

**M. A. Economics Syllabus**  
(I SEMESTER to IV SEMESTER)

<b><u>Semester-I</u></b>			
	INTERNA L MARKS	<b>Semeste r End Exam Marks</b>	<b>Tota l</b>
1. Micro Economic Theory – I	30	70	100
2. Macro Economics	30	70	100
3. Public Finance	30	70	100
4. Evaluation of Economic Doctrines	30	70	100
5. Mathematical Methods	30	70	100
<b><u>Semester-II</u></b>			
1. Micro Economics Theory -II	30	70	100
2. Monetary Economics	30	70	100
3. International Economics	30	70	100
4. Public Finance Administration	30	70	100
5. Statistical Methods	30	70	100
<b><u>Semester-III</u></b>			
1. Economic Growth and Development	30	70	100
2. Indian Economy	30	70	100
3. Environmental Economics	30	70	100
4. Computer Applications in Economics	30	70	100
5. <b><u>Optionals</u></b>			
a) Mathematical Economics	30	70	100
b) Urban Economics	30	70	100
c) Labour Economics	30	70	100
d) Economics of Insurance	30	70	100
e) Rural Development	30	70	100
<b><u>Semester-IV</u></b>			
1. India's Foreign Trade	30	70	100
2. Industrial Economics	30	70	100
3. Agricultural Economics	30	70	100
4. Economics of Infrastructure	30	70	100
5. <b><u>Optionals</u></b>			
a) Econometrics	30	70	100
b) Regional Economics & Area Planning	30	70	100
c) Human Resource Management	30	70	100
d) Financial Markets and Analysis	30	70	100
e) Agri-business Management	30	70	100

**Module I: Introduction to Microeconomic Theory**

The Economic Problem: Scarcity and Choice; The scope of Economic theory and Basic Economic Problems; Methods of Economics Analysis; Static and Dynamic Analysis- Micro and Macro differences.

**Module II: Consumer Behaviour:**

Basic Concepts: Law of demand – Cardinal utility - Ordinal Utility function, Indifference curves, Budget line; Income effects- Price effect and substitution effects – Derivation of demand curve - Slutsky's equation; Revealed preference theory.

**Module III: Theory of Production**

Basic concepts- Production function ; Linear Programming in production technology- Homogeneous and homothetic production functions; returns to scale, Euler's theorem, Cobb-Douglas, CES, Translog Leontief's Production Functions ;

**Module IV: Cost functions**

Cost functions- short run and long run; Profit maximization. Baumol's sales revenue maximization model; Williamson's model of managerial discretion. Marris model of managerial enterprise, Bains limit pricing theory.

**Module V: Market Structure:**

Markets under perfect competition; market equilibrium; Stability of equilibrium; Dynamic adjustments; Monopoly; Monopsony; Discriminating Monopoly, Monopolistic Competition; Duopoly and Oligopoly- Cournot, Stackelberg, Kinked Demand Curve

READING LIST

1. Koutsoyiannis A. (1979), 'Modern Microeconomics', MacMillan, University of Michigan, USA
2. Baumol, W.J. (1982), Economic Theory and Operations Analysis, Prentice Hall of India, New Delhi. 2.Green, H.A.G. (1971), Consumer Theory, Penguin, Harmondsworth. 3. Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory: A Mathematical Approach, McGraw Hill, New Delhi.
3. Da Costa, G.C. (1980), Production, Prices and Distribution, Tata McGraw Hill, New Delhi. 2. Healthfields and Wibe (1987), An Introduction to Cost and Production Functions, Macmillan, London. 3. Hirshleifer, J and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.
4. Archibald, G.C. (Ed.) (1971), Theory of the Firm, Penguin, Harmondsworth
5. Da Costa, G.C. (1980), Production, Prices and Distribution, Tata McGraw Hill, New Delhi.
6. Hirshleifer, J and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.
7. Archibald, G.C. (Ed.) (1971), Theory of the Firm, Penguin, Harmondsworth.
8. Bain, J. (1958) Barriers to New Competition, Harvard University Press, Harvard.

M.A., ECONOMICS  
SEMESTER – I  
*PAPER – II: MACRO ECONOMICS*

**MODULE – 1 : NATIONAL INCOME AND ACCOUNTS**

Circular Flow of Income in two- three-and four-sector economy; different forms of national income accounting – GNP Deflator.

**MODULE – 2 : CONSUMPTION FUNCTION**

Determination of out put and employment – classical and Keynesians approach; Keynes' Psychological law of consumption – implications of the law; short-run and long-run consumption function; Empirical evidence of consumption function; Income-consumption relationship-absolute income, relative income, life cycle and permanent income hypotheses.

**MODULE – 3: INVESTMENT FUNCTION**

Determinants of Investment – Capital and Investment – Accelerator Principle, Marginal Efficiency of Capital – Acceleration.

**MODULE- 4 : THEORY OF INFLATION**

Cost-push and demand pull inflations - Philips curve analysis – Short run and long run Philips Curve; The natural rate of unemployment hypothesis.

**MODULE -5 : BUSINESS CYCLES**

Theories of Schumpeter, Samuelson and Hicks, Control of business cycles – relative efficacy of monetary and fiscal policies.

**MODULE 6 : RECENT DEVELOPMENTS IN MACROECONOMICS**

Supply side economics, New Classical Economics, New Keynesian Economics.

**BASIC READING LIST:**

1. Ackley, G. (1978), *Macroeconomics: Theory and Policy*, Macmillan, New York.
2. James Froyen: *Macroeconomics*, McGraw Hill, New York.
3. Edward Shapivo: *Macroeconomics*, McGraw Hill, New York.
4. Dornbusch, Fischer and Startz, *Macroeconomics*, Tata McGraw Hill, New Delhi.
5. Duesenberry, J.S. (1949), *Income, Saving and the Theory of Consumer Behaviour*, Harvard University Press, Harvard.
6. Keynes, J.M. (1936), *The General Theory of Employment, Interest and Money*, Macmillan, London.
7. Chakravarty, S.C. (1985), *Report of the Committee to Review the Working of the Monetary System*, Reserve Bank of India, Bombay.
8. Gurley, J and E.S. Shaw (1960), *Money in a Theory of Finance*, Brookings Institution, Washington.
9. Reddy, Y.V. (2000), *A Review of Monetary and Financial Sector Reforms in India – A Central Banker's Perspective*, UBSPD, New Delhi.
10. Rao, VKRV (1983), *India's National Income: 1950 to 1980*, Sage Publications, New Delhi.

M.A., ECONOMICS  
SEMESTER – I  
**PAPER – III: PUBLIC FINANCE**

**MODULE 1 : INTRODUCTION**

Role of Government in organized society; Changing perspective – Govt. in a mixed economy; public and private sector, cooperation or competition; Govt. as an agent for economic planning and development; Govt. as a tool for operationalizing the planning process; private goods, public goods, and merit goods; Market failure – Principle maximum social advantage.

**MODULE 2 : PUBLIC REVENUE**

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 3 : PUBLIC EXPENDITURE**

Wagner's law of increasing state activities; Wiseman-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 4 : 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.

**MODUE 5 : INDIAN PUBLIC FINANCE**

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.

**READING LIST**

- 1 Buchanan, J.M. (1970), *The Public Finances*. Richard D. Irwin, Homewood.
- 2 Musgrave, R.A. (1959), *The Theory of Public Finance*. McGraw Hill, Kogakhusa, Tokyo
- 3 Musgrave, R.A. and P.B. Musgrave (1976), *Public Finance in Theory and Practice*. McC Hill, Kogakusha, Tokyo.
- 4 Buchanan, J.M. (1968), *The Demand and Supply of Public Goods*. Rand McNally, Chic;
- 5 Friedman, A. (1986), *Welfare Economics and Social Choice Theory*. Martins Nijhoff, Boston.
- 6 Premchand, A. (1966), *Control of Public Expenditure in India*. Allied Publishers, New Delhi.
- 7 Buchanan. J.M. (1958). *Public Principles of Public Debt, A Defence and Restatement*. Richard D. Irwin Homewood.
- 8 Chelliah, Raja J. (1971), *Fiscal Policy in Underdeveloped Countries*. George Alien and Unwin, London.
- 9 Bhargava, R.N. (1967), *The Theory and Working of Union Finance in India*. Chaitanya Publishing House, Allahabad.
- 10 Bhargava, P.K. (1982), *Centre State Resource Transfers in India*. The Academic Press, Gurgaon.
- 11 Chelliah, Raja J. et. al (1981), *Trends and Issues in India's Federal Finance*, National Institute of Public Finance and Policy, New Delhi.
- 12 Gulati. I.S. (1979). *Centre State Financial Relations : An Assessment of the Role of Finance Commission*, M.S. University of Baroda, Baroda.
- 13 Lakdawala, D.T. (1967), *Union State Financial Relations*. Lalwani Publishing House, Mumbai.
- 14 Musgrave, R.A. (1977), *Essays in Fiscal Federalism*. Greenwood West Port.
- 15 Oates, W.E. (1972), *Fiscal Federalism*. Harcourt Brace and Johanowich, New York.
- 16 Reports of various Finance Commissions
- 17 Srivastava, D.K. (Ed.) (2000), *Fiscal Federalism in India*, Har-Anand Publications Ltd., New Delhi.
- 18 Bhargava, R.N. (1969), *Indian Public Finances*. B.D. Bhargava and Sons, Chandausi.

