

**SYLLABUS FOR UNIVERSITY TEACHING DEPARTMENT AND AFFILIATED
COLLEGES IN P.G. CLASSES**

M.A. in Economics : Semester Examination 2015-16

At post graduate level, candidates are required to study 15 papers in Ist , IInd and IIIrd semester (5 papers in each semester) and 04 papers in IVth semester examination.. This be treated as the nineteen papers of the course structure. So there shall be 19 papers in the post graduate examination in Economics. Viva -voce examination be treated as a compulsory paper for M.A. IVth semester examination. Each paper shall carry 100 marks out of which 80 marks will be for theory paper and 20 marks for internal assessment. There shall be 2000 marks in M.A. Candidates shall have secure 36 percent marks in aggregate of all papers in order to pass the M.A. Examination. Examination and result shall be treated according to rules and regulations of ordinance no. 13.

M.A. SEMESTER-I and SEMESTER-II

PAPER	SEMESTER-I	Marks		SEMESTER-II	Marks	
		Theory	Internal Assessment		Theory	Internal Assessment
PAPER-I	Micro Economics-I (Theory & Principles)	80	20	Micro Economics-II (Analysis)	80	20
PAPER-II	Macro Economics-I (Theory & Principles)	80	20	Macro Economics-II (Analysis)	80	20
PAPER-III	Quantitative Methods	80	20	Research Methods & Computer Application	80	20
PAPER-IV	Indian Economy	80	20	Indian Economic Policy	80	20
PAPER-V	Industrial Economics	80	20	Labour Economics	80	20

M.A. SEMESTER-III and SEMESTER-IV

PAPER	SEMESTER-III	Marks		SEMESTER-IV	Marks	
		Theory	Internal Assessment		Theory	Internal Assessment
PAPER-I	Economics of Growth	80	20	Economics of Development & Planning	80	20
PAPER-II	International Trade	80	20	International Economics	80	20
PAPER-III	Public Finance	80	20	Public Economics	80	20
PAPER-IV	Environmental Economics	80	20	Economics of Social Sector	80	20
PAPER-V	Demography	80	20	Viva-Voce	100	--

GRAND TOTAL (A+B) 1000+1000=2000

SEMESTER - I
MICRO ECONOMICS-I
(THEORY AND PRINCIPLES)
PAPER-I

Unit-I Introduction & Demand Analysis economics model characteristics of equilibrium and Disequilibrium system theory of demand analysis – Cardinal and ordinal approaches. Elasticity of Demand (Price Income & Cross) Empirical estimation of Elasticity, Elasticity of supply.

Unit- II Indifference curve – Income & substitution effect – Hicks and Slutsky theorem revealed preference theory, Hicks's Revision of Demand, Hicksian Consumers surplus, recent development in the theory of demand – (a) The pragmatic approach to demand analysis (b) linear expenditure system.

Unit – III Theory of Production – Production function, the short period & long period production function, the law of variable proportion, Returns to a factor and returns to scale. Technical programs and the production function, choice of optimal combination of factors of production, choice of optimal expansion path, cob Douglas production function.

Unit- IV Theory of cost and Revenue analysis, short-run costs Long term costs, Marginal analysis as an approach to price and output determination, equilibrium of firm in perfect competition. Monopoly short run and long run equilibriums, price discrimination, welfare aspect, monopoly control and regulation.

Unit – V Monopolistic Competition – Chamberlin's approaches to equilibrium of the firms under groups with product differentiation and selling cost, excess capacity, critique oligopoly – non- collusive- chamberlin's oligopoly model, The kinked demand model. The collusive oligopoly – Cartel, price leadership the basic point price system models.

Text Books

1. Jhingan M. L. (2014), Advanced Economic Theory, Vrinda Publication, New Delhi
2. Jhingan M. L. (2014), Micro Economics , Vrinda Publication, New Delhi
3. Agarwal , A (2014), Micro Economic analysis , Sahitya Bhawan Publication, New Delhi

Reference Books

1. Kraps, David M. (1990) a course in micro economics theory Princeton university press, Princeton.
2. Kout sayiannis; A (1979) modern Microeconomics (2nd Edition), macmillan press,London.
- 3.Layard, PRG and P.W. Watters (1978), Micro economic theory, McGraw Hill, New York.
4. San A (1999) Micro economics theory and Applications, Oxford University Press, New Delhi;
5. Stigler, G. (1996) theory of Price (4th edition), Princeton Hall of India, New Delhi.
6. Varian, H (2000) Micro economics Analysis, W.W. Norton, New York.
7. Baumol W.J., (1982) Economic theory and operations Analysis, Princeton Hall of India, New Delhi.
- 8.Handersan, J.M. and R.E. Quandy (1980) Micro economics theory - A Mathematical approach, Mc Graw Hill New Delhi.
- 9.Hirshleifer, J. And A Glazer (1997), Price theory and Application, Prentise Hall of India, New Delhi.

SEMESTER – I
MACRO ECONOMIC ANALYSIS
Paper – II

- Unit – I National Income and Accounts – Concept of National Income and National Product, Problems of Measurement, Circular flow of Income – Two, Three and Four Sector Economy, Different forms of National Income Accounting – Social Accounting, Input Output Accounting, Flow of Funds, Balance of Payment – Accounting.
- Unit – II Classical Theory of Employment, Keynesian & Pigou Theory of Employment, Comparison of Classical and Keynesian Models, National Income Determination of Keynesian Model.
- Unit- III Consumption Function- Keynesian Psychological Law of Consumption, Short Run and Long Run Consumption Function, Empirical Evidence on Consumption Function – Absolute Income Hypothesis, Duesenberry's Relative Hypothesis, Life Cycle and Permanent Income Hypothesis.
- Unit — IV Investment Function, Rate of Interest for Investment, Marginal Efficiency of Capital and Investment. Saving and Investment Equality, Multiplier, Accelerator, Super-Multiplier. Supply of Money, High Powered Money, Measurement of Money supply, Control of Money Supply.
- Unit — V Demand for Money –Fisher and Cash Balance(Cambridge) Approach, Fundamental Equation of Keynes, Post Keynesian Approach to Demand for Money- Patinkin, Bamuls, James Tobin, Friedman, Gurley & Shaw's Approaches.

Text books

1. Sethi, T.T. (2008) Macro Economics, Laxminarayan Agrawal, Agra.
2. Jhingan, M.L. (2010) Monetary Economics, Vrinda Publications Pvt. Ltd.
3. Jhingan, M.L. (2000) Macro Economic theory, Vrinda Publications Pvt. Ltd.
4. Shinghai G.C & Mishra J.P. (2013) Macro economic Analysis, Sahitya Bhawan Publication Agra.

Reference Books

1. Markley, G. (1978), Macroeconomics; Theory and Policy, Macmillan, New York.
2. Blackhouse, R. and A. Salansi (Eds.) (2000), Macroeconomics and the Real World (2vols) Exford University Press, London.
3. Branson, W.A. (1989), Macroeconomics Theory and Policy, (3rd Edition), Harper and Row, New York.
4. Aornbusch, R and F. Stanley (1997), macroeconomics, McGraw Hill, inc., New York.
5. Hall, R.E. and J.B. Taylor (1986), Macroeconomics, W.W. Norton, New York.
6. Heijdra, B.J. and V.P. Frederick (2001), Foundations of Modern Macroeconomics, Oxford University Press, New Delhi.
7. Jha, R. (1991), Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd. New Delhi.
8. Romer, DL. (1996), Advanced macroeconomics, McGraw Hill Company Ltd., New York.
9. Scarte, B.L. (1997), Cycles, Growth and inflation, McGraw Hill, New York.

SEMESTER- I
 QUANTITATIVE METHODS
 Paper – III

Unit – I-Skewness – Symmetrical and asymmetrical distribution, Measurement of skewness – Karl Pearson’s coefficient of skewness, Simple correlation- Measurement of correlation – Karl Pearson’s coefficient of correlation and Spearman’s rank correlation, Probable error and standard error in correlation, Partial and multiple coefficient of correlation.

Unit – II Regression analysis – regression and correlation, regression lines and regression coefficient, regression equations. Multiple regression analysis (up to three variables). Standard error of the estimates, Interpolation and extrapolation-method of fitting a parabolic curve, Newton’s advancing difference method, Direct binomial expansion method and Lagrange’s method.

Unit – III Association of Attributes – Meaning and types of association, Consistency of data, methods of determining association – method of comparison of proportion, coefficient of association using Yule’s method, Probability – meaning and definition, Permutation and combination, Types of events, measurement of Probability – addition and multiplication theorem, conditional probability.

Unit – IV Index Number- Fisher’s Ideal Index number Reversibility Test – Time Reversibility & Factor Reversibility, Chain Index No.

Unit – V Time series Analysis – short period oscillation, Trend, Semi-average method, Moving average method, Graphical presentation.

Reference

1. Shukla, S.M. and S.P. Sahay – Quantitative method’s Sahitya Bhawan Publications, Agra.
2. Agrawal, D.R., ‘Quantitative methods’. Vrinda Publications (P) Ltd.
3. Sancheti, D.C., ‘Quantitative methods’ Sultanchand and Sons, New Delhi.
4. Gupta, S.P. and others, “Quantitative Techniques.” Sultanchand and Sons, New Delhi.

SEMESTER- I
 INDIAN ECONOMY
 Paper –IV

Unit – I - GDP and National Income of India – Components and Structure of GDP and National Income, Role of Primary, Secondary & Tertiary Sectors in GDP of India, National Income, and Per Capita Income, Growth Rates of GDP and Per Capita Income. Saving, Investment and Capital Formation Rates in India.

Unit – II - Demographic Features of Indian Population – Size and Growth Rate of Population in India, Sex, Age-Composition and Density of Population, Rural-Urban Migration, Urbanization and Civic Amenities, Occupational Structure, The Quality of Population, National Population Policy. Demographic Features of Chhattisgarh State.

