Government and Industry. Oxford University. Press, Delhi.
- Reserve Bank of India (1985). Foreign Collaboration in Indian Industry. R. B.

- I. Bombay.
- Sandesara, J. C. (1982). Industrial Growth in India : Performance and Prospects; Lala Lajpatrai College Bombay.
 - Ahulwalia, I. J. (1985). INDUSTRIAL growth in India. Oxford University Press, Delhi.
 - Bagchi, A. and M. Banerjee, eds. (1979). Change and Choice in Indian. Industry. Bagchi Publications Calcutta.
 - Brahmananda, P. R. & V. R. Panchamukhi (Eds.), (1987). The Development Process of Indian Economy. Himalaya Publishing House, Bombay.
 - Das, N. (1969). The Public Sector in India, Vora & Company, Bombay.
 - Khan, M. V. (1980). Trends in Industrial Production 1951-77 and Onwards in R. B.I. Occasional Papers R. B. I. Bombay.

Option (iii) ENVIRONMENTAL ECONOMICS

Maximum Marks : 100

Unit – 1

Economics and Ecology: Definition and Concepts. Economics, Ecology,

Resources (their character/types and inter-relationships). Environment as a resource; Environmental economics, Eco-development, Ecosystem, productivity and stability. Environment pollution on (its types, sources and effects), Public goods and bads, unmarketed goods, externalities. Resource depletion, problem of social cost.

Environment as an important component in welfare; application of welfare economics to environmental issues such as pollution, urban congestion and the provisions of public goods, common property, externalities and the distribution of income.

Unit – II

Economic Development and Environmental Quality; Environmental costs of economic growth. Problems of urban environmental planning (Industry, transport, housing, slum clearance, sewerage and waste disposal). Problem of rural environmental planning (rural industrialization, waste disposal, common property resources degradation deforestation). Relationship of conservation and development. Special role of ecology in development planning. Resource management to fulfill environmental, social and economic objectives. Dilemma in environmental planning (poverty Vs. Environmental quality, social aspects, legal aspects, financial aspects).

Unit – III

Economic Evaluation of Environmental Resources Measuring environmental damage (Valuation Methodologies). Externalities and valuation of resources on the Public lands. Measurement of benefits from the environmental resources. Irreversibility and the optimal use of natural environments (irreversibility in economic processes, irreversible Decisions and exhaustible resources, irreversible investment and project evaluation, determining the discount rate, inter-generational transfers determining the discount rate, inter-generational transfers and uncertainty). Divergence between social cost and private and uncertainty). Divergence between social cost and private cost. Cost-benefit analysis for environmental management.

Unit – IV

Environmental Management Models : Environmental control under uncertainty. Economics of pollution control. Economics of renewable resource harvesting (Optimal policies of fisheries, optimal rotating forest). Efficient allocation of renewable resources through time. Materials balance model for the environment. Multi-objective optimization model for environmental decision making.

Unit – V

Policies for Environmental Planning : Methods of securing the optimum amount of pollution (Direct Government controls, property rights, Pigouvian taxes, Effluence standards and effluent charges). Role of voluntary organization. People's participation in environmental management, Resource conservation (conserving soils, protecting forests, materials substitution, product life extension. Recycling materials conservation.

SUGGESTED READINGS

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- Brown, I. R., et. Al. State of the World, (A World-Watch institute Report, Prentice Hall of India New Delhi.
- Clark, C. W. (1976). Mathematical Bioeconomics : Optimal management of Renewable Resources, John Willey & Sons, New York.
- Cooper, Charles (1980). Economic Evaluation and the Environment, Hodder and Stoughton, London.
- Dasgupta, P. (1982). The Control of Resources, Oxford University Press, Delhi.
- Dorfman, R. and N. S. Dorfman (Eds.) (1977). Economics of the Environment, W. W. Norton, New York.
- Krutilla, J. V. and A. C. Fisher (1975). The Economics of Natural Environmental, Johns Hopkins University Press, Baltimore.
- Maeler, K. G. (1974). Environmental Economics A theoretical Enquiry, Johns Hopkins University Press, Baltimore.
- Nijkamp, P. (1977). theory and Application of Environmental Economics, North-Holland Publishing Co., Amsterdam.
- Nijkamp, P. (1980). Environmental Policy Analysis ; Operational Methods and Models, John Wily & Sons, New York.
- Pearce, P. W. (1976). Environmental Economics, Longman London.
- Squire, L & Vander Tak, H. (1975). Economic Analysis of Projects, John Honkins University Baltimore.
- Pearce, D. W. and Turner, R. K. 1990. Economics of Natural Resources and the Environment. Harveter Wheatsheaf, New York.
- Faber, M. And R. Manstetton, (1996). Ecological Economics Edward Elgar, Cheltenham, U.K.

- Folmer, H., H. L. Gabel and H. Opschoor (eds.) (1996). Principles of Environmental and Resource Economics. Edward Elgar, Cheltenham, U. K.
- Barbier, E. B. (1997). The Economics of Environment and Development. Edward Elgar, Cheltenham, U. K.
- World Bank, (1992). World Bank Development Report, 1992; Environment and Development. Oxford University Press, Oxford.