- 19 Bhargava, P.K. (1976), Taxation of Agriculture in India. Vora and Co. Bombay.
- 20 Bhargava, P.K. (1984), Some Aspects of Indian Public Finances, Uppal Publishing House, New Delhi.
- 21 Bhargava, P.K. (1991), India's Fiscal Crisis. Ashish Publishing House, New Delhi.
- 22 Chelliah, R.J. (Ed.) (1997), Towards Sustainable Growth. Oxford University Press, New Delhi.
- 23 Gandhi, V.P. (1970), Some Aspects of India's Tax Structure. Vora and Company, Bombay.
- 24 Mundle, S. (1999). Public Finance Policy : Issues for India. Oxford University Press. New Delhi.
- 25 Ulbrich, Public Finance in Theory and Practice, 1<sup>st</sup> Edition, 2004.

M.A. ECONOMICS  
SEMESTER -I  
***PAPER IV: EVOLUTION OF ECONOMIC DOCTRINES***

**1. The Early Period:**

Ancient Doctrines: The Old Testament; Greek Philosophers; Plato and Aristotle; Roman Empire and Christianity; Middle Ages; The Doctrine of the Church; Modern Period; Mercantilism; Physiocracy

**2. The Classical Period**

The Classical School- Adam Smith; Ricardo; Malthus; Say's Law of Markets; Muller; Socialists; Sismond; Marx; Other contributions; a) The Historical School and b) Say, Cournout, Thunen, Senior, J.S. Mill

**3. The Later Period:**

Founders of Modern Economics: Gossen, Jevons, Menger Walras, other writers: Pareto, Fisher- Basic Doctrines of Marshall.

**4. Post Marshall Doctrines:**

Pigou, Keynes and Schumpeter; Basic Doctrines; Veblen Institutionalism.

**5. The Indian Doctrines:**

Ancient to Modern Periods: Kautilya; Vlluvar; Medieval Thought – Nauroji, Ranade, R.C.Dutt; M.N. Roy (Democratic Decentralization); Gandhi: Sarvodaya, Full Employment, Khadi and Village Industries, Cooperation.

Books Recommended:

1. Back House, R.(1985), A History of Modern Economic Analysis, Basil Blackwell, Oxford.
2. Blaug.M.(1978),Economic Theory in Retrospect, Cambridge University Press, Cambridge.
3. Dasgupta, A.K.(1985), Epochs of Economic Theory, Oxford university Press Delhi.
4. Ekelund, R.B. and R. Herbett (1983), A Hisotry Economic Theory and Method. Mc Graw Hill, London.
5. Gide, Cand G. Rst(1956)m, A History of Economics Doctrines George G,. Harrap and Co., London.
6. Hajela, T.N.(1980), History of Economic Thought Shivalal Agarwala and Co., Agra
7. Gray, A(1978), Development of Economic Doctrine, Longman Group, London
8. Rima, I.H.(1979)Development of Economic Analysis, Richard D Irvin, Homewood.
9. Roll E. (1973) A History of Economic Thought, Fabre, London.
10. Babatosh Datta, Indian Economic Thought, Twentieth Century Perspectives, 199-50
11. Gandhi, K.K. (1938), Economics of village industries, , Navivan Publishing House Ahmedabad.
12. Gandhi, K.K. (1974) India of My Dreams, Navjivan Publishing House Ahmedabad.
13. Ganguli, B.N. (1977, Indian Economic thought a nineteenth century perspective, Tata, MacGraw- Hill, New Delhi.
14. Gupta, J.N.ed.,(1971), R.C.Dutt-Life and works, London.
15. Kautilya(1951), Arthaqshastra tr. By R. Shayama Sastry, Rernond Printing Press, Mysore
16. Roy, M.N. (1964), Memoirs, Allied Publisher, Bombay.

M.A. ECONOMICS  
SEMESTER -I  
*PAPER V: MATHEMATICAL METHODS*

**MODULE 1 :**

Concept of Function, Types of Functions - Graphical Representation of function - Limit and continuity of a function - Concept of Straight line, Circle and Parabola - Applications in Economics.

**MODULE 2 :**

Concept of derivative - Rules of differentiation - Interpretation of revenue, cost, demand, supply, functions; Elasticities and their types; Multivariable functions; Concept and types of production functions.

**MODULE 3 :**

Rules of partial differentiation; Problems of maxima and minima in single and multiple variables; Simple problems in market equilibrium; Total derivatives, Indifference curve analysis etc., Concept of integration; Simple rules of integration; Application to consumer's surplus and producer's surplus.

**MODULE 4 :**

Matrix Theory and Input-Output analysis; Meaning-Types-Assumptions; Review exercises.

**MODULE 5 :**

Linear programming - Basic concepts; Formulation of linear programming problem - its structure and variables; Solutions of linear programming through graphical and simplex method.

**Reference :**

1. Vohara, Quantitative Techniques, Tata McGraw Hill, 2<sup>nd</sup> ed., 2001.
2. D.C.Sancheti and V.K.Kapoor, Business Mathematics.
3. S.C. Gupta Fundamentals of statistics.
4. K.Chandra Sekhar, Business of statistics.

M.A., ECONOMICS  
SEMESTER - II  
**PAPER - I: MICRO ECONOMIC THEORY-II**

**Module 1: Theory of 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, Kaleclla and Kaldor's

**Module 2: PRE PARETIAN WELFARE ECONOMICS**

Welfare Economics: Nature and Scope; Economic and General Welfare; Value Judgments; Positive Economics and Welfare Economics; Benthamite Approach to Aggregate Welfare; Optimum Resource Allocation and Welfare Maximization.

**Module 3. GENERAL EQUILIBRIUM THEORY**

Partial and General Equilibrium; Stability and Uniqueness of General Equilibrium; Coalitions and Monopolies; The Walrasian General Equilibrium Model; 2x2x2 Graphical General Equilibrium Model

**Module 4: THE NEO-CLASSICAL (PIGOVIAN) WELFARE ECONOMICS AND EXTERNALITIES**

Pigovian Welfare Economics and Externalities – Meaning, Welfare Conditions – Externalities between private and social costs and returns; Pigo's ideal output.

**Module 5: NEW WELFARE ECONOMICS**

Introduction; The Optimum Conditions of Exchange; Factor Substitution and Degree of Specialization; The Condition of Optimum Factor-Product Utilization; Pareto Optimality and Perfect Competition; The Social Welfare Function (Bergson and Sameulson). Maximization of Social Welfare; The Theory of second best; Value judgments and welfare economics; Arrow's Possibility Theorem; Political aspects of Welfare Economics.

**READING LIST**

1. Bronfenbrenner, M. (1979), Income Distribution Theory, Macmillan, London.
2. Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.
3. Broadway, R.W. and N. Bruce (1984), Welfare Economics, Basil Blackwell, London.
4. Graff, J. De V. (1957), Theoretical Welfare Economics, Cambridge University Press, Cambridge.
5. Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory : A Mathematical Approach, McGraw Hill, New Delhi.
6. Da Costa, G.C. (1980), Production, Prices and Distribution, Tata McGraw Hill, New Delhi.
7. Green, H. and V. Walsh (1975), Classical and Neo-Classical Theories of General Equilibrium, Oxford University Press, London.
8. Hansen, B. (1970), A Survey of General Equilibrium Systems, McGraw Hill, New York.
9. Arrow, K.J. and M.D. Iantrilligator (Eds.) (1981), Handbook of Mathematical Economics, Vol.1, North Holland, Amsterdam.
10. Borch, K.H. (1968), The Economics of Uncertainty, Princeton University Press, Princeton.
11. Diamond and Rothschild (Eds.) (1978), Uncertainty in Economics, Academic Press, New York.



M.A., ECONOMICS  
SEMESTER - II  
**PAPER - II: MONETARY ECONOMIS**

**Module – 1 : SUPPLY OF MONEY**

Functions of Money – Determinants of money supply; RBI approach to money supply; High powered money and money multiplier; control of money supply.

**Module – 2 : DEMAND FOR MONEY**

Keynes's liquidity preference approach to demand for money – Aggregate demand for money; Post Keynesian Theories of Demand for Money – Tobin, Boumol, Friedman

**Module - 3 : MONEY MARKET EQUILIBRIUM AND IS-LM MODEL**

Equilibrium in money market – Equilibrium in product market – Derivation of LM Curve and IS Curve – General Equilibrium.

**Module - 4: BANKING**

RBI and its functions – Methods of Credit Control – Reserve Bank of India and Monetary Policy – Objectives and Limitations. Objectives and functions of Commercial Banks – Money Market and Role of Commercial Banks – Nationalization and Privatization of Commercial Banks.

**Module – 5: MONETARY SECTOR REFORMS IN INDIA**

Banking Sector Reforms – Chakravarthy Committee Report – Narasimham Committee Report.