Unit – III - Agricultural Development in Indian Economy – Agricultural Growth and Productivity, Causes of Low Productivity and Measures to Increase it.

Institutional Structure- Land Reforms in India, Technological Changes in Agriculture, the Green Revolution, Second Phases of Green Revolution, National Agricultural Policy and Food Security in India.

Unit – IV- Industrial Development in India Industrial Policies of 1956 and 1991, Public Sector Enterprises and their Performance, Privatization and Disinvestment, Small Scale Sector and Minor Medium Enterprises, Problem of Sick Units, and Knowledge Economy.

Unit – V - Balanced Regional Development Indicators of Regional Imbalance, Causes of Economic Backwardness and Regional Imbalances.

Text Book

1. Basu kaushik(2011) The New Oxford Companion to Economic in India, Oxford University Press, India.
2. Basu Kaushik & Maertens Annemie, The Concise Oxford Companion to Economics in India, Oxford University Press, India.
3. Asian Development Bank, Energy infrastructure : Priorities. Constraints an Strategies for India, , Oxford University Press, India.
4. Datt,Gaurav and Ashwani Mahajan, Indian Economy, 65th Revised Edition and S. Chand and Company New Delhi.
- 5^ए दत्त, गौरव एवं अश्वनी महाजन (2014) भारतीय अर्थव्यवस्था, एस. चन्द एण्ड कम्पनी लिमिटेड नई दिल्ली
- 6- मिश्र, एस. के. एवं वी. के. पुरी (2014) भारतीय अर्थव्यवस्था, हिमालय पब्लिशिंग हाऊस, नई दिल्ली
7. Mishra, S. K. & V. K. Puri (2014) Indian Economy, 32nd Edition, Himalaya Publication House New Delhi.

Reference Books

1. Ahulwalia, I. J. and I. M. E. Litle (Eds.) 1999): India's Economic Reforms and Development (Essay honor of Manohar Singh), Oxford University Press, New Delhi,.
2. Bardhan, P. K. (9th Edition) (1998): The Political Economy of Development India, Oxford University Press, New Delhi.
3. Bawa, R.S. and Raikhy (Ed.) (1997): Structural Change in Indian Economy, Guru Nanak Dev University Press. Amritsar (PB).
4. Brahmananda, P. R. and V. R. Panchmukhi (9th Eds.) (2001): Development Experience in the Indian Economy : Interstate Perspectives, Bookwell, Delhi.
5. Chakravarty, S. (1987): Development Planning: The Indian Experience, Oxford University Press, New Delhi.
6. Dantwala, M. L. (1996): Dilemmas of Growth: the Indian Experience, Sage Publication, New Delhi.

SEMESTER- I INDUSTRIAL ECONOMICS Paper –V

Unit – I Concept and Organization of a Firm-Ownership, Control and Objectives of the Firm. Product Differentiation, Entry Conditions, Economics of Scale. Market Structure and Profitability, Market Structure and Innovation, Theories of Industrial location, Alfred Weber and Sergeant Florence Theory. Factors Affecting Industrial Localization.

Unit - – II Industrial Productivity, Efficiency and Capacity. Industrial Policy in India, Role of Public and Private Sectors, Recent Trends in Industrial Growth. Liberalization

and Privatization, Regional Industrial Growth in India.

- Unit – III Owned, External and Other Components of Funds, Nature, Volume and Types of Institutional Finance – IDBI, IFCI, SFCs, SIDC, Commercial Banks etc. Financial Statement- Balance-sheet. Profit and Loss Account, Assessment of Financial Soundness,
- Unit – IV Structure of Industrial Labour, Employment Dimensions of Indian Industry. Industrial Legislation, Industrial Relations, Exit policy and Social Security.
- Unit – V Iron and Steel, Cotton Textiles, Jute, Sugar. Development of Small-Scale and Cottage Industries in India.

Text books

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. Chernilam, F (1994) : Industrial Economics : Indian Perspective (3rd Edition), Himalaya Publishing House, Mumbai.
4. Desai, B. (1999), Industrial Economic in India (3rd Edition), Himalaya Publishing house Mumbai.

Reference

1. Divine, P.J. and R.M. Jones et. At. (1976) : An Introduction to industrial economics, George Allen and Unwin Ltd., London.
2. Government of India, Economic Survey (Annual)
3. Hay, D. and D.J. Morries (1979), Industrial Economics : Theory and Evidence, Oxford University Press, New Delhi.
4. Kuchhal, S.C. (1980) :Industrial Economy of India (th Edition), Chaitanya Publishing House, Allahabad.
5. Reserve Bank of India Report on Currency and Finance (Annual).
6. Singh, A. and A. Sadhu (1988) : Industrial Economics, Himalaya Publishing House

SEMESTER- II MICRO ECONOMICS-II (ANALYSIS) Paper –I

Unit – I-Critical evaluation of marginal analysis, Baumel's sales revenue maximization model, Williamson's model of managerial discretion, Morris model of managerial enterprises. Full cost pricing rule, Bains limit pricing theory and its recent developments, including Behavioural model of the firm.

Unit – II NEO-Classical Approach of Distribution and General Equilibrium Marginal productivity theory, product Exhaustion theorem, Elasticity of Technical substitution, technical progress and factor shares, Theory of distribution in imperfect product and factor markets, Determinants of rent, wages, interest and profit. (Only modern Theory)

Unit – III Problems in measuring welfare - classical welfare economics – Pigovian Welfare economics, Pareto optimal conditions value-judgment. Social welfare function: compensation principle Kaldor, Hicks. Inability to obtain optimum welfare-imperfections market, Little theory.

Unit – IV Partial and General Equilibrium, Walrasian Excess Demand and input-output approaches to general equilibrium (static and Dynamical both)

Unit – V Linear programming and Game Theory (Geographical and simplex methods)

Text Books

1. Jhingan M. L. (2014), Advanced Economic Theory, Vrinda Publication, New Delhi
2. Jhingan M. L. (2014), Micro Economics , Vrinda Publication, New Delhi
3. Agarwal , A (2014), Micro Economic analysis , Sahitya Bhawan Publication, New Delhi

Reference Books

1. Mansfield, E. (1997), Microeconomics (9th Edition), W.W. Norton and Company, New York.
2. Ray, N.C. (1975), An Introduction to Microeconomics, Macmillan Company of India Ltd., Delhi.
3. Ryan, W.J.L. (1962), Price Theory, Macmillan and Co. Limited, London.
4. Samuelson, P.A. and W.D. Nordhaus (1998), Economics, Tata McGraw Hill, New Delhi.
5. Stonier, A.W. and D.C. Hague (1972), A Textbook of Economic Theory, ELBS and Longman Group, London.

SEMESTER- II MACRO ECONOMICS Paper –II

- Unit – I Theory of Inflation – Classical, Keynesian and Monetarist Approaches to Inflation, Semi and Full inflation, Theory of Structural Inflation, Stagflation Control of Inflation, Philips Curve Analysis – Short Run and Long Run Philip's Curve. The Natural Rate of Unemployment Hypothesis, Tobin's Modified Philip Curve,
- Unit – II Business Cycles, Main Features of Business Cycles, Types of Business Cycle, Theories of Business Cycles Hawtrel's Monetary Theory of Trade Cycle, Schumpeter's, Keynes, Hicks, Samuelson's, Friedman, Kaldor Model of Trade Cycle.
- Unit – III Monetary Policy-Meaning of Monetary Policy, Instrument of Monetary Policy, Objective of Monetary policy, Limitations of Monetary Policy, Monetary Policy and Economic Development, New Classical Macro Economics, International Monetary System, International Liquidity Problem, SDR and New International Economic Order.
- Unit – IV Fiscal Policy – Meaning of Fiscal Policy, Instruments of Fiscal Policy, Objectives of Fiscal Policy, Fiscal Policy and Economic Growth, Effectiveness of Fiscal Policy, Monetarism Vs Fiscalism – The Debate, Similarities Between Monetary Policies and Fiscal Policies.
- Unit – V IS-LM Model, The Product Market Equilibrium, The Money Market Equilibrium, Equilibrium of Product and Money Market, Merits and Demerits of IS-LM Curve, Extension of IS-LM Models With Flexible Prices and Labour Market.

Text books

1. Sethi, T.T. (2009-10) Macro economics, Laxminarayan Agrawal, Agra.
2. Jhingan, M.L. (2008) Monetary Economics, Vrinda Publications Pvt. Ltd.
3. Jhingan, M.L. (2010) Macroeconomic theory, Vrinda Publications Pvt. Ltd.
4. Shinghai G.C. & Mishra J.P. (2013) Macro Economic Analysis, Sahitya Bhawan Publication Agra.

Reference

1. Blackhouse, R. and A. Salansi (Eds.) (2000), Macroeconomics and the Real World (2 vols) Exford University Press, London.
2. Branson, W.A. (1989), Macroeconomics Theory and Policy, (3rd Edition), Harper and Row, New York.
3. Aornbusch, R and F. Stanley (1997), Macroeconomics, McGraw Hill, inc., New York
4. Hall, R.E. and J.B. Taylor (1986), Macroeconomics, W.W>Norton, New York.
5. Heijdra, B.J. and V.P. Frederick (2001), Foundations of Modern Macroeconomics, Oxford University Press, New Delhi.
6. Jha, R. (1991), Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd. New Delhi.
7. Romer, D.L. (1996), Advanced macroeconomics, McGraw Hill Company Ltd., New York.
8. Scarte, B.L. (1997), Cycles, Growth and inflation, McGraw Hill, New York.
9. Markeley, G. (1978), Macroeconomics Theory and Policy, macmillan, New York.

SEMESTER- II

RESEARCH METHODOLOGY AND COMPUTER APPLICATION

Paper –III

Unit – I-Research methodology and research methods, research : meaning, Types and motivation of research, main stages of statistical research, data primary and secondary data, methods of collecting primary data, secondary data : different sources, precautions while constructing questionnaire, editing primary and secondary data.