**BASIC READING LIST:**

1. Ackley, G. (1978), *Macroeconomics: Theory and Policy*, Macmillan, New York.
2. James Froyen: *Macroeconomics*, McGraw Hill, New York.
3. Edward Shapivo: *Macroeconomics*, McGraw Hill, New York.
4. Dornbusch, Fischer and Startz, *Macroeconomics*, Tata McGraw Hill, New Delhi.
5. Keynes, J.M. (1936), *The General Theory of Employment, Interest and Money*, Macmillan, London.
6. Chakravarty, S.C. (1985), *Report of the Committee to Review the Working of the Monetary System*, Reserve Bank of India, Bombay.
7. Gurley, J and E.S. Shaw (1960), *Money in a Theory of Finance*, Brookings Institution, Washington.
8. Reddy, Y.V. (2000), *A Review of Monetary and Financial Sector Reforms in India – A Central Banker's Perspective*, UBSPD, New Delhi.
9. Laidler, D.E.W. (1977), *Demand for Money: Theory and Evidence*, Dum- Don Valley, New York.

M.A., ECONOMICS  
SEMESTER - II  
*Paper - III: INTERNATIONAL ECONOMICS*

**Module I: THEORY OF INTERNATIONAL TRADE**

Meaning and Importance of International Trade – Silent Features of International Trade – The pure theory of International Trade – Theories of Absolute Advantage, Comparative Advantage and Relatively Costs, Heckscher – Ohlin Theory of International Trade.

**Module 2: MEASUREMENT OF GAINS**

Measurement of Gains from Trade and Distribution – Concepts of Terms of Trade, their uses and limitations – Hypothesis of Secular Deterioration of Terms of Trade.

**Module 3: THEORY OF INTERVENTIONS**

The Theory of Interventions – Tariffs, Quotas and Non-tariff barriers – Economic Effects of Tariffs and Quotas on National Income, Output and Employment.

**Module 4: BALANCE OF PAYMENTS**

Meaning and Components of Balance of Payments – Equilibrium and disequilibrium in Balance of Payments – The process of adjustment of balance of payments – Foreign Trade multiplier with and without foreign representation and determination of national income and output – Relative merits and demerits of fixed and flexible exchange rates.

**Module 5: INTERNATIONAL FINANCIAL INSTITUTIONS**

International Monetary Fund (IMF) – The World Bank (IBRD) – International Finance Corporation (IFC) – International Development Association (IDA)

**READING LIST**

1. Soderston, Bo (1991), International Economics, The Macmillan Press Ltd., London.
2. Bhagwati, J. (Ed.) (1981), International Trade, Selected Readings, Cambridge, University Press, Massachusetts.
3. Kindleberger, C.P.(1973), International Economics, R.D.Irwin, Homewood.
4. Carbaugh, R.J.(1999), International Economics, International Thompson Publishing, New York.
5. Dana, M.S.(2000), International Economics; Study, Guide and Work Book (5<sup>th</sup> Edition), Routledge Publishers, London.
6. Carbaugh, International Economics, 9<sup>th</sup> Edition, 2004.

M.A., ECONOMICS  
SEMESTER - II  
**Paper - IV: PUBLIC FINANCE ADMINISTRATION**

**MODULE – 1: BUDGET**

Meaning, Revenue and Capital Budget- Surplus, Deficit and Balance Budget- Preparation of India Central Budget; Concept of Deficit- Revenue, Fiscal, Primary; Deficit Financing- Meaning, Objectives and Causes; Deficit Finance since 1991, Effects of Deficit Financing.

**MODULE – 2 : CENTRAL – STATE FINANCIAL RELATIONS**

Sources of Income – Expenditure of the Central Government – Introduction of State finance source of revenue – Expenditure of State Governments.

**MODULE – 3 : FINANCE COMMISSIONS AND RESOUCUE ALLOCATION**

Resource mobilization – Revenue allocation under various finance commissions – Main recommendations of finance commissions – Anomalies of Union – State financial relations – Financial autonomy – Sarkaria Commission report on financial relations.

**MODULE – 4: GOVERNMENT ACCOUNTING AND AUDIT; FINANCIAL CONTROL**

Nature, Purpose and Objectives of Government Accounting – Nature, Meaning and Types of Audit- Functions of Audit department- Separation of Accounts from Audit- Need of independent Audit- Controller and Auditor- General of India

Union Finance Ministry Structure, Functions and Role Delegation of Financial Powers- Financial adviser- Parliamentary financial control in India- Public accounts committee- Origin- composition and role- Estimates committee-Origin composition functions and role

**MOLDULE – 5 : FISCAL POLICY AND FISCAL REFORMS IN INDIA**

Tradition and modern view of fiscal policy – Instruments – Automatic stabilizer – Compensatory fiscal policy and inflation – Effectiveness of fiscal policy – fiscal policy in India – Long term fiscal policy – Impact fiscal reforms on Economic Development.

**READING LIST**

- 1 Buchanan, J.M. (1970), *The Public Finances*. Richard D. Irwin, Homewood.
- 2 Musgrave, R.A. (1959), *The Theory of Public Finance*. McGraw Hill, Kogakhusa, Toky
- 3 Musgrave, R.A. and P.B. Musgrave (1976), *Public Finance in Theory and Practice*. McC Hill, Kogakusha, Tokyo.
- 4 Buchanan, J.M. (1968), *The Demand and Supply of Public Goods*. Rand McNally, Chic;
- 5 Friedman, A. (1986), *Welfare Economics and Social Choice Theory*. Martins Nijhoff, Boston.
- 6 Premchand, A. (1966), *Control of Public Expenditure in India*. Allied Publishers, New Delhi.
- 7 Buchanan. J.M. (1958). *Public Principles of Public Debt, A Defence and Restatement*. Richard D. Irwin Homewood.
- 8 Chelliah, Raja J. (1971), *Fiscal Policy in Underdeveloped Countries*. George Alien and Unwin, London.
- 9 Bhargava, R.N. (1967), *The Theory and Working of Union Finance in India*. Chaitanya Publishing House, Allahabad.
- 10 Bhargava, P.K. (1982), *Centre State Resource Transfers in India*. The Academic Press, Gurgaon.
- 11 Chelliah, Raja J. et. al (1981), *Trends and Issues in India's Federal Finance*, National Institute of Public Finance and Policy, New Delhi.
- 12 Gulati. I.S. (1979). *Centre State Financial Relations : An Assessment of the Role of Finance Commission*, M.S. University of Baroda, Baroda.
- 13 Lakdawala, D.T. (1967), *Union State Financial Relations*. Lalwani Publishing House, Mumbai.
- 14 Musgrave, R.A. (1977), *Essays in Fiscal Federalism*. Greenwood West Port.
- 15 Oates, W.E. (1972), *Fiscal Federalism*. Harcourt Brace and Johanowich, New York.
- 16 Reports of various Finance Commissions
- 17 Srivastava, D.K. (Ed.) (2000), *Fiscal Federalism in India*, Har-Anand Publications Ltd., New Delhi.
- 18 Bhargava, R.N. (1969), *Indian Public Finances*. B.D. Bhargava and Sons, Chandausi.
- 19 Bhargava, P.K. (1976), *Taxation of Agriculture in India*. Vora and Co. Bombay.
- 20 Bhargava, P.K. (1984), *Some Aspects of Indian Public Finances*, Uppal Publishing House, New Delhi.
- 21 Bhargava, P.K. (1991), *India's Fiscal Crisis*. Ashish Publishing House, New Delhi.
- 22 Chelliah, R.J. (Ed.) (1997), *Towards Sustainable Growth*. Oxford University Press, New Delhi.
- 23 Gandhi, V.P. (1970), *Some Aspects of India's Tax Structure*. Vora and Company, Bombay.
- 24 Mundle, S. (1999). *Public Finance Policy : Issues for India*. Oxford University Press. New Delhi.
- 25 Ulbrich, *Public Finance in Theory and Practice*, 1<sup>st</sup> Edition, 2004.

**M.A., ECONOMICS**  
**SEMESTER - II**  
**Paper - V: STATISTICAL METHODS**

**MODULE 1 : SAMPLING METHODS**

Concept of sampling - random and non-random sampling; Simple random; Stratified random, systematic sampling, cluster sampling and non-random sampling methods.

**MODULE 2 : CORRELATION AND REGRESSION**

Correlation and regression analysis and their properties; Concept of the least squares and the lines of regression and applications.

**MODULE 3 : TIME SERIES ANALYSIS**

Introduction - components - measurement of trend - graphic, (Free hand curve fitting) method, method of semi average, method of moving average, method of curve fitting by principle of least squares.

**MODULE 4 : PROBABILITY**

Deterministic and non-deterministic relationships - Terminology - Some basic concepts of set theory - Probability defined - Theorems of probability - Conditional probability - Bayes theorem and inverse probability - Joint and marginal probabilities - Review Exercises.

**MODULE 5 : THEORETICAL DISTRIBUTIONS**

Binomial Distribution and Poisson Distribution - Assumptions constants - Normal Distribution - properties of normal distribution, constants of normal distribution - Review Exercises.

**MODULE 6 : STATISTICAL INFERENCE**

Formulation of statistical hypotheses - Null and alternative; Criteria for testing of hypothesis - Hypothesis testing based on Z, t (Chi-square) and F tests; Type 1 and Type 2 errors.

Reference:

1. S.C. Gupta Fundamentals of statistics.
2. K.Chandra Sekhar, Business of statistics.
3. K.V.Sarma, Statistics made simple, Prentice Hall of India.

M.A., ECONOMICS  
SEMESTER - III  
**PAPER - I: ECONOMIC GROWTH AND DEVELOPMENT**

**Module I: Development and Planning**

Economic Growth--Economic Development and Sustainable Development- Importance of Institutions- Government and markets- Perpetuation of Underdevelopment- Vicious circle of poverty. Indicators and measurement of poverty structural view of underdevelopment – measurement of development; conventional, HDI and quality of life indices

**Module II: Economic Growth Models**

Economic Growth: Harrod-domar model, instability of equilibrium, Neoclassical growth- Solo's model, steady state growth, Mrs Joan Robinson's growth model; Growth model of Kaldor.

**Module III: Theories of Development**

Classical theory of development, Marx and Schumpeter Approaches to development: Balanced growth, Critical Minimum Effort, Big Push; Unlimited supply of Labour , Unbalanced growth; Low income equilibrium trap.

**Module IV: Technical change and study Growth**

Technological progress – embodied and disembodied technical progress; Hicks, Harrod; Labour saving technical change; Capital saving technical change; Basic principles, conditions for steady growth; main properties of steady growth.

**Module V: Allocation of Resources and Planning**

Need for investment criteria in developing countries – present vs., future, Alternative investment criteria; Cost-benefit analysis, Shadow process, Need for planning – democratic, decentralized and indicative planning, micro-level planning- Review of Indian Plan models.

**BEST READING LIST**

1. Adelman, I. (1961), Theories of Economic Growth and Development, Stanford University Press, Stanford.
2. Higgin, B. (1959), Economic Development, W.W.Norton, New York.
3. Kindleberger, C.P. (1977), Economic Development, (3<sup>rd</sup> Edition), Mc.Graw Hill, New York.
4. Meier, G.M. (1995), Leading issues in Economic Development, (6<sup>th</sup> Edition), Oxford University Press, New Delhi.
5. Chakravarti, S. (1987), Development Planning : The Indian Experience, Clarendon Press, Oxford.
6. Ashok Rurdra, (1975), Indian Plan Models, Allied Publishing House, Bombay.

M.A. ECONOMICS  
SEMSTER III  
*PAPER II: INDIAN ECONOMY*

**Module I**

Main features; Geographic size-Endowment of natural resources, Population, size, composition quality and growth trend-Occupational distribution- Unbalance and civic amenities: Mass poverty unemployment and its effects; Economic effect of population procedure inequalities; rural –urban disparities

**Module II**

Economic planning in India; Major controversies on planning in India Alternative strategies-goals and achievements, shortfalls of different plans- planning and the Market.

Broad Fiscal, monetary, industrial trade and agricultural policies-objectives, rationale, constraints and effects.

**Module III**

Agriculture; 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 IV**

Industry; Industrial policy; Public Sector enterprises and their performance; Problem of sick units in India; Privatization and disinvestments debate; Growth and pattern of industrialization; Small-scale sector; Productivity in industrial sector; Exit policy – issues in market reforms; Approaches for employment generation.

**Module V**

W T O And Economic Reforms: Rationale of internal and external reforms; Globalization 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. Foreign Trade and prrnts Imbalances; balance of payments and external debt inflation and parracell economy and it effects.

**READING LIST**

1. Byres, T.J.(Ed.) (1998), *The Indian Economy; Major Debates Since Independence*, Oxford University Press, New Delhi.
2. Chakravarty, S. (1987), *Development Planning – The Indian Experience*, Oxford University Press, New Delhi.
3. Chatopadhyaya, M., P.Matiti and M.Rakshit (Eds.) (1996), *Planning and Economic Policy in India – Evaluation and Lessons for the Future*, Sage Publications, New Delhi.
4. Brahmananda, P.R. and V.R. Panchmukhi (Eds.) (1987), *The Development Process of the Indian Economy*, Himalaya Publishing House, Bombay.
5. Chelliah, Raja J. and R.Sudarshan (1999), *Income, Poverty and Beyond; Human Development in India*, Social Science Press, New Delhi.
6. Dandekar, V.M. (1996), *The Indian Economy, 1947-92, Vol.II*, Sage Publications, New Delhi.
7. Frederick, H. and A.M. Charles (1970), *Education, Manpower and Economic Growth*, New Delhi.
8. Government of India, Planning Commission (1999), *Ninth Five Year Plan, 1997-2002, Vol.II*, New Delhi.
9. Tilak, J.B.C. (1993), *Costs and Financing of Education in India : A Review of issues, Problems and Prospects (Mimeo)*, National Institute of Educational Planning and Administration, New Delhi.
10. Appu, P.S. (1996), *Land Reforms in India*, Vikas, New Delhi.
11. Brahmananda, P.R. and V.R. Panchmuki (Eds.) (1987), *The Development Process of the Indian Economy*, Himalaya Publishing House, New Delhi.
12. Joshi P.C. (1975), *Land Reforms in India*, Allied Publishers Pvt.Ltd., New Delhi.
13. Basu, K.et.al (1995), *Capital Investment and Development: Essays in memory of Sukhamoy Chakravarty*, Oxford University Press, New Delhi.
14. Byres, T.J. (Ed.) (1997), *The State, Development Planning and Liberalization in India*, Oxford University Press, New Delhi. Chelliah, Raja J. and R.Sudarshan (1999), *Income, Poverty and Beyond: Human Development in India*, social Science Press, New Delhi.

**PAPER III: ENVIRONMENTAL ECONOMICS****Module 1: Environment, Ecology and Economy:**

Environment and Economy-Elements of Ecology-Energy Flow and Energy Systems Dynamics - Pollution and Externalities-Market Inefficiency and Externalities-Property Rights and Externalities - Non-Convexities and Externalities-Common Property Rights.

**Module 2: Measurement of Environmental Values:**

Concept of Total Economic Value-Objective standard based valuation selective preference based valuation-Indirect Methods of Environmental valuation: Travel Cost Method, Hedonic Price Theory-Direct Methods of Environmental Valuation: 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; Environment and development trade off and the concept of sustainable development; Rules of sustainable development-Indicators of sustainable development-Integrated environmental and economic accounting and the measurement of environmentally corrected GDP-Macro-economic 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-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 and rationale and benefits.

**BASIC READING LIST:**

- 1 Bhattacharya, R.N.(Ed) (2001), Environmental Economics: An Indian Perspective, Oxford University Press, New Delhi.
- 2 Baumol, W.J. and W.E. Oates (1988), The Theory of Environmental Policy (2<sup>nd</sup> edition). Cambridge University Press, Cambridge.
- 3 Fisher, A.C. (1981), Resource and Environmental Economics, Cambridge University Press, Cambridge.
- 4 Hanley, N., J.F. Shogem and B.White (1997), Environmental Economics in Theory and Practices, Macmillan.
- 5 Hussen, A.M. (1999). Principles of Environmental Economics, Routledge, London.
- 6 Jereen, C.J.M.Ven Den Bergh (1999), Handbook of Environmental and Resource Economics, Edward Elger Publishing Ltd., JK.
- 7 Kolstad C.D. (1999), Environmental Economics, Oxford University Press, New Delhi,
- 8 Pearce, D.W. and R.Tumer (1991), Economics of Natural Resource Use and Environment, John Hopkins University Press, Baltimore.
- 9 Perman, R.M. and J.McGilvary (1996). Natural Resource and Environmental Economics, Longman, London.
- 10 Sankar, U. (Ed.), (2001), Environmental Economics, Oxford, University Press, New Delhi.
- 11 Tietenberg, T. (1994), Environmental Economics and Policy, Harpar Collins, New York.
- 12 Scott, J. Callan, Janet, M. Thomas, "Environmental Economics and Management – Theory, Policy and Applications", 4<sup>th</sup> Edition.
- 13 James, R., Kahn, "Economic Approach to Environment and Natural Resources", 3<sup>rd</sup> Edition, 2005.
- 14 David Anderson, "Environmental Economics and Resource Management with Economic Applications Card", 1<sup>st</sup> Edition, 2004.

M.A., ECONOMICS  
SEMESTER - III  
**PAPER - IV: COMPUTER APPLICATIONS IN ECONOMICS**

**Module 1: Information Concept & Computer fundamentals**

Definition of a computer, Computer system as information processing system, Types of computer system, elements of a digital computer system(components), CPU and its functions, basic concept of input /out put devices, various input devices(keyboard, mouse, MICR, OCR, Micro phone), etc. various output devices(printer, plotters spooling) etc. Primary and secondary memory. Types of memory and memory devices and their comparison; Software concepts; Types of software-system/application, Role of a system software, different system software.