Unit – II Sampling and sample designs : census and sample methods, methods of sampling random sampling methods and Non- random sampling methods, size of sample, merits and limitations of sampling, sampling and Non- sampling errors, how to judge the reliability of samples.

Unit – III Classification and tabulation of data : meaning and objectives of classification, types of classification, tabulation of data, parts of a table, types of tables.

Unit – IV Hypothesis, meaning and types of hypothesis, procedure of test of significance, students 't' test, chi-square test and F ratio test, practical problems related to significance of the difference between two small samples and test of significance of the difference between parameter and statistic.

Unit – IV Computer : What is 'Computer',? different parts of a computer : Hardware and software, types of computer, main characteristics of a computer, role of computer in economic research.

Reference

1. Kothari, C.R. 'Research methodology'.

2. Sharma, Dr. Ramnath, 'Methods and Techniques of Social Survey and Research, A Rajhans Publication.
3. Bajpai, Dr. S.R., 'Methods of Social Survey and Research' Kitab Ghar, Kanpur-3
- 4^प मुखर्जी, रविन्द्रनाथ, सामाजिक षोध एवं सांख्यिकी, विवेक प्रकाषन, जवाहर नगर, दिल्ली – 7
- 5^प षुक्ला एवं सहाय, सांख्यिकीय, साहित्य भवन पब्लिकेशंस, आगरा.

SEMESTER- II
INDIAN ECONOMIC POLICY
Paper – IV

- Unit – I Planning in India – Objectives and Strategies of Planning, LPG (Liberalization, Privatization & Globalization Model of Development, Critical Assessment of Eleventh Five Year Plan, Developing Grass-root Organization for Development: Panchayats, NGO'S.
- Unit – II Problem of Poverty and Inequality – The Concept of Poverty, Measurement & Estimation of Poverty in India, International Comparison of Poverty and Inequality of Incomes, Poverty Eradication Programmes, Causes of Failure to Remove Poverty.
Problem of Unemployment in India- Nature of Unemployment, Various Schemes to Reduce the Unemployment, National Employment Guarantee Programme.
- Unit – III Public Finance in Indian Economy – Fiscal Federation, Central-State Financial Relationship, Critical Analysis of the Thirteenth Report of Finance Commission, Centre-State Conflict on Finances, Kelkar Task-Force on Reforms, Financial Sector Reforms in India.
- Unit – IV External Sector Behavior of Indian Economy- Structure and Direction of Foreign Trade, Balance of Payments of India, Issues in Export Import Policies, External value of the Rupee and Foreign Exchange Reserves, FEMA (Foreign Exchange Management Act), Trade Reforms in India.
- Unit – V WTO and its Impact on the Different Sector of Economy, Economic Reforms – Rational of Internal and External Reforms, Budget (Country and states), How to Prepare a Budget of Central and State Govt.

Text Book

1. Basu kaushik(2011) The New Oxford Companion to Economic in India, Oxford University Press, India.
2. Basu Kaushik & Maertens Annemie, The Concise Oxford Companion to Economics in India, Oxford University Press, India.
3. Asian Development Bank, Energy infrastructure : Priorities. Constraints an Strategies for India, , Oxford University Press, India.
4. Datt,Gaurav and Ashwani Mahajan, Indian Economy, 65th Revised Edition and S. Chand and Company New Delhi.
5. दत्त, गौरव एवं अश्वनी महाजन (2014) भारतीय अर्थव्यवस्था, एस. चन्द एण्ड कम्पनी लिमिटेड नई दिल्ली
6. मिश्र, एस. के. एवं वी. के. पुरी (2014) भारतीय अर्थव्यवस्था, हिमालय पब्लिशिंग हाऊस, नई दिल्ली
7. Mishra, S. K. & V. K. Puri (2014) Indian Economy, 32nd Edition, Himalaya Publication House New Delhi.

Reference

1. Ahulwalia, I. J. and I. M. E. Litle (Eds.) 1999): India's Economic Reforms and Development (Essay honor of Manohar Singh), Oxford University Press, New Delhi,.
2. Bardhan, P. K. (9th Edition) (1998): The Political Economy of Development India, Oxford University Press, New Delhi.
3. Bawa, R.S. and Raikhy (Ed.) (1997): Structural Change in Indian Economy, Guru Nanak Dev University Press. Amritsar (PB).
4. Brahmananda, P. R. and V. R. Panchmukhi (9th Eds.) (2001): Development Experience in the Indian Economy : Interstate Perspectives, Bookwell, Delhi.
5. Chakravarty, S. (1987): Development Planning: The Indian Experience, Oxford University Press, New Delhi.
6. Dantwala, M. L. (1996): Dilemmas of Growth: the Indian Experience, Sage Publication, New Delhi.

SEMESTER- II
LABOUR ECONOMICS
Paper – V

- Unit – I Labour Market – Nature and Characteristics of Labour Markets in India; Definition, Nature ,Scope& Importance of Labour Economics, The Genesis & Nature of Labour Economics, Labour Problems in a Developing Economy, Labour & Five Years plans in India. Labour policy in India.
- .Unit – II Manpower planning, Manpower Requirements, selection &Recruitment ,Employee training and Managerial Development ,Workers Education, Wage Determination ,Classical, new classical and bargaining theories of wage determination; concepts of minimum wage.
- Unit – III Productivity and Wage Relationship.; National Wage Policy,. Industrial Relations, Human Relation, Theories of Labour Movement; Labour Unions in India, Rise and Growth of Labour Union, Achievements of Labour Unions; Current Trends in Collective Bargaining,
- Unit – IV Labour Legislation in Indian Labour, Laws and Practices in Relation to International Labour Standards. State and Labour ,State and Social Security of Labour, Concept of Social Security and its Evolution.
- Unit – V Labour Welfare in India, Standard of Living and Efficiency of Workers, Child Labour, Female Labour, Concept of Industrial Peace ,Settlement of Industrial Dispute, Second National Labour Commission.

Text books

1. Goyal, Sunil & Goyal, M.L.(2008):Labour Economics, R.B.S.A. Publications, Jaipur.
2. Saxsena, R.C.(2010): Labour Problems & Social Welfare, K. Nath and Company Publication, Meret.
3. Singh, Dilip Kumar,(2008): Workers Participationin in Management and Industrial Relation, Rawat Publication, Jaipur & Delhi.
4. Singh, Usha & Singh, H.P.(2011):Child Labour in India :Problem and Solutions ,Classical Publication ,New Delhi.

Reference Books

1. Hajela P.D. (1998), Labour Restructuring in India : A Critique of the New Economic Policies, Commonwealth Publishers, New Delhi.
2. Jhabvala, R. and R.K. Subrahmanya (Eds.) (2000). The Unorganised Sector : Work Security and Social Protection. Sage Publication, New Delhi.
3. Lester, R.A. (1964). Economics of Labour. (2nd Edition), Macmilan, New York.
4. Mc Connell, C.R. and S.L. Brue (1986). Contemporary Labour Economics, Mc Graw-Hill New York.

5. 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.
6. Rosenberh M.R. (1998), Labour Markets I Low Income Countries in Chenery, H.B. and T.N. Srinivasan, (Eds.) The Handbook of Development Economics, North-Holland, New York.
7. Venkata Ratnam, C.S. (2001), Globalization and Labour- Management Relations Dynamics of change, Sage publications/ Response Books, New Delhi.

**SEMESTER- III
ECONOMICS OF GROWTH
Paper – I**

- Unit – I Economic Growth: Economic Growth and Development, Measurement of Economic Growth, Economic Growth Model Vicious Circle of poverty, Physical Quality of Life Index, Human Development Index, UNDP Human Development Report 2013, Inclusive Growth.
- Unit – II The Concept of Capital Output Ratio, Input-Output Analysis, Project Evaluation and Cost – Benefit Analysis, Methods of Project Evaluation.
- Unit – III Theories of Development : The Marxian Model. The Schumpeterial Model, Keynesian Theory of Development. Mahalanobis Four Sector Model.
- Unit – IV Theories of Development Harrod-Domar Model : Arther Lewis Model Unlimited Supply of Labour, Ranis & Fie Model, Kaldor Model of Distribution,
- Unit – V John Robinson model, Meads New- Classical Model, Hicks and Hayek Modal, Solow model of Long- Run Growth.

Text Books

1. Jhingan, M.L. (2008) 31ST edition, The economics of development and planning, vrinda publication pvt. Ltd.
2. Shinghai G.C. & Mishra J.P. (2013) Macro economic Analysis, Sahitya bhawan publication Agra.
3. Mishra, J.P. (2012) Economics of Growth and development Sahitya bhawan publication Agra.

Reference Books

1. Todaro, M.P. (1996) (6th edition) Economic Development, Longman London.
2. Soow, R.M. (2000), Growth Theory An Exposition, Oxford University Press, Oxford.
3. United Nations, Human Development Department Report 2005.
4. Behrman, S. and T.N. Shrinivasan (1995), Hand book of Development Economics, Vol 1, 2, & 3, Elsevier; Amsterdam.
5. Ghatak, s (1986), An introduction to development Economics, Allen & Elnein, London.
6. Sen, A.K. (Ed.) 1990 Growth Economics, Penguin, Harmonds worth.
7. Dasgupta, P.A.K. Sen and S. Marglin (1972), Guidelines for project Evaluation, UNIDO, Vienna,
8. Mehrotra, S. And J. Richard (1998), Development with a Human Face, Oxford University Press New Delhi.