**Module II: MICROSOFT OPERATING SYSTEMS**

Operating System-Microsoft Disk Operating Systems(MS DOS)- Internal and External commands-Windows, Operating System-salient Features-Merits of Windows Operating System-Accessories-System tools-Scan Disk-Word Pad-Note Pad-Paint-Imagination-Windows Explore-My Documents-My computer-Internal Explorer-Network Neighborhood. Ms-Word: Creating, Opening and saving files-editing and formatting text-spell and grammar check-auto corrects-creation of tables and volumes. MS-Excel: Work sheet-entering data and creating work sheets and work book opening and formatting.

**Module III: DATA PROCESSING TECHNIQUES USING MS EXCEL**

Concept of Data-Record and File-types of Data-Data Entry-File handling and Operations like opening, appending and cascading-closing and attribute controls-Data Storage and Retrieval-Data operations-Preparation and Formatting of Text, Tables and Graphs-Estimation of Descriptive Statistics, Index Numbers and Growth Rates, Demand function, Supply function, Production function, Consumption function, Employment Function, Demand for Money function, Supply of Money function, Leontiff Input-Output Model, MS Access: Creating, opening and working with data in MS-Access-tables-forms-query-report. MS-Power Point: concept of presentation-creating, opening and saving the slide shows-animation-viewer's presentation.

**Module IV: INTERNET APPLICATIONS**

Definition and uses of Internet-Salient features-different types of web sites-Creation of Electronic Mail address-Sending and getting e-mails-Features of Inbox-Attaching Images or Documents to E-mail-Downloading e-mail-Attachments of Documents from the Internet-data search from important Government Websites. [www.gov.ac.in](http://www.gov.ac.in), [www.rbi.org](http://www.rbi.org) .

**Module V: DATA ANALYSIS USING SPSS**

Basics of Data Analysis-Data Entry in SPSS-computing with SPSS-Preparation of Graphs with SPSS-Distribution Functions and Density Functions-Statistical Package handling and command description for SPSS-Reports, Descriptive-Statistics, Compare Means, time Series Analysis, Correlation and Regression Models.

**READING LIST:**

1. Atul Kahate, Information Technology and Numerical Methods, Tata McGraw Hill, New Delhi, 2003.
2. Rajaraman, V. (1996), Fundamentals of Computers, Prentice Hall of India, New Delhi.
3. Lipschultz, M.M. and S.Lipschultz (1982), Theory and Problems of Data Processing, Schum's Outline Series, McGraw Hill, New York.
4. Peter Norton's introduction to computer, Tata McGraw Hill Publishing Co., New Delhi.
5. Tom Sheldon, Windows 95 Made Easy, Tata McGraw Hill Publishing Co., New Delhi.
6. James Senn, Analysis and Design of information systems, Tata McGraw Hill Publishing Co., New Delhi.
7. Garden B.Davis, Computer data processing, Tata Mc.Grawa Hill Publishing Co., Ltdd., New Delhi.
8. Kathuinemurray, BPB Publications, Mastering PowerPoint 4 for Windows,
9. Sinha, P.K. : Computer Fundamentals, BPB Publications, New Delhi.
10. Raja Raman.V: Fundamentals Computers of , PHI, New Delhi.
11. Kerns: Essentials of Microsoft Windows, Word and Excel, PHI.
12. Alexis Leon and Mathews Leon: Introduction to computers with Ms-Office, TMH.



M.A., ECONOMICS  
SEMESTER - III  
*PAPER – V (A): MATHEMATICAL ECONOMICS*

**MODULE 1 : THEORY OF CONSUMER BEHAVIOUR**

Nature of Static Models – Utility function – Indifference curves – Maximization of utility – Derivation of Demand function – Slutsky equation – Theory of Revealed Preference.

**MODULE 2 : THEORY OF PRODUCTION**

Production functions – Isoquants – Constrained output and maximizations – Derivation of cost functions. Properties of Cobb-Douglas and CES functions – Euler's Theorem and its interpretations – Elasticity of substitution.

**MODULE 3: PRICE DETERMINATION**

Market equilibrium functions – Perfect competition – Monopoly – Oligopoly.

**MODULE 4: GROWTH MODELS**

Nature of Dynamic Models – Growth Models of Solow, Joan Robinson, and Swan – Plan Models – Mohalanobis and Feldman – Models of Trade Cycles – Hicks – Super multiplier.

**MODULE 5: LINEAR PROGRAMMING AND INPUT-OUTPUT ANALYSIS AND GAME THEORY**

Linear Programming – Primal and dual problem, Simplex method; transport and storage problems and other applications of linear programming in economics; Input-output analysis – Open and closed systems. Basic concepts of Game Theory

**READING LIST:**

1. Allen R.G.D. – Mathematical Analysis for Economists.
2. Allen R.G.D. – Mathematical Economics.
3. Allen R.G.D. – Macro Economic Theory
4. Chiang C.A. – Fundamental Methods Mathematical Economics.
5. Agarwal H.S. – Mathematical Approach to Economic Theory.
6. M.Evans – Macro Economic Activity.
7. Arrow, K.J. and M. Intrilligator (Eds.) (1982), Handbook of Mathematical Economics, Volumes I, II and III, North Holland, Amsterdam.
8. Chiang, A.C. (1986), Fundamental Methods of Mathematical Economics, Mc Graw Hill, New York.
9. Henderson, J.M. and R.E.Quandt (1980), Micro Economic Theory: A Mathematical Approach, Mc. Graw Hill, New Delhi.

**Module – 1 : URBAN ECONOMIC DEVELOPMENT IN INDIA:**

Urban Economic Analysis – Genesis of Urban Economic Development – Urbanization and Economic Development – Industrialization, Urbanisation relationship – Economics of Agglomerations.

**Module – 2 : URBANISATION AND URBAN GROWTH:**

Definition of Urbanisation – An Appraisal of Census Data on Urbanization – Degree of Urbanization – Rate of Urbanization – Trends in Patterns of Urbanisation and Urban Growth – Urbanisation Record since 1901 in India.

**Module – 3 : MIGRATION IN INDIA:**

Migration and Economic Development – Types Migration – Streams of Migration – Migration and Distance – Internal Migration in India – Ravenstein’s Laws of Migration – Lee’s Theory of migration – Lewis-Fei-Ranis Model – Todaro model of migration.

**Module – 4 : URBAN PROBLEMS:**

Problems of Slums and Housing – Water Electricity, Sanitary Problems – Environmental Pollution

**Module – 5 : FUTURE OF URBAN INDIA:**

National Urban Economic Development Policy.

**READING LIST:**

1. Werner Z.Hirsch, Urban Economic analysis, Tata McGraw-Hill Company, New Delhi, 1973.
2. David Segal, Urban Economics, Richard D. Irwin, Inc, Homewood, Illinois, 1977.
3. R.C.Vickerman, Urban Economics, Heritage Publishers, New Delhi, 1985.
4. Alan W.Evans, Urban Economics – An Introduction – Basil Blackwell, 1985
5. V.V.Subrahmanyam & R.L.Bawa – Urban Economic Development in India.

**Module 1 : LABOUR MARKETS:**

Peculiarities of Labour - Rise of Labour Problems - Nature and Characteristics of Labour Markets in Developing Countries like India - Paradigms of Labour Market Analysis.

**Module 2 : EMPLOYMENT:**

Employment and Development relationship – Poverty and Unemployment in Developing Countries; Unemployment – Concept, Types and Measurement particularly in India.

**Module 3 : WAGE DETERMINATION:**

Classical - Neo-classical and Bargaining theories of Wage Determination; Concepts of Minimum Wage, Living Wage and Fair Wage; Wage Determination in different sectors – Rural, Urban, Organized, Unorganized and in Informal Sectors.

**Module 4 : INDUSTRIAL RELATIONS:**

Growth, Pattern and Structure of Labour Unions in India, Achievements of labour unions; Causes of Industrial Disputes and their Settlement and Prevention Mechanism, Labour Legislation in India;

**Module 5 : STATE AND LABOUR:**

Concept of Social Security and its evolution; Social Assistance and Social Insurance; State policies with respect to Social Security and Labour Welfare in India; Special problems of Labour - Child Labour, Female Labour.

**Reading list:**

1. Hajela, P.D. (1998), *labour Restructuring in India: A Critique of the New Economic Policies*, Commonwealth Publishers, New Delhi.
2. McConnell, C.R. and S.L. Brue (1986), *Contemporary Labour Economics*, McGraw-Hill, New York.
3. Papola, T.S., P.P. Ghosh and A.N. Sharma (Eds.) (1993), *Labour Employment and Industrial Relations in India*, B.R. Publishing Corporation, New Delhi.  
Venkata Ratnam, C.S. (2001), *Globalization and Labour-Management Relations: Dynamics of Change*, Sage Publications/Response Books, New Delhi.  
Papola, T.S. and Rodgers, G. (Eds.) (1992), *Labour Institutions and Economic Development in India*, International Institute for Labour Studies, Geneva.
4. Kannapon, S. (1983), *employment Problems and Urban labour Markets in Developing Countries*, University of Michigan, Ann Arbor.

M.A., ECONOMICS  
SEMESTER - III  
**PAPER - V (D): ECONOMICS OF INSURANCE**

**MODULE 1 : INTRODUCTION**

Economic security; Human quest for economic security through time; Exposure to losses; Role of insurance; Definition of insurance; Risk pooling and risk transfer; Economic and legal perspectives. Social Vs. Private insurance; Life vs. non-life insurance; Classification of life, health and general insurance policies.