**SEMESTER- III
INTERNATIONAL TRADE
Paper – II**

- Unit – I Theory of International Trade – Meaning and Distinguishing Features of Inter- regional and International Trade, International Trade as a Specific State of Inter-regional Trade.
Refinements of the Comparative Cost Theory. Haberler’s Opportunity Cost Theory, Mill’s Theory of Reciprocal Demand.
- Unit – II Heckschar-Ohlin Theory of International Trade, Factor Price Equalization, Theorem of International Trade, Stolper Samuelson and Rybezynski Theorems.
The Terms of Trade – Concepts, Determination of Terms of Trade, Factors Affecting Terms of Trade, Terms of Trade & Economic Development, Its Empirical Relevance and Policy Implications for Less Developed Countries, Terms of Trade & Welfare Implications.
- Unit – III The Theory of Intervention – Tariffs, Quotas, and Non-tariff Barriers, Economic Effects of Tariff and Quotas on National Income, Output, Consumption, Price, Employment, Terms of Trade & Income Distribution, The Stolper – Samuelson Theorem of Tariff on Income Distribution, The Learner’s Paradox.
- Unit – IV Balance of Payments – Meaning and components of BOP, Equilibrium and Disequilibrium in the BoP, Measures to Correct the Adverse BoP, Marshall-Lerner’s Conditions- under Devaluation, Expenditure Reducing and Expenditure Switching Policies & Direct Control.
- Unit – V Foreign Trade Multiplier, Foreign Repercussion or Back-Wash Effect, Foreign Exchange Rate-Spot and Forward Exchanges Rates, Fixed and Flexible Exchange Rates, their Merits and Demerits, Hybrid Exchange Rate, Floating Rate of Exchange, Managed Floating System.

Text Books:

6. Acharyya, Rajat (2013) International Economics, An Introduction to Theory and Policy, Oxford University Press India.
7. Goyal Ashima (2014) International Economics, The oxford Handbook of the Indian Economy in the 21st century: Understanding the Inherent Dynamism, Oxford University Press India.
8. Raychaudhuri, Ajitava & Prabir De, International Trade in Service in India: Implications for growth and Inequality in a Globalizing World, Oxford University Press, India.
9. Nayar, Deepak (2012) Trade and Globalization: Deepak Nayar, Oxford University Press, India.
10. Appleyard, R. Dennis, (2013) International Economics, Tata Mc Graw Hill Publishing Company Limited New Delhi.
11. Vaish, M. C. and Sudama Singh, (2011) International Economics, Oxford and IBH Publishing Co.Pvt.Ltd., New Delhi.

Reference:-

1. Bhagwati, J. (Ed). (1981): International Trade, Selected readings, Cambridge, University Press, Massachusetts.
2. Carbough, R.J. (1999), International Economics, International Thompson Publishing, New York.
3. Chacholiades, M. (1990), International Trade: Theory and Policy, McGraw Hill, Kogakusha, Japan.
4. Dana, D. S. (2000), International Economics: Study Guide and Work Book, (5th Edition), Routledge Publishers, London.
5. Dunn, R. M., and J. H. Mutti (2000), International Economics, Routledge, London.
6. Kenen, P.B. (1994), The International Economy, Cambridge University Press, London.

7. Kindleberger, C. P. (1973), *International Economics and International Economic Policy A Ready*, McGraw Hill International, Singapore.
8. Krugman, P. R. and M. Obstfeld (1994), *International Economics : Theory and Policy*, Glenview, Foresman.

SEMESTER- III
PUBLIC FINANCE
Paper – III

- Unit – I Defination Nature and Evaluation of Public Finance, Principles of Maximum Social Advantages, Taxation – Different Forms, Principles of Taxation, Shifting, Effects and Incidence of Taxation. Impact of Tax Under Laws of Returns and Perfect Competition.
- Unit – II Indian Tax System, Indirect & Direct Tax, Corporate Tax, personal Income Tax, Estate Duty, Central Excise, Custom Duties, Taxes on Land and Agriculture, Value Added Tax, Modvat Service Tax. Taxable Capacity. Tax Reform in India.
- Unit – III Public Expenditure :- Different Forms of Expenditure, Structure and Growth of Public Expenditure in India, Trends in Central Government Expenditure, Economic Effect of Public Expenditure on Production and Distribution. Public Expenditure and Economic Growth. Pure Theory of Public Expenditure or Theory of Social Good's.
- Unit – IV Public Debt – Different Sources of Public Debt, Redemption of Public Debt, Principle of Public Debt Management and payment of Public Debt, Growth of Public Debt in India. Burden of Public Debt.
- Unit – V Budget – Budget Process in India, Objections of Budget, Kinds of Budget – Traditional Budget, Performance Budget, Zero Based Budget, Out-Come Budget, Gender Budget, Budget Theory – Classical Viewpoint. Balance Budget, Modern View Point, Imbalanced Budget.

Text Book

1. Lekhi, R.K.,(2014), *Public Finance*, Kalyani Publication Ludhiana New Delhi
2. S.K., Sing, (2013) *Principals of Public Finance* Sahitya Bhavan Publication, Agra.
3. Pant, K.C., (2012) *Public Finance*
4. Sinha, V.C.,(2013) *Public Finance and Economic*, Sahitya Bhavan Publication.

Reference Books

1. Atkinson, A.B. and J.E. Siglitz (1980), *Lectures on Public Economics*, Tata McGraw Hill, New York.
2. Auerbach, A.J. and M. Feldstern (Eds.), *Handbook of Public Economics*, Vol. 1, North Holland, Amsterdam.
3. Report of Twelfth Finance Commission of India.
4. Government of India (1992), *Reports of the Tax Reforms Committee – Interim and Final* (Chairman : Raja J. Chelliah).
5. Chelliah, Raja J. et. Al (1981)., *Trends and issues in India's Federal Finance*, NIPFP. New Delhi.
6. Peacock, A and G.K. Shaw (1976), *Th Economic Theory of Fiscal Policy*, George Alen and Unwin, London.
7. Sahni, B.S. (Ed.) (1972), *Public Expenditure Analysis: Selected Readings*, Rotherdam University Press.
8. Jha, R. (1998), *Modern Public Economics*, Routledge, London.
9. Musgrave, R.A. and P.B. Musgrave (1976), *Public Finance in Theory and Practice*, Mcgraw Hill, Kogakusha, Tokyo.
10. Cornes, R. and T. Sandler (1986), *The Theory of Externalities, Public Goods and Club Goods*, Cambridge University Press. Cambridge.

11. Economic Survey- 2014-15
12. 14th Finance commission Report-2015
13. Central Govt. and Stat Govt. Budget- 2015

SEMESTER- III ENVIRONMENTAL ECONOMICS

Paper – IV

Unit – 1 Welfare Economics – Definition of welfare Economics. Criterion of Social Welfare- Bentham Criteria, Cardinal Criterion, Pareto Optimality Criteria, Kaldor-Hicks Compensation Criterion, The Bergson criterion, The problem of second best.

Unit – II Social Welfare function, Maximization of social welfare, Maximization in perfect competition, public goods and private goods. Market failure & public goods.

Unit – III Environmental Economics – beneficitation of Environmental Economics, Relation between Environmental Economies and Economics, Environmental Economics and Ecological Economics, Environmental and resources Economics, important-issues in Environmental Economies. Macro economic policy and Environmental.

Unit – IV Theories of Externalities – Economic and Diseconomies, External Cost, Marginal social cost., Marginal Private cost. Pigioun Taxes and Subsidies.

Unit – V Environmental value- use value, option value and non use value, international carbon Tax. Environment and W.T.O.

Reference Books

1. Madhu Raj – Environmental Economics.
2. Steve Baker – Environmental Economics.
3. D.W. Pearce – Environmental Economics.
4. Bauriol, W.J. and W.E. Oates. (1988) : The Theory of Environmental Policy, (2nd Edition), Cambridge University Press, Cambridge.
5. Berman, P. (Ed.) (1995) : Health Sector Reform in Developing Countries : Making health development sustainable, Boston : Harvard Series on Population and international Health.
6. Blaug, M. (1972) : Introduction to Economics of Education J Penguin, London.

SEMESTER- III DEMOGRAPHY

Paper – V

Unit – I Demography – Meaning and Importance, Theories of Population – Theory of Optimum Population and Theory of Demographic Transition. Measures of Population Change and Distribution – Rate of Population Change and Distribution, Measures of Degree of Concentration of Population – Lorenz Curve and Gini Concentration Ratio.

Unit – II Migration – Kinds and Factor Affecting of Migration, Hurdles of Migration, Measurement of Internal Migration, Migration Rates and Ratio. Urbanization- Factors Influencing Urbanization and Effects of Urbanization, Population and Economic Development. Human Resource Development in India.

- Unit – III Mortality – Meaning and Sources of Mortality Data, Causes of High Death Rate in India, Trends in Death Rate in India, Measurement of Mortality Based on Death Statistics, Crude Death, Specific Death Rate, Infant Mortality Rate and Standardized Death Rate, Child Mortality Rate, Maternal Mortality Rate, Life Table – Functions and Construction of Life Table. Problems Related to Death Rates and Life Table.
- Unit – IV Fertility– Meaning, Causes of High Birth Rate in India, Trends in Birth Rate in India, Measurement of Fertility and Reproduction – Crude Birth Rate, General Fertility Rate, Age- Specific Fertility Rate, Total Fertility Rate. Gross Reproduction Rate and Net Reproduction Rate. Problems Related to Fertility and Reproduction Rates.
- Unit – V Women Empowerment - Economic Status, Women in Decision Making, Women and Labour Market; Women Work Participation: Concept and Analysis of Women’s Work Participation, Structure or Wages across Regions and Economic Sector’s, Determinants of wage Differentials, Gender and Education.

Text Books

1. Agrawal, S. N. ‘India’s population Problems, Tata Mc-Graw Hill co. Bombay.
2. Bogue, D. J., ‘Principles of Demography’, Honwiley, New York.
3. Sinha, V. C. and Pushpa Sinha, ‘Principles of Demography’, Mayur Paper backs.
4. Mishra, Jai Prakash, ‘Demography’, Sahitya Bhawan Publications, Agra.
5. Pathak, K. B. and F. Ram, ‘Techniques of Demographic Analysis’, Himalaya Publishing House.
6. Jhingan, M. L. and others, ‘Demography’, Vrinda Publications (P) Ltd.
7. Srinivasan, K., ‘Basic Demographic Techniques and Applications’, Sage Publication.

Reference Books

1. Census India SRS Bulletins, Registrar General of India, Govt. of India, 2011
2. Rural-Urban distribution *Census of India: Census Data 2001: India at a glance >> Rural-Urban Distribution*. Office of the Registrar General and Census Commissioner, India. Retrieved on 2008-11-26.
3. Number of Villages *Census of India: Number of Villages* Office of the Registrar General and Census Commissioner, India. Retrieved on 2008-11-26.
4. Urban Agglomerations and Towns *Census of India: Urban Agglomerations and Towns*. Office of the Registrar General and Census Commissioner, India. Retrieved on 2008-11-26.
5. Preston, S.H. (1976). Family Sizes of Children and Family Sizes of Women. *Demography* 13(1): 105-114.
6. Pritchett, L.H. (1994). Desired Fertility and the Impact of Population Policies. *Population and Development Review* 20(1): 1-55.

SEMESTER- IV

ECONOMICS OF DEVELOPMENT AND PLANNING

Paper – I

- Unit – I Economic Planning; Objectives. Achievements and Failures of Indian Plans, Resource Mobilization in Indian Plans, Strategy of Indian Plan, Saving, Capital Formation and Overall Growth Rate, Twelfth Five Year Plan (2012-17) Achievement of Eleventh Five Year Plan.
- Unit – II Approaches to Development – Vicious Circle of Poverty, Big-Push Theory, Theory of Critical Minimum Efforts, Balanced and Unbalanced Growth, Nelsons Theory of Low Level Equilibrium Trap.

- Unit – III Investment Criteria in Economic Development; The social Marginal Productivity Criteria, The capital Turnover Criteria, The Re-investment Criterion, Time Series Criterion, the Choice of Techniques
- Unit – IV Capital Formation and Economic Development, Monetary policy in Economic Development Fiscal policy in Economic Development. Entrepreneurship in Economic Development, Marketable Surplus in Economic Development.
- Unit – V Problems of Development; Measuring Poverty of World and India. Income Inequalities, Unemployment, Sustainable Development, Role of State in Economic Development, Problem of Price-Rise in India.

Text books

1. Jhingan, M.L. (2003), The Economics of development and planning, Vrinda publication pvt. Ltd.
2. Shinghai, G.C. & Mishra, J.P. (2013) Macro Economic Analysis, Sahitya bhawan publication Agra.
3. Mishra, J.P. (2012) Economics of Growth and Development, Sahitya bhawan publication Agra.

Reference Books

1. Todaro, M.P. (1996) (6th edition) Economic Development, Longman London.
2. Solow, R.M. (2000), Growth Theory An Exposition, Oxford University Press, Oxford.
3. United Nations, Human development Department report 2005.
4. Behrman, S. and T.N. Shrinivasan (1995), Hand book of Development Economics, Vol 1, 2 & 3, Elsevier; Amsterdam.
5. Ghatak, S. (1986), An introduction to development Economics, Allen & elnein, London.
6. Sen, A.K. (Ed.) 1990 growth Economics, Penguin, Harmondsworth.
7. Dasgupta, P.A.K. Sen and S. Marglin (1972), Guidelines for project Evaluation, UNIDO, Vienna,
8. Mehrotra, S. and J. Richard (1998), Development with a Human Face, Oxford University Press New Delhi.

SEMESTER- IV INTERNATIONAL ECONOMICS Paper – II

- Unit – 1 The Theory of Regional Blocks- Forms of Economic Co-operation, Reforms for the Emergence of Trading Blocs at the Global Level. Static and Dynamic Effects of a Customs Union and Free Trade Area, Rational of Economic Progress of SAARC, SAPTA, ASEAN Regions, Problems and Prospects of Forming a Customs Union in the Asian Region.
- Unit – II Regionalism of European Union, NAFTA, Multilateralism and WTO, Functions of WTO, TRIPS, TRIMS, Agriculture, Market- Access, Textile Clothing, Patent Rights, Ministerial Conferences of WTO, UNCTAD.
- Unit – III Theory of Short Term & Long Term Capital Movement and International Trade– Port Folio Investment and International trade, FDI and International Trade, Merits & Demerits of Long Term Capital Movement in International Trade, Factors Affecting International Capital Movement, Global Financial Crises & Global Recovery.

- Unit – IV WTO and World Bank- From Point of View of India, Trade policies of India after Reforms. Recent Change in the Direction and Composition of the Trade and their Implications.
- Unit – V Rationale and Impact of Reforms- since 1991 on BoP, Problems of India's International Debt, Export Policies of India, Working and Regulations of MNcs in India.

Text Books

1. Acharyya, Rajat (2013) International Economics, An Introduction to Theory and Policy, Oxford University Press India.
2. Goyal Ashima (2014) International Economics, The oxford Handbook of the Indian Economy in the 21st century: Understanding the Inherent Dynamism, Oxford University Press India.
3. Raychaudhuri, Ajitava & Prabir De, International Trade in Service in India: Implications for growth and Inequality in a Globalizing World, Oxford University Press, India.
4. Nayar, Deepak (2012) Trade and Globalization: Deepak Nayar, Oxford University Press, India.
5. Appleyard, R. Dennis, (2013) International Economics, Tata Mc Graw Hill Publishing Company Limited New Delhi.
6. Vaish, M. C. and Sudama Singh, (2011) International Economics, Oxford and IBH Publishing Co.Pvt. Ltd., New Delhi.

Reference Books

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

SEMESTER- IV PUBLIC ECONOMICS Paper – III

- Unit – I Role of Public Finance in Economic Development, Major Fiscal Function, Concept of Social Goods, Fiscal Federalism in India, Principles of Fiscal Federalism, Vertical and Horizontal Imbalances.
- Unit – II Fiscal Policy – Objectives of Fiscal Policy, Theory of Fiscal Policy. Policy in Under – Development Countries, Economic Stability and Fiscal Policy, Fiscal Policy and Full Employment, Fiscal Policy and Economic Development - : A Study in Development Finance.
- Unit – III Federal Finance – Principle of Federal Finance in India, Centre – State Financial Relation, Resource Transfer From Centre to States, Godgil's Formula. Fourteen Finance Commission.

- Unit – IV Analysis of Centre & Chhattisgarh Govt., Budget. Taxable and Non Taxable Income of Chhattisgarh, Structure and Growth of Public Expenditure in Chhattisgarh. - Revenue Expenditure, Capital Expenditure.
- Unit – V Financial Responsibilities and Budget Management Act, Performance of the Chhattisgarh Government. Budget, Plan & Non Plan Expenditure in Chhattisgarh.

Text Books

1. Lekhi, R.K.,(2014), Public Finance, Kalyani Publication, Ludhiana New Delhi.
2. S.K., Sing, (2013) Principal of Public Finance Sahitya Bhavan Publication, Agra.
3. Pant, K.C., (2012) Public Finance
4. Sinha, V.C., (2013) Public Finance and Economic, Sahitya Bhavan Publication.

Reference Books

1. Government of India (1992), reports of the Tax Reforms Committee – Interim and Final (Chairman : Raja J. Chelliah).
2. Chelliah, Raja J. et. Al (1981)., trends and issues in India's Federal Finance, NIPFP. New Delhi.
3. Peacock, A and G.K. Shaw (1976), The Economic Theory of Fiscal Policy, George Allen and Unwin, London.
4. Sahni, B.S. (Ed.) (1972), Public Expenditure Analysis : Selected Readings, Rotherdam University Press.
5. Jha, R. (1998), Modern Public Economics, Routledge, London.
6. Musgrave, R.A. and P.B. Musgrave (1976), Public Finance in Theory and Practice, McGraw Hill, Kogakusha, Tokyo.
7. Cornes, R. and T. Sandler (1986). The Theory of Externalities, Public Goods and Club Goods, Cambridge University Press. Cambridge.
8. Economic Survey Centre and State (2014-15)
9. 14th Finance commission Report- 2015
10. Central Govt. and Stat Govt. Budget- 2015

SEMESTER- IV ECONOMICS OF SOCIAL SECTOR Paper – IV

Unit – I- Pollution – Classification of pollution, Control of pollution, Air pollution Control, Water Pollution Control, Pollution control strategies, cost-benefit analysis of pollution Environment and pollution.

Unit – II Environmental Protection Environmental laws, Protection of Environment, Environment and Development, Sustainable Development, Population growth and Environmental issued global warming, climate change, Green house effect.

Unit – III Resource – Classification of Resource, Renewable resource, Non-renewable, optimum use of resources, land resources, forest resources, social forestry, peoples participation in the management of Common and forest land Energy efficiency and environment Energy Taxation, Atomic & Solar Energy.

Unit – IV Education-Economics of Education, Expenditure on education. Productive expenditure on education. Productivity of education, The return of education, Human-Capital, Human Capital Vs. Physical capital. Educational, Reforms and Right of education Act.

Unit – V Health. Economics, Determination of Health care, Malnutrition. The concept of Human life, Inequalities in Health-class and gender, Prospective HDI GDI, GEM and HPI.

Reference Books

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



ECONOMICS
M.A. PREVIOUS AND M.A. FINAL EXAMINATION - 2015-16

At Post-graduate level. Candidates required to study ten compulsory papers during two years period. There shall be five compulsory papers in M.A. previous and five compulsory papers in M.A. final examinations. So, there shall be ten compulsory papers in the post-graduate examination. Each paper shall carry 100 marks. Candidate shall have to secure 36 percent marks in aggregate of all papers in order to pass the M.A. previous and M.A. final Examination.

M.A. Previous

Paper I	Micro Economics (0337)
Paper II	Macro Economics (0339)
Paper III	Quantitative Methods (0341)
Paper IV	Indian Economic Policy (0343)
Paper V	Demography (0349)

M.A. Final

Paper I	Economics of Growth and Development (0338)
Paper II	International Trade and Finance (0340)
Paper III	Public Economics (0342)
Paper IV	Economics of Social Sector and Environment (0344)
Paper V	Agricultural Economics (0350) .