**MODULE 2 : RISK AND RISK MANAGEMENT**

Fundamentals of uncertainty and risk; Pure risk and speculative risk; Expected utility and decision-making under uncertainty; Expected utility and the demand for insurance; Moral hazard and insurance demand; Concept of risk management; Essentials of risk management; Elements of risk management- Risk assessment; Risk control and risk financing; World wide risk sharing- Concept of reinsurance, Fundamentals of reinsurance, Types of reinsurers; Reinsurance distribution systems, Reinsurance markets in developing countries.

**MODULE 3 : ESSENTIALS OF LIFE AND HEALTH INSURANCE**

Fundamentals of life and health insurance; Functions of life and health insurance; Mathematical basis of life insurance; Plans of life insurance; Legal aspects of life insurance; Provisions of policies; Selection and classification of risks; Basics of premium construction; Valuation and distribution of surplus; Individual health insurance; Uses, Types of evaluation; Principles of underwriting of life and health insurance; Group insurance and superannuating (pension) schemes; Set-up and management of insurance companies.

**MODULE 4 : ESSENTIALS OF GENERAL INSURANCE**

Definition of general insurance; Types of general insurance; Importance of general insurance; Importance of general insurance in a country's economic development; Concept of short-term risk; Fundamentals of the following concepts – Common law, Equity, Proposal/Accidence, Indemnity, Insurable interest, Contribution subrogation, Representation; Utmost good faith, Material fact, Physical hazard, Moral hazard, Policy endorsements conditions/warranties; Selection of risks; Inspection of risks; Rating and calculation of premiums; Tariffs and non-tariffs; Marketing of general insurance; Technology development and general insurance.

**MODULE 5 : PLANNING FOR WEALTH ACCUMULATION AND RETIREMENT NEEDS**

Wealth accumulation planning; Life cycle planning; Planning for accumulation, objectives; Purchase of insurance and accumulation planning; Investments – Tax-advantaged and tax non-advantaged; Essentials of individual retirement planning; Analysis of retirement; Income needs, Retirement planning strategies; Investing for retirement, Pension plans; Basic principles of pension plans; Pension plans in India; Estate Planning; Process of estate Planning; Estate Planning tools; Life insurance for estate liquidity.

**READING LIST**

1. Dionne, G. and S.E. Harrington (Eds.) (1997), Foundations of Insurance Economics, Kluwer Academic Publishers, Boston.
2. Pfeiffer, I. And D.R. Klock (1974), Perspectives of Insurance, Prentice Hall Inc., Englewood, Cliffs.
3. Yarri, M.E. (1965), 'Uncertain Life Time, Life Insurance and the Theory of Consumer, 'Review of Economic Studies, Volume 32.
4. Brockelt, P.L., R.C. Witt and P.R. Hind (1991), An Overview of Reinsurance and the Reinsurance Markets, Journal of Insurance Regulation, Volume 9, No.3.
5. Elliot, M.W., B.L. Webb, H.N. Anderson and P.R. Kensicki (1995), Principles of Reinsurance, Insurance Institute of America, Malvern, Pa.
6. Friedmann, M. and L.J. Savage (1947), The Utility Analysis of Choices Involving Risk, Journal of Political Economy, Vol.56.
7. Black, K. Jr. and H.D. Skipper Jr. (2000), Life and Health Insurance, Prentice Hall, Upper Saddle River, New Jersey.
8. Insurance Institute of India, Life Assurance Underwriting, 9IC-22), Mumbai.
9. Skipper, Jr., H.D. (Ed.) (1998), International Risk and Insurance: An Environmental Managerial Approach, Irwin McGraw Hill, Boston.
10. Benjamin, B. (1991), General Insurance, Heinemann, London.
11. Drofman, M.S. (1994), Risk and Insurance, Prentice Hall, Englewood-Cliffs.
12. Insurance Institute of India, General Insurance (IC-34), Mumbai.
13. Black, K.Jr. and H.D. Skipper Jr. (2000), Life and Health Insurance, Prentice Hall, Upper Saddle River, New Jersey.
14. Casner, A.J. (1995), Estate Planning, Little Brown, Boston.
15. Government of India (1998), Old Age and Income Security (OASIS) Report (Dave Committee Report), Government of India, New Delhi.

M.A., ECONOMICS  
SEMESTER -III  
**PAPER -V (E): RURAL DEVELOPMENT**

**Module I:**

Development, Meaning – Basic elements and objectives Rural Development; meaning, objectives, scope and importance of rural development. Approaches, Gandhian approach; Community Development Approach, Sectoral Approach; Participatory Development approach.

**Module II:**

Agriculture and Rural Development- Share of agriculture in the national income- Agriculture as a source of livelihood and employment- Agriculture as a source of raw materials, capital for development, manpower, Agriculture Development Programmes; objective, target group, strategies and evaluation of Intensive Agriculture Development Programme(IADP), Intensive Agriculture Area Programme(IAAP) and High Yield Variety Programme(Green revolution)- Area specific rural Development Programmes; regional disparities- meaning, causes and consequences, Meaning and need for regional planning- objectives, activities, target groups and evaluation of Drought Prone Area Programme, Hill Area Development Programme, Integrated Wasteland Development Programme.

**Module III:**

Alleviation of rural poverty: Meaning ,concept, measurement of poverty, causes and consequences, Poverty eradication programmes: objectives, activities and target group, evaluation of PDS, Swarna Jayanthi Grama Swarajgar Yogana, National Rural Employment Guaranty Scheme NREGP.- Social Welfare schemes for rural uplift; concept of social welfare, Objectives, scope, activities, performance of Antyodaya Programme- Annapoorana Scheme- Intensive Child Development Scheme(ICDS), schemes for rural housing, water supply and sanitation.

Community Development Programme(CDP), coverage, activities, Organization, methods and techniques of CDP-Evaluation of CDP- Development Programmes and Panchayati Raj- Community Organisation; Concept- meaning- basic assumptions- principles of community organizations, Self Help Group(SHG) as a community organization- structure and functions of SHG- performance of SHG in Andhra Pradesh

**Module IV:**

Cooperatives and rural development –meaning and principles of cooperation, Objectives, functions, structure and performance of rural credit and non-credit

**Module V:**

Administration of rural development in India- administrative structure for rural development in Andhra Pradesh- District rural Development Agency (DRDA): Structure and functions; Panchayat Raj Institutions (PRI); Structure and functions; Non Governmental Organization(NGO); Meaning and functions.

**References:**

1. B.P. Tyagi : Agricultural Economics and Rural Development
2. G.R. Madan : India's Developing Villages
3. Katar Singh : Rural Development
4. K.V. Reddy : Agriculture and Rural Development, Himalaya Publishing House
5. J.S. Brara : The Political Economy of Rural Development
6. Desai, Vasant : A Study of Rural Economics, Mumbai, Himalaya Publishing House, First Edn., 1983
7. Desai, A.R. : Rural Sociology in India, Mumbai, Popular Prakashan, 5<sup>th</sup> Edn., 1978.
8. Dhingra, I.C. : Rural Economics, New Delhi, Sultan Chand & Sons Publishers, 1984.
9. Hanumantha Rao C.H.: Agricultural Production and Returns in India, Institute of Economic Growth, Delhi, Asia Publishing House, 1965.
10. Myrdal, Gunnar : Asian Drama – An Enquiry into the Poverty of Nations, Vol.II, London, The Penguin Press, 1968.
11. Shah C.H. : Agricultural Development of India – Policy and Problems, Mumbai, Orient Longman, 1979.
12. Srinivas, M.N. : India's Villages, Mumbai, Media Promoters and Publishers Pvt. Ltd., 2<sup>nd</sup> Edn., 1978.
13. Subramaniam, C. : "Strategy for Integrated Rural Development, Community Development and Panchayat Raj Digest, April 8, 1977.

M.A., ECONOMICS  
**SEMESTER -IV**  
***PAPER -I: INDIA'S FOREIGN TRADE***

**Module I: INDIA'S FOREIGN TRADE:**

Introduction – Trends at Exports and Imports in India – Components of Foreign Trade – Growth and Structure of India's Foreign Trade since 1991 – New Trade Policy – Impact of Trade Reforms since 1991.

**Module II: INDIA'S BALANCE OF PAYMENTS:**

India's Problems of Balance of Payments: The pre-1991 period – Balance of Payments studies since 1991 – Solutions to Balance of Payments Problem.

**Module III: FOREIGN CAPITAL:**

Need for Foreign Capital – India's Policy towards Foreign Capital – Foreign Direct Investment (FDI) – FDI vs. Exports – Foreign Aid to India.

**Module IV: INDIA'S FOREIGN EXCHANGE RATE POLICY:**

Choice of Foreign Exchange Rate Regime – Exchange Rate Management in India: Par Value System, Pegged Regime, The Period since 1991 – The Management of Foreign Exchange Resources.

**Module V: WORLD ECONOMY:**

Types of Trade Blocks- Globalization Strategy – New International Order – Globalization and Technology Transfer – TRIPs and TRIMs – India and WTO.

**READING LIST:**

1. J.N. Srinivasan and Suresh D. Tendulkar, "Reintegrating India with the World Economy", Oxford University Press, New Delhi, 2003.
2. Vyuptakesh Sharan and Indra Nath Mukherji, "India's External Sector Refroms", Oxford University Press, New Delhi.
3. Reserve Bank of India, "Report on Currency and Finance 2002-2003", Mumbai, 2004.
4. Joseph Stiglitz, "Globalization and its Discontents", Penguin Books, 2002.
5. C. Ranga Rajan, "Select Essays on Indian Economy", Academic Foundation, New Delhi, 2004.
6. Balder Raj Nayar, "Globalization and Nationalization", Sage Publications, New Delhi, 2001.
7. Biplab Dasgupta, "Structural Adjustment, Global Trade and New Political Economy of Development", Sage Publications, New Delhi, 1998.  
World Bank, World Development Report, 1987.

M.A., ECONOMICS  
SEMESTER -IV  
**PAPER II: INDUSTRIAL ECONOMICS**

**MODULE - I : Theories of Industrialization & Firm:**

Meaning of Industrialization, The role of Industry in Economic Development. Theories of Industry; Hoffman, Chenery and Gershenkron,. Theories of Industrial Location- Weber, Sargent Florence, & Losch.

**MODULE - II : Market Structure & Market Performance:**

Concepts & Organisation of a firm. Market Structure; Sellers Concentration; Product Differentiation; Entry Conditions; Economics of Scale; Profitability & Innovation. Growth of the firm- Size and Growth; Growth and Profitability of the firm; Constraints on Growth; Productivity and Efficiency.

**MODULE - III : Indian Industrial Growth & Pattern**

Industrial Pattern under five Year Plan; Review of Industrial Growth under Planning and Structural transformation. Changing role of Public Sector, Shortcomings of Public Sector. Role of Private Sector in India and its Limitation. Industrial Policy 1991 and subsequent changes, FDI.

**MODULE – IV: Industrial Finance:**

Industrial Finance: Owned, External and other components of Funds; Role. Nature, Volume and types of Institutional Finance- State Level financial Institutions and Commercial Banks.

**MODULE - V: Small Scale and Rural Industries:**

Case for Small Scale Enterprises; Problems of SSIs; SSIs and Sickness; Need for Rural Industrialization, Industrial labour – Structure of Industrial workers; Social Security Legislations; Labour Market Reforms.

**READING LIST:**

1. Ahluwalia, I.J. (1985), Industrial Growth in India, Oxford University Press, New Delhi.
2. Barthwal, R.R.(1985), Industrial Economics, Wiley Eastern Ltd., New Delhi.
3. Cherunilam, F. (1994), Industrial Economics : Indian Perspective (3<sup>rd</sup> Edition), Himalaya Publishing House, Mumbai.
4. Desai, B. (1999), Industrial Economy in India (3<sup>rd</sup> Edition), Himalaya Publishing House, Mumbai.
5. Divine, P.J. and R.M.Jones et.al. (1976), An Introduction to Industrial Economics, George Allen and Unwin Ltd., London.
6. Shivayya and Das, Industrial Economics
7. Francis Cherunilam, Industrial Economics : Indian Perspective
8. S.K. Mishra & V.K. Puri Indian Economy, Himalaya Publications house, 2009
9. Kuchhal, S.C.(1980) Industrial Economy of India(5<sup>th</sup> Edition), Chaitanya Publishing House, Allahabad. Reserve Bank of India, Report on currency and Finance (Annual)

M.A., ECONOMICS  
**SEMESTER -IV**  
**PAPER III: AGRICULTURAL ECONOMICS**

**MODULE 1 : AGRICULTURE AND ECONOMIC DEVELOPMENT**

Nature and scope of agricultural economics; Traditional agriculture and its modernization; Role of agriculture in economic development. Interdependence between agriculture and industry. Agricultural development, sources of rural credit in India.

**MODULE 2: AGRICULTURAL PRODUCTION AND PRODUCTIVITY**

Agricultural production – Resource use and efficiency; Production function analysis in agriculture; Factor combination and resource substitution; Farm size and productivity relationship laws of returns- Supply response of individual crops. Technical change, labor absorption in Agriculture

**MODULE 3: AGRICULTUREAL MARKETING AND PRICES**

Marketing and state policy; Agricultural markets; Regulated markets; Marketed and marketable surplus; Marketing channels, Prices spread, Behavior of agricultural prices – Terms of trade between agricultural and non-agriculture prices; Need for state intervention; Objectives of agricultural price policy.

**MODUEL 4: AGRICULTURAL GROWTH IN INDIA**

Recent trends in agricultural growth in India; Inter-regional variations in growth of output and productivity; Cropping pattern shifts; Supply of inputs- Pricing of inputs and role of subsidies; distribution of gains from technological change; role of Public investment and capital formation in Indian agriculture; Strategy of agricultural development; Sustainable agriculture and Food Security.

**MODUEL 5: AGARICULTURE AND EXTERNAL SECTOR**

International trade in agricultural commodities: Commodity agreements; Globalization of India economy and problems and prospects of India agriculture: Impact of World Trade Organization on India agriculture

**BASIC READING LIST**

- ❖ Bhaduri, A. (1984), The Economics structure if Backward Agriculture. Macmillam, Delhi.
- Bilgrami, S.A.R. (1996). Agricultural Economics. Himalaya publishing House, Delhi.
- Dantwala M.L.et.al (1991). Indian Agricultural Development since Independence. Oxford &IBH, New Delhi.
- Government of Indian (1976), Teade Liberalisation and Indian Agriculture. New Delhi.
- Gulati, A. and T.Kelly (1999), Trade Liberalisation and Indian Agriculture. Oxford University press, New Delhi.
- Kahlon, A.S. and Tyagi D.S (1983), Agriculture price policy in India. Allied publishers, New Delhi.
- Rao.C.H.Hanumantha (1975), Agricultural Growth. Rural Poverty and Environmental Degradation in India.Oxford Unverity press, New Delhi.
- Rudra, A. (1982), Indian Agricultural Economics : Myths and Reality. Allied publishers, New Delhi.
- S.Subba Reddy, P.Raghu Ram, T.V Neelakanta Sastry, I.Bhavani Devi – Agricultural Economics, Oxford & IBH Publishing CO, Pvt,Ltd, New Delhi.
- A.N Sadhu &Amarjit Singh, Fundamentals of Agricultural Economics, Himalaya Publishing House.
- R.G.Desai, Agricultural Economics (Models, Problems and policy issues), Himalaya Publishing House.



M.A., ECONOMICS  
**SEMESTER -IV**  
***PAPER IV: ECONOMICS OF INFRASTRUCTURE***

**Module I: Basic Infrastructure- Transport**

Introduction- Infrastructure and Economic Development – Social and Physical Infrastructure- Infrastructure as a Public goods

**Module II: Development of Infrastructure in India**

Development of transport system- economic Development- Models of freight and passenger demand. Problems of individual models of transport. Principle of pricing-current policy- problems and measures.

**Module III Communications, electricity and Gas**

Rate making in telephone utilities; principles of decreasing costs in telephone industry Characteristics of postal services- its importance – Restructuring of postal services- Bulk supply and pricing of electricity. The relative economics of Thermal, Hydel and Nuclear Power Plants. The case for a nuclear power grid- the exploitation natural gas. Pricing problem.

**Module IV: Education**

Education in India and development of human resources; elementary, secondary and higher education in India. Problems of India's education system, Reforms in education its impact on employment. Education policy in India

**Module V: Health**

Role of Health is improving the quality of human capital, Determinants of health- Health and Nutrition- Health crisis in India- The new health policy- National Rural Health Mission- Health Programmes under recent plans

**Reading List:**

1. Crew, M.A. and P.R.Kleindorfer (1979), Public Utility Economics, Macmillan, London.
2. Indian Council of Social Sciences Research (ICSSR) (1976), Economics of Infrastructure, Vol.VI, New Delhi.
3. National Council of Applied Economics Research (NCAER) (1996), Indian Infrastructure Report: Policy Implications for Growth and Welfare, NCAER, New Delhi.
4. Parikh, K.S.(Ed.) (1999), India Development Report – 1999-2000, Oxford, New Delhi.
5. Turvey, R. (Ed.) (1968), Public Enterprises, Penguin, Harmondsworth.
6. Misra & Puri “Indian Economy”- Himalaya Publishing house 27<sup>th</sup> Revised Edition- 2009.

M.A., ECONOMICS  
SEMESTER -IV  
*PAPER V (A): ECONOMETRICS*

**MODULE 1 :**

General Features of a Model, Characteristics of a Good Model, Model and Structure Types of Equations. Exogenous-Endogenous Variables, Econometrics and Econometric Models, Steps in an Econometric Study, Specification of Econometric Models. An Example.

**MODULE 2 :**

Simple and general linear regression model- Assumptions, Estimation (through OLS approach) and properties of estimators; Concepts and derivation of R<sup>2</sup> and adjusted R<sup>2</sup>; Analysis of variance approach and its application in regression analysis.