M.A.(Previous) Economics

PAPER - I

MICRO ECONOMICS

(Paper Code-0337)

UNIT-1 Introduction, Basic Concepts and Demand Analysis

Basic Economic Problem- Choice and Security, Deductive and Inductive Methods of Analysis, Positive and Normative Economics, Economic Models, Characteristics of Equilibrium and Disequilibrium Systems.

Elasticities (price, Cross, Income) of demand-theoretical aspects and empirical estimation, elasticity of supply ; theories of demand-utility, Indifference Curve, Income and substitution effects, Slutsky theorem, compensated demand curve and their application, revealed preference theory,

revision of demand theory of Hicks ; characteristics of goods approach consumer's surplus, elementary theory of price determination - demand and supply equilibrium.

UNIT-2 Theory of Production and Costs

Production Function - Short period and long period, law-of variable proportions and returns to scale, isoquants - least cost combination of inputs, returns to factor,

Economics of scale, elasticity of substitution, Euler's theorem, technical progress and production function cob-Douglas, CES, production functions and their properties. Marginal analysis as an approach to price and output determination, supply curve; Monopoly-short run and long run equilibrium price determination, Welfare aspects monopoly control and regulation.

UNIT-3 Monopolistic competition, General and Chamberlin approaches to equilibrium, (equilibrium of the firm and the group with product differentiation and selling Costs, excess Capacity under monopolistic and imperfect Competition, Criticism of monopolistic competition.

Oligopoly-Non-Collusive (Cournot, Bertrand, Edgeworth, Chamberlin; Kinked demand curve) and Collusive (Carter and merger, price leadership and basic point price system) models.

UNIT-4 Critical evaluation of marginal analysis, Baumol's sales revenue maximisation model, willamsan's model of managerial discretion, morris model of managerial enterprises. Full cost pricing rule, Bains limit pricing theory and its recent developments, including styles, labinis model, and behavioural model of the firm.

NEO-CLASSICAL APPROACH OF DISTRIBUTION WELFARE ECONOMICS AND GENERAL EQUILIBRIUM Marginal Productivity theory, Product Exhaustion theorem, Elasticity of Technical Substitution, technical progress and factor shares, theory of distribution in imperfect product and factor markets, Determinants of rent, wages, interest and profit.

UNIT-5 Pigovian welfare economics, Pareto optimum conditions value-judgment, social welfare function; compensation principle, inability to obtain optimum welfare- imperfections, market failures decreasing costs uncertainty and non-existent and incomplete markets.

Partial and General equilibrium, Walrasian Excess Demand and input-output approaches to general equilibrium, existence, stability and uniqueness of equilibrium and general equilibrium.

BASIC READING LIST:

1. Kraps, David M. (1990) a course in micro economics theory princation university press, Princeton.
2. Kout sayiannis; A (1979) modern Microeconomics (2nd Edition), macmillan press,London.
3. Layard, PRG and P.W. Watters (1978), Micro economic theory, McGraw Hill, New York.
4. San A (1999) Micro economics theory and Applications, Oxford University Press, New Delhi;
5. Stigler, G. (1996) theory of Price (4th adition), Prentise Hall of India, New Delhi.
6. Varian, H (2000) Micro economics Analysis, W.W. Norten, New York.

7. Baumol W.J., (1982) Economic theory and operations Analysis, perntice Hall of India, New Delhi.
8. Handersan, J.M. and R.E. Quandy (1980) Micro economics theory - A Mathematical approach, Mc Graw Hill New Delhi.
9. Hirshleifer, J. And A Glazer (1997), Price theory and Application, Prentise Hall of India, New Delhi.
10. Health fields and wibs (1'987) An introduction to cost and production function, Macmillan, London.

**COMPULSORY PAPER
PAPER- II
MACRO ECONOMICS
(Paper Code-0339)**

UNIT-1 National Income and accounts - Concepts of National Income and National Product. Problems of Measurement,' Circular Flow of Income in two, three and four sector economy; different forms of national income accounting, Social accounting, input-output accounting and flow of funds and balance of payment accounting. Consumption Function - .Keynes psychological law of consumption - implications of the law; short run and long-run consumption function, Empirical evidence on consumptions function; Income-consumption relationship Absolute income, Relative income, Life cycle and Permanent income hypotheses.

UNIT-2 Investment Function - Marginal efficiency of capital and investment - long run and short run; The accelerator and investment behavior, Saving and Investment equality, Multiplier; concept of Multiplier; Super Multiplier.

Supply of Money - money supply determination, demand determined money supply process, RBI approach to money supply; High powered money and money multiplier; budget deficits and money supply, money supply and open economy; control of money supply.

UNIT-3 Demand for money - Classical approach to demand for money - quantity theory approach, Fisher's equation, Cambridge quantity theory, Keynes's liquidity preference approach, transaction, precautionary and speculative demand for money - aggregate demand for money; Post - Keynesian approaches to demand for money - Patinkin and the real Balance Effect, Approaches of Baumol and Tobin; Friedman and the modern quantity theory; Crisis in Keynisian economics and the revival of monetarism. New-classical and Keynesian, views on interest: The IS-LM model; Derivation of IS curve; Derivation of LM curve; General equilibrium of Product and money market.

UNIT-4 Theory of Inflation - Classical, Keynesian and Monetarist approaches to inflation;

Structuralism theory of inflation; Philips curve analysis - Short run and long run, Philips curve; The Natural rate of unemployment hypothesis; Tobin's modified Philips curve; Adaptive expectations and rational expectation;

Policies to control inflation. Business Cycles - Theories of Schumpeter, Kaldor, Samuelson and Hicks, Control of, business cycles.

UNIT-5 Monetary and fiscal policies - Types of Monetary Policy; Instruments of monetary Policy; Relative effectiveness of monetary and fiscal policies. Macro Economic Policies Development - Role of Monetary and fiscal Policies in India, New classical Macro economics.

PRACTICE BOOKS:

1. Markley, G. (1978), Macroeconomics; Theory and Policy; Macmillan, New York.
2. Blackhouse, R. and A. Salansi (Eds.) (20()), Macroeconomics and the Real World (2vols) Exford University Press, London.
3. Branson, W.A. (1989), Macroeconomics Theory and Policy, (3rd Edition), Harper and Raw, New York.
4. Aornbusch, R. and .F. Stanley (1997), Macroeconomics, McGraw Hill, Inc., New York.
5. Hall, R.E. and J.B. Taylor (1986), Macroeconomics, W.W. Norton, New York.
6. Heijdra, B.J. and V.P. Frederick (2001), Foundations of Modern Macroeconomics, Oxford University' Press, New Delhi.
7. Jha, R. (1991), Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd. New Delhi.
8. Romer. DL. (1996), Advanced Macroeconomics, McGraw Hill Company Ltd., New York.
9. Scarte, B.L. (1977), Cycles, Growth and Inflation; McGraw Hill, New York.
10. Shapiro, E. (1996), Macroeconomic Analysis', Galgotia. Publications, New Delhi.
11. Surrey, MJC (Ed) (1976), Macroeconomics Themes, Oxford University Press, Oxford

**COMPULSORY PAPER
PAPER - III
QUANTITATIVE METHODS
(Paper Code-0341)**

UNIT-1 Concept and types of production functions-Cobb-Douglas production function; linear programming- Basic concept; formulation of a linear programming problem its structure and variables; nature of feasible, basic and optimal solution; solution of linear programming through graphical method; concept of game; strategies - simple and mixed; value of game ; saddle point solution; simple applications, limitations of the game theory.

UNIT-2 Skewness : Symmetrical and asymmetrical distribution; measurement of skewness - Karl Pearson's of coefficient Skewness, Bowley's coefficient of skewness; meaning, assumptions and limitations of simple correlation; measurement of correlation coefficient.. Karl Pearson's coefficient of correlation and spearman's rank correlation; probable error and standard error in correlation; regression analysis, regression lines regression equations, regression coefficient, correlation and regression, partial correlation and multiple correlation; multiple regression analysis (up to three variables) standard error of the estimates.

UNIT-3 Interpolation and extrapolation, methods of fitting a parabolic curve direct binomial expansion method. Newton's advancing difference method and Lagrange's method; Association of attributes, meaning and types of association, consistency of data, in association. Theory of probability, various types of events, addition and multiplication theorems, conditional probability and concept of inter dependence.

UNIT-4 Index Number - Type of index number, Fisher's ideal index number, Reversibility test, Cost of living index, Time series data Analysis - Components of time series. Short period and long period trend line; moving average method.

UNIT-5 Census and sample methods of statistical inquiry: Deliberate and random sampling, simple, random, stratified random and P.P.S. sampling. Concept of an *estimator* and its sampling distribution. desirable properties of an estimator; formulation of statistical hypotheses - null and alternative; goodness of fit. Confidence intervals and levels of significance, hypothesis testing based on z, t, χ^2 (Chi-square) and F tests, Type-1 and Type-2 errors.

QUANTITATIVE METHODS :

1. Allen, R.G.D. (1974): Mathematical Analysis for Economics, Mcmillan Press and ELBS, London.
2. Chiang, A.C. (1986): Fundamental methods of Mathematical Economics, Mc Graw Hill, New York.
3. Gupta S.C. (1993): Fundamental of Applied Statistics S. Chand & Sons, New Delhi.

COMPULSORY PAPER PAPER - IV INDIAN ECONOMIC POLICY (Paper Code-0343)

UNIT-1 Economic Development and its determinants approaches to economic development and its measurement-sustainable development, role of state, market and other institutions, indicators of development-PQLI-Human Development Index (HDI), Gender development indices.

Planning in India- Objectives and strategy of planning, failures and achievements of

plans - developing grass-root organizations for development, Panchayats, NGOs and pressure groups.