**MODULE 3 :**

Extension of three variable Model partial and multiple correlation co-efficients- Multiple regression analysis. General Linear Model-Assumptions-OLS estimates – Properties.x

**MODULE 4 : PROBLEMS IN REGRESSION ANALYSIS**

Nature, test, consequences and remedial steps of problems of heteroscedasticity; Multicollinearity and auto-correlation; Problems of specification error; Errors of measurement.

**MODULE 5 : REGRESSION WITH QUALITATIVE INDEPENDENT VARIABLES**

Dummy variable technique – Testing structural stability of regression models comparing to regressions, interaction effects, seasonal analysis, piecewise linear regression, use of dummy variables, regression with dummy dependent variables;– Applications.

**READING LIST:**

1. G.M.K.Madnani, - Introduction to Econometrics
2. Klein LR, Text Book of Econometrics.
3. J.Johnston, Econometric Methods.
4. Gujarati, D.N.(1995), Basic Econometrics
5. Kennedy P (1998), A Guide to Econometrics
6. Koutsoyiannis A (1977), Theory of Econometrics
7. Krishna K.L.(Ed.) (1977), Econometric Applications in India.
8. Maddala, G.S.(Ed) (1993), Econometrics Methods and Application.
9. S.P.Singh, Anil K.Parashar, H.P.Singh, - Econometrics & Mathematical Economics.
10. Ramanathan, Introductory Econometrics with Applications, 5<sup>th</sup> Edition, 2002.

M.A., ECONOMICS  
SEMESTER -IV  
***PAPER V (B): REGIONAL ECONOMICS & AREA PLANNING***

**MODULE I: INTRODUCTION**

What is Regional Economics- Regional Economic Problems- Perspectives on Economic Growth and Development.

**MODULE II: LOCATION THEORY AND ECONOMIC ACTIVITY**

Models and Problems of Regional Economic Growth

**MODULE III: LOCATION DECISIONS**

Levels of Analysis and Location Units- Objectives and Procedures for Location Factors – Location Factors: Local inputs outputs; Classification of Location Factors; The relative importance of location choice.

**MODULE IV: LAND USE**

What is Land- Competition is for the use of Land- Urban Land Use Patterns; Scale and Agglomeration Economics and land use; Multiple access and location in cities; “Neighborhood Effects” and land use constraints.

**MODULE V: REGIONAL DEVELOPMENT IN INDIA**

Components of regional planning – Magnitude of Regional imbalances- Regional Planning Policy in India and Andhra Pradesh - Lack of genuine Regional Planning.

Reading List:

1. Harry W. Richardson ‘Regional Economics’ Praeger, New York, 1969.
2. Edgar M. Hoover, ‘An Introduction to Regional Economics’- Alfred A. Knopf, New York, 1975
3. Harry W. Richardson ‘Urban Economics, Beltimore, Penguin, 1971.
4. Edwin S. Mills ‘Urban Economics’ Glenview, Ill. Scott, Fores man, 1972

M.A., ECONOMICS  
SEMESTER -IV  
***PAPER V (C): HUMAN RESOURCE MANAGEMENT***

**MODULE – I : NATURE OF HUMAN RESOURCE MANAGEMENT**

Introduction – Nature of Human Resource Management, Need for Human Resource Management. Approaches, process of Human Resources Management, Human Resource Management and Human Resource Development.

**MODULE – II : HUMAN CAPITAL**

Formation of Human Capital, indicators, problems and issues, Human Capital formation in less developed countries, Human development index.

**MODULE – III : LEADERSHIP DEVELOPMENT**

Appraisals, Grievances Handling, Organization Development, Organization Development, Quality Circles; Management by objectives and organization.

**MODULE – IV : HUMAN RELATIONS**

Nature, objectives, Determinants; Approaches to Human relations, values, concepts of Human relations approach – performance appraisal in Human Resource Management.

**MODULE – V : HUMAN RESOURCES MANAGEMENT**

Recruitment and sources, Methods; Selection procedure; absenteeism, labour turnover, employees training, rewards and incentives – Determinants and types and motivation.

**READING LIST:**

1. William B. Werther : Human Resources and Personnel Management, Mc.Graw Hill.
2. Dwivedi R.S. : Human Relations and Organizational Behaviour – Global perspective, Mac. Millan India.
3. Michael, V.P : Human Resources Management and Human Relations, Himalaya Relations, Himalaya Publishing House.
4. Subba Rao P. : Essentials of Human Resources Management and Industrial Relations, Himalaya Publishing House.
5. Rao T.V. Et.al : Alternative approaches and strategy of human resources development.
6. Bhagolowal T.N. : Personnel Management and Industrial Relations, Sahitya Bhavan.
7. A.M. : Personnel and Human Resources Management, Himalaya Publication.
8. Mamoria C.B. : Personnel Management, Himalaya Publishing House.

M.A., ECONOMICS  
SEMESTER -IV  
**PAPER V (D): FINANCIAL MARKETS AND ANALYSIS**

**Module 1**

Financial Markets and their importance - Structure of Money and Capital Markets - Investment Options - Bonds, Equities, Debt, Futures, Derivatives.

**Module 2**

Concepts of Economic Vs Accounting Profit - Calculation of Financial Ratios from the Balance Sheets and Profit and Loss Accounts - Liquidity, Profitability, Leverage and Activity Ratios.

**Module 3**

Stock Market - Structure -Stock market related ratios-(Market capitalization, Nominal book and Market values, Earnings per share, Dividend per share, Earning yield, Dividend yield, Price to earning ratio Etc.,) Factors Influencing Share Prices - Fundamental and Technical analysis- Important Theories - Market Efficiency, Random Walk, Capital Asset Pricing, Trend Walk, Dow and Elliot's Wave Theories.

**Module 4**

Portfolio Management — Meaning and Importance, Meaning and Types of Risk, Risk Management, Risk Return Analysis, Markowitz Model of Portfolio Theory - Important Principles of Portfolio Management.

**Module 5**

Project appraisal - Methods of Evaluation - Net Present Value Method, Internal Rate of Return Method, Profitability Index, Pay Back Period.

**REFERENCES**

1. Financial Management - M Y Khan & P K Jain, Tata Mcgraw- Hill
2. Financial Management - R K Shanna & Sashi K Gupta, Kalyani Publisher
3. Financial Management - I M Pandey, Vikas Publisher
4. Financial Management -- Principles & Practice, S N Maheswari. S Chand & Co.
5. Financial Markets - V A. Avadhani, Himalaya
6. Financial Markets & Institutions -- L M Bhoie, Tata Mcgraw- Hill
7. Indian Financial System -- H R Machi Raju, Vikas Publisher
8. Investment & Security Markets in India -- V A Avadhani, Himalaya
9. Investment Analysis - S Bhalla, S.Chand & Co.
10. Investment Management -- V A Avadhani. Himalaya
11. Key Management Ratios -- Ciaran. Waish, Mac Millan
12. Security Analysis & Portfolio Management - Fisher & Jordan. Prentice Hall
13. Security Analysis & Portfolio Management -- Prasanna Chandra Tata Mcgraw- Hill
14. The working of Stock Exchanges in India - H R Machi Raju, New Age International Publishers

M.A., ECONOMICS  
SEMESTER -IV  
**PAPER V (E): AGRI-BUSINESS MANAGEMNT**

**Module 1: Introduction**

Agriculture as a business. Characteristics of Agribusiness, Differences between farm and non farm business management, Role of management at various levels right from crop planning to disposal of the product. Principles of management and their applications in Agribusiness

**Module 2 Feasibility Analysis**

Project description. Preparation of business plan. Capital requirements and costs, Operating requirements and costs, appraisal and evaluation of projects with reference to agro industry

**Module 3 Production Management**

Production planning, organization and motivation , production centers; Marketing management -Preparation of market plan , The marketing programme. Marketing organization. Motivating and controlling marketing efforts.

**Module 4 Financial Management**

The Accounting system. Basic functional statements; Measures of profitability. Social and Private profitability- The Policy Analysis Matrix, The measurement of shadow prices in the Policy Analysis matrix, shadow price of land, labour and fixed assets; Financial planning and organization.

**Module 5 Operational Efficiency**

Management techniques for effective control, perform and budgeting, Some pre-requisites for effective management, planning and evaluation.

**BOOKS RECOMMENDED:**

- |                              |   |
|------------------------------|---|
| Cramer G-L. & Jensen CW      | : Agricultural Economics and Agri Business, John Wiley & Sons, New York, 1979   |
| Omri Rawling,                | : Introduction to Agribusiness, PHI, New Jersey   |
| V.K.Srivasta,                | : Project Planning, Functioning, Implementation and Evaluation", Center for Management in Agriculture, IIM , Ahmedabad, 1983. |
| FAO                          | : Economic Analysis of agricultural policies" Harvard Institute for International Development", FAO, 1995.                    |
| Harsh SB, Connor IJ & Schwab | : Meaning the Farm Business", PHI, New Jersey, 1981.  |
| Singh, I.J                   | : Elements of Farm Management Economics, Affiliated East-West Press, Pvt.Ltd, 1977.   |