UNIT-2 Demographic Features, Poverty and inequality, broad demographic features of Indian population, rural-urban migration, urbanization and civic amenities, poverty and Inequality. Resource Base and Infrastructure Energy - Social infrastructure, education and health.

UNIT-3 The Agriculture-Sector-Institutional Structure, land reforms in India, technological change in agriculture, pricing of agricultural inputs and outputs. Terms of trade between agriculture and industry, agricultural finance policy. The Industrial Sector, Industrial Policy, public sector enterprises and their performance, problem of sick units in India. Privatization. and disinvestment debate, growth and pattern of industrialization, small-scale sector, productivity in industrial sector.

UNIT-4 Public Finance - Fiscal Federalism, Centre-state financial relations, finances of central government, finances of state government, parallel economics, problems relating to fiscal sector reforms in India, Money, Banking and prices - Analysis of price behavior in India, Financial sector reforms, Interest rate policy, Review of monetary policy of RBI.

UNIT-5 External sector - structure and direction of foreign trade, Balance of payments, Issues in Export-import policy and FEMA, Exchange rate policy, Foreign capital and MNCs in India; The progress of trade reforms in Indian. Economic Reforms - Rational of internal and external reforms: Globalization of Indian economy, W.T.O. and its impact on the different sectors of the economy.

REFERENCES:

1. Ahulwalia, I.J. and I.M.D. Litle (Eds.) (1999): India's Economic Reforms and Development (Essays honor of Mariohar Singh), Oxford University Press, New Delhi.
2. Bardhan, P.K. (9th Edition) (.1999): The Political Economy of Development India, Oxford University Press, and New Delhi.
3. Bawa, A.S. and Raikhy (Ed.) (1997): Structural change in Indian Economy, Guru Nanak Dev University Press, Amritsar.
4. Brahmananda, P.A. and V.A. Panchmukhi (9th Eds.) (2001): Development Experience in Indian Economy: Inter-state Perspectives, Bookwell, Delhi.
5. Chakravarty, S. (1987): Development Planning: The Indian Experience, Oxford University Press, New Delhi.
6. Dantwala, M.L. (1996): Dilemmas of Growth: The Indian Experience, Sage Publication, New, Delhi.

COMPULSORY PAPER

**PAPER - V
DEMOGRAPHY
(Paper Code-0349)**

UNIT-1 Meaning, Scope and importance of demography sources of demographic data, Tools of demographic analysis, measurement of population growth and population pyramid; Theories .of population - Malthus theory, Socio-cultural and economic theories of population, Biological theories of population, Theory of optimum population, Theory of demographic transition.

UNIT-2 Fertility - meaning and definition of fertility, Measurement of fertility - child woman ratio, crude birth rate, corrected birth rate, General fertility rate, Age specific fertility rate, Total fertility rate, Gross reproduction rate, and Net reproduction rate, calculation of fertility rates, determinants of fertility, Trends fertility in India.

UNIT-3 Mortality and morbidity - Importance of mortality data causes of death, meaning of morbidity, Differentials in mortality and morbidity, measurement of mortality crude death rate, Age-specific death rate, Infant mortality rate, Standardized death rate and maternal mortality rate, calculation of mortality rates, Trends in mortality in India, life table.

UNIT-4 Migration and urbanization, Population projection, growth of population in India, population and economic development, population

explosion in India, Demographic characteristics of developing countries. Population Policy of India.

UNIT-5 Women empowerment - Economic status, Women in decision making, Women and labour market; Women work participation: Concept and analysis of women's work, structure or wages across regions and economic sector's, Determinants of wage Differentials, Gender and education.

REFERENCES:

1. Agrawal S.N. (1972), India's Population Problem, Tata McGraw-Hill Co. Bombay.
2. Bose, S. (1996), India's Basic Demographic Statistics, B.A. Publishing Corporation, New Delhi.
3. Bogue, D.J. (1971), Principles of Demography, Hon Wiley, New York
4. Handry, A.T. (1999): Operations Research, Prentice Hall of India, New Delhi.
5. Speigal, M.R. (1992): Theory and problems of statistics, Mc Graw Hill Book Co., London.
6. Taha, H.A. (1997): Operations Research: An Introduction (6th edition), Prentice Hall of India Pvt. Ltd.; New Delhi.
7. Yamans, Tare (1975): Mathematics for Economics, Prentics Hall af India, New Delhi.
8. Mathur, P.N. & R. Bhardwaj (Eds.) 1967: Economic Analysis in input-output Research, Input Output, Research Association of India, Pune.
9. Kathari, C.R. (1992): An introduction to. Operations Research Vikas Publishing House, New Delhi.
10. Hadley, G.(1962): Linear Programming, Addison Wesley Publishing Co. Massachusetts.
11. Chou a (1975): Statistical Analysis Halt, Rainhart and Winstan, New York.

COMPULSORY PAPER

PAPER - I

ECONOMICS OF GROWTH AND DEVELOPMENT

(Paper Code-0338)

UNIT-1 Economic Growth: Economic growth and development, Factors affecting economic growth, Capital, labor and technology. Measuring economic development, development gap. Common characteristics of developing economics. Obstacles to economic development: Human development index and other indices of development, Quality of life index, Food security. Human Resource Development.

UNIT-2 Theories of development- Ricardo, Karl marx, Schumpeter and Harrod-Domar model, Neoclassical model- solow, Meade. Mrs John Robinson and kaldor model. Technology progress and economic growth - Hick, Hayek learning by doing, Production function approach to economic development.

UNIT-3 Approaches to development - Vicious circle of poverty, circular causation unlimited supply of labour, big push theory, theory of critical minimum effort, Balanced and unbalanced growth, Low income equilibrium trap, Ranis-fie model.

UNIT-4 Problems of Development- Measuring poverty and income inequalities in developing countries. Nature and causes of poverty and income inequality. Capital formation, Capital output ratio, Human Capital formation in developing countries. Role of State in economic development.

UNIT-5 Allocation of resources - Need for investment criterion in developing countries. Marginal rate of resource criteria, the rate of turn over criterion, the time series criterion, and cost benefit Analysis, Project evaluating and UNIDO guide lines. Shadow prices, Input-output Analysis.

BASIC READING LIST:-

Adelman, I (1961), Theories of Economic Growth and Development
Stanford University press, Stanford.

COMPULSORY PAPER
PAPER - II
INTERNATIONAL TRADE AND FINANCE
(Paper Code-0340)

UNIT-1 Theory of International Trade: The pure theory of international trade- Theories of absolute advantage, Opportunity cost, Modern theory of international trade, Theorem of factor price equalization, Heckscher-Ohlin theory of trade, Kravis and Linder theory of trade, Factor intensity reversals; Stapler-Samuelson and Rybczynski theorems, Empirical testing of comparative costs and H.O. theories, Economic growth and international trade.

UNIT-2 Measurement of gains-Measurement of gains from trade and their distribution, concepts of terms of trade- their uses and limitations, Determination of terms of trade, its empirical relevance and policy implications for less-developed countries, Welfare implications. The theory of intervention (Tariffs, quotas and non-tariff barriers), Economic effects of tariffs and quotas on national income, output, employment, terms of trade, income distribution, Balance of payments on trading partners both in partial and general equilibrium analysis, The political economy of non-tariff barriers and their implications, Nominal effective and optimum test of tariffs their measurement, impact and welfare implications.

UNIT-3 Balance of payments - Meaning and components of balance of payments, Equilibrium and disequilibrium in the balance of payments, The process of adjustment under systems of gold standard, Fixed exchange rates and flexible' exchange rates, Expenditure-reducing and expenditure-switching policies and direct controls of adjustment, Policies for achieving internal and external equilibrium simultaneously under alternative exchange rate regimes, foreign trade multiplier. Determination of national income and output, Relative merits and Demerits of fixed and flexible exchange rates.

UNIT-4 The theory of regional blocks-Forms of economic co-operation, Reforms for the emergence of trading blocs at the global level, static and dynamic effects of a customs union and free trade area, Rationale an economic progress of SAARC / SAPTA and ASEAN regions, Problems and prospects of forming a customs union in the Asian region, Regionalism (EU, NAFTA), Multilateralism and WTO, Rise and fall of gold standard and Breton-woods system, Need, adequacy and determinants of international reserves, Conditionality clause of IMF, Emerging international monetary system Reforms of the International Monetary System, India and developing countries.

UNIT-5 Theory of short-term capital movements and East-Asian crisis and lessons for developing countries; international trade and financial institutions-functions of GATT/WTO (TRIPS, TRIMS), UNCTAD, IMF, World Bank and Asian Development Bank- Their achievements and failure WTO and World Bank from the point of view of India. Trade policies in India- Trade Problems and trade policies in India during the last five decades, Recent change in the direction and composition of trade and their implications, Rational and impact of trade reforms since 1991 on balance of payments, problems of India's international debt, working and regulations of MNCs in India. Export policies.

BASIC READING LIST:

1. Bhagwati, J. (Ed). (1981) : International Trade, Selected Readings, Cambridge, University Press, Massachusetts.
2. Carbaugh, R.J. (1999), International Economics, International Thompson Publishing; New York.
3. Chacholiades, M. (1990), International Trade: Theory and Policy, McGraw Hill, Kogakusha, Japan.
4. Dana, M.S. (2000), International Economics: Study, Guide and Workbook, (5th Edition), Routledge Publishers, London.
5. Dunn, R.M. and J.H. Mutti (2000), International Economics, Routledge, London.
6. Kenen, P.B. (1994), the International Economy. Cambridge University Press, London.
7. Kindleberger. C.P. (1973), International Economics and International Economic Policy: A Reader, McGraw Hill International, and Singapore.
8. Krugman, P.R and M. Obstfeld (1994), International Economics: Theory and Policy, Glenview, Foresman.

**COMPULSORY PAPER
PAPER - III
PUBLIC ECONOMICS
(Paper Code-0342)**

UNIT-1 Role of Government in organized society, Government in a mixed economy, Public and Private goods, principles of maximum social advantages, Taxation- different forms, principles of taxation, shifting, effects and incidence of taxation, Indian taxes- personal income tax, excise duty, central excise and custom duties, taxes on land and agriculture, taxable capacity.

UNIT-2 Public Expenditure - Different forms of expenditure, economic effect of public expenditure on production and distribution, public expenditure and economic growth in developing countries, Wagner's law of increasing state activities, Wiseman Peacock hypothesis, pure theory of public-expenditure, structure and growth of public expenditure in India.

UNIT-3 Public Debt- different sources of public debt, Redemption of public debt, economic effects of public debt, Burden of public debt. Classical view of public debt, principles of debt management and repayment of public debt, growth of public debt in India.

UNIT-4 Fiscal policy - Objectives of fiscal policy in under-developed countries, economic stability and fiscal policy, fiscal policy and full employment, balanced budget multiplier, functional finance.

UNIT-5 Finance Commission - Twelfth Finance Commission Report - only, Analysis of Central and State Government Budgets, Financial Administration, Budget and budgetary procedure in India, Gadgil formula, federal finance, principles of federal finance in India.

BASIC READING :

1. Atkinson, A.B. and J.E. Stiglitz (1980), Lectures on Public Economics, Tata McGraw Hill, New York.
2. Auerbach, A.J. and M. Feldstein (Eds.), Handbook of Public Economics, Vol. 1, North Holland, Amsterdam.

**COMPULSORY PAPER
PAPER - IV
ECONOMICS OF SOCIAL, SECTOR AND ENVIRONMENT
(Paper Code-0344)**

UNIT-1 Welfare Economics - Definition of Welfare Economics, Criterion of Social welfare, Bentham's Criterion, Cardinality Criterion. The Pareto optimality Criterion, Kaldor Hicks Compensation Criterion, The Bergson Criterion. The problem of second best. Social welfare function, Maximization of Social Welfare. Welfare Maximization in Perfect Competition.

UNIT-2 Environmental Economics - Definition of Environmental economics, Public Goods, Private goods. Market Failure and Public goods. Theory of Externalities-Economics and Diseconomies. External Costs, Marginal social cost, Marginal private cost. Pigouian Taxes and Subsidies Environmental Values use value, Option value, and non use value. International Carbon Tax. Environment and W.T.O. Macro-economic policy

and Environment

UNIT-3 Pollution - Classification of Pollution, Control of Pollution, Air Pollution Control, Water, Pollution Control, Pollution Control Strategies, Cost-benefit analysis of pollution; Environmental Laws. Protection of Environment. Environment and Development, Sustainable Development. Population Growth and Environment.

UNIT-4 Resources - Classification of resources, Renewable resources, Non renewable resources, Optimal use of resources, Land resources, Forest resources, Social forestry, people's participation in the management of common and forest lands Energy Efficiency and environment. Energy Taxation-subsidies for Biomass, Automobile Fuels.

UNIT-5 Education - Economics of Education, The Return of education, Expenditure on education, The productivity of education. Human capital, Human capital vs Physical capital, Demand production Benefit of education, Educational Planning. Education, and Labour Market. Poverty Unemployment and Education. Health Economics Determinants of health, dimension of health care, Malnutrition. The concept of human life. Inequalities in health-Care and Gender Perspectives.

BASIC READING:

1. Baumol, W.J. and W.E. Oates (1988): The Theory of Environmental Policy, (2nd Edition), Cambridge University Press, Cambridge.
2. Berman, P. (Ed.)(1995) : Health Sector Reform in Developing Countries : Making health development sustainable, Boston: Harvard Series on Population

and
Health.

International

3. Blaug, M. (1972): Introduction to Economics of Education J Penguin, London. (15)
4. Bromely, D.W. (Ed.) (1995): Handbook of Environmental Economics, Blackwell, and London.
5. Cohn, E. and T. Gaske (1989) : Economics of Education, Pergamon Press, London.
6. Fisher, A.C. (1981): Resource and Environmental Economics, Cambridge University Press, Cambridge.
7. Hanley, N.J.F. Shoge'rn and B. White (1997): Environmental Economics in theory and-Practice, Macmillan.
8. Hussen, A.M. (1999): Principles of Environmental Economics, Routledge, London.
9. Jeroen, C.J.M. van den Bergh (1999)': Handbook' of -Environmental and resource Economics, Edward Elgar Publishing .Ltd: U.K:
10. Madhu Raj - Environmental Economics.
11. Steve Baker - Environmental Economics. .
12. D.W. Pearce - Environmental Economics.
13. John Vaizey - The Economics of Education.

**COMPULSORY PAPER
PAPER - V
AGRICULTURE ECONOMICS
(Paper Code-0350)**

UNIT-I Nature and scope of Agricultural economics- Traditional and Modern agriculture, role of agriculture in economic development. Problems in rural industrialization, development of Agro-based industries, interdependence between agriculture and industry. Green revolution. Agricultural production, Production function analysis, cost concept in agricultural product, farm budgeting, Resource use and efficiency in Agricultural sector.

UNIT-II Land use, Principles of land utilization, land distribution, Land values and rent, Land reform measures and performance, Land tenures and farming systems, problems of marginal and small farmers. Rural Labour supply, Mobility of labour and labour market

in agriculture sector. Nature of employment in rural sector Agriculture wages in India. Male-Femele wage difference in agriculture.

UNIT-III Rural Finance - Role of rur.al capital and rural credit, Rural capital and capital formation, Characteristics and source of rural credit, Institutional and non institutional rural credit, Rural Banks, Commercial Banks,. Regional Rural Banks and Rural credit Co-operatives Societies. Agricultural prices- Agricultural markets, Behavior of agricultural prices, agricultural. Markets and agricultural marketable surplus. Taxation, crop insurance, state policy and Agricultural price policy.

UNIT-IV Agricultural Growth in India - Recent trends, inter-regional variation in growth of agricultural product, cropping pattern, factors affecting productivity, pricing of inputs, role of subsidies, role of technology and input of

irrigation in Agricultural sector. Problems and prospects of Globalization and W.T.O. in India Agricultural commodities.

UNIT-V Infrastructure - Infrastructure and economic development, the structure of Transportation costs, Demand for transportation, Cost function in the transport Sector, Telephone utilities, role of postal services, Demand for Energy, Energy conservation, Renewable and Non-conventional Sources of Energy.

REFERENCES:

1. Bhahacharjee, J.P. - Studies. in Indian Agricultural Economics.
2. Rao, V.K.R.V.- New Challenge before Indian Agriculture.
3. Mellor, J.W. - The Economics of Agricultural Development.
4. Bhadure, A. (1984), The Economic Structure of Backward Agriculture, Macmillan, Delhi.
5. Bilgrami, S.A.R. (1996), Agricultural Economics, Himalaya Publishing House, Delhi.
6. Dantewada, M.L. Et. a, (1991), Indian Agricultural Development Since independence, Oxford & BH, New Delhi.
7. Government of India (1976), Report of the National Commission of Agriculture, New Delhi.
8. Government of India, Economic Survey (Annual), New Delhi.
9. Gulati, A. and T. Kelly (1999), Trade Liberalization 'and Indian Agriculture, Oxford University Press, New Delhi.
10. Joshi, P.C. (1975), Land Reforms in India: Trends and. Prospects. Allied Publishers, Bombay.
11. Kahlon, A. S. and Tyage D.S. (1983), Agriculture Price. Policy in India, Allied Publishers, New Delhi.
12. Rao, C.H.I.Hanumanth (1975), Agricultural Growth, Rural Poverty. and Environmental Degradation in India, Oxford University Press, New Delhi.
13. Reserve Bank of India, Report on Currency and Finance (Aual), Mumbai.
14. Rudra,A. (1982), Indian Agricultural Economics, Myths and Relaiity, Allied Publishers, New, Delhi.
15. Saini, G.R. (1979), Farm Size, Resource Use Efficiency and income Distribution, Allied Publishers, New Delhi.

SEMESTER- I

QUANTITATIVE METHODS

Paper – III

Unit – I Concepts of function and types of function. Differentiation- definition and rules of differentiation. Application of differentiation in economics. Integration- definition and rules of integration. Application of integration in economics. Standard error and probable error in correlation. Auto correlation.

Unit – II Regression analysis – regression and correlation, regression lines and regression coefficient, regression equations. Multiple regression analysis (up to three variables). Standard error of the estimates, Inter potation and extrapolation-method of

fitting a parabolic curve, Newton's advancing difference method, Direct binomial expansion method and Lagrange's method.

Unit – III Association of Attributes – Meaning and types of association, Consistency of data, methods of determining association – method of comparison of proportion, coefficient of association using Yule's method, Probability – meaning and definition, Permutation and combination, Types of events, measurement of Probability – addition and multiplication theorem, conditional probability.

Unit – IV Index Number- Fisher's Ideal Index number, Reversibility Test – Time Reversibility & Factor Reversibility, Time series analysis – short period oscillation, Trend, Semi-average method, Moving average method, Graphical presentation.

Unit – V Theoretical frequency distribution- Binomial, Normal and Poisson distribution. Theory of sampling, Test of significance of small samples- Practical problems related to T test, Chi- square test and F- ratio test.

Reference :-

- 1 .Shukla, S.M. and S.P. Sahay – Quantitative method's Sahitya Bhawan Publications, Agra.
- 2.Agrawal, D.R., 'Quantitative methods'. Vrinda Publications (P) Ltd.
- 3.Sancheti, D.C., 'Quantitative methods' Sultanchand and Sons, New Delhi.
- 4.Gupta, S.P. and others, "Quantitative Techniques." Sultanchand and Sons, New Delhi.
- 5.मेहता एवं मदनानी, 'अर्थशास्त्र में प्रारंभिक गणित', लक्ष्मीनारायण अग्रवाल, आगरा-3.