

M.J.P. ROHILKHAND UNIVERSITY, BAREILLY

New Syllabus of Economics

B.A. Examination

Bachelor of Arts (B.A.-Pass) course will consist six compulsory paper each of 50 marks and total of 300 marks.

PART I (w.e.f. 2010-2011)

First Paper - Micro Economics

Second Paper - Indian Economy

PART II (w.e.f. 2011 - 2012)

First Paper - Macro Economic Theory and Public Finance

Second Paper - Money, Banking and International Trade

PART III (w.e.f. 2012 - 2013)

First Paper - Basic Statistics

Second Paper - Economic Development and Planning

M.A. Examination

Master of Arts course will consist eight compulsory and two optional papers each of 100 Marks and total of 1000 Marks. Out of ten papers, there shall be four papers compulsory in previous and final. One paper is to be chosen in each year from the list of optional paper. The use of calculator, if required, is allowed.

Regular students who obtain 55 percent or more marks in M.A. (Prey.) examination shall have an option to submit a dissertation in lieu of optional papers. The topic of the paper (dissertation) will be decided with the consultation of permanent staff member of the department who will act as supervisor. The maximum number of such students with one supervisor at a time will be four.

M.A. (Previous) Examination

(effective from 2010 - 2011)

COMPULSORY PAPERS :-

- I. Micro Economic Analysis
- II. Economics of Growth and Development.
- III. Quantitative Methods.
- IV. International Trade and Finance.

M.A. (Final) Examination

(effective from 2011 - 2012)

COMPULSORY PAPERS :-

- V. Macro Economic Analysis.
- VI. Public Economics
- VII. Indian Economic Policy
- VIII. Viva-Voce

OPTIONAL PAPERS

(One is to be offered in M.A. Previous and one in M.A. Final)

- IX. Industrial Economics
- X. Labour Economics
- XI. Economics of Social Sector and Environment
- XII. Demography
- XIII. Mathematical Economics
- XIV. Econometrics
- XV. Agricultural Economics
- XVI. Financial Institutions and Markets
- XVII. Economics of Infrastructure
- XVIII. History of Economic Thought
- XIX. Advanced Statistics

B.A./B.Sc. Part I
Paper-I
MICROECONOMICS

PREAMBLE

In this Paper, student is expected to understand the behavior of an economic agent, namely, a consumer, a producer, a factor owner and the price fluctuation in a market. The approach of this paper is to study the behavior of a unit and analysis is generally static and in partial equilibrium framework.

The modules incorporated in this Paper deal with the nature and scope of economics, the theory of consumer behavior, analysis of production function and equilibrium of a producer, the price formation in different markets structures and the equilibrium of a firm and industry. In addition, the principles of factor pricing and commodity pricing and welfare economics have been included.

Module 1: Introduction

Nature and scope of economics; Methodology in economics; Choice as an economic problem; basic postulates; Role of price mechanism; Demand and supply; Basic framework-applications; Market equilibrium.

Module 2 Consumer's Behaviour

Utility - Cardinal and ordinal approaches; Indifference curve; Consumer's equilibrium (Hicks and Slutsky); Giffin goods; Compensated demand; Elasticity of demand - Price, income and cross; Consumer's surplus; Engel curve.

Module 3 Theory of Production and Costs

Production decisions; Production function; Iso-quant Factor substitution; law of variable proportions: returns to scale; economics of scale; Different concepts of cost and their interrelation; Equilibrium of the firm; Expansion path; Empirical evidence on costs.

Module 4: Market Structure

Market forms - Perfect and imperfect markets; Equilibrium of a firm - Perfect competition, monopoly and price discrimination; Measure of monopoly power;

Monopolistic competition; Duopoly, Oligopoly; Taxation and equilibrium of a firm;
Notion of controlled and administered prices.

Module 5: Factor Pricing

Marginal productivity theory of distribution; Theories of wage determination;
Wages and collective bargaining; Wage differentials; Rent - Scarcity rent; Differential
rent; Quasi rent; Interest - Classical and Keynesian theories; Profits - Innovation, risk
and uncertainty theories.

Module 6 : Welfare Economics

Problems in measuring welfare; Classical welfare economics; (Pigou's version)

Books Recommended :-

- Henderson J. and R.E. Quandt (1980), Microeconomic Theory:
- Mansfield, E. (1997), Microeconomics
- Ray, N.C. (1975), An Introduction to Microeconomics,
- Stonier, A.W. and D.C. Hague (1972), A Textbook of Economic Theory.
- आहूजा एच० एल० - व्यक्तिपरक आर्थिक विश्लेषण।
- सेठी टी० टी० व्यक्ति अर्थशास्त्र।
- झिंगन एम०एल० व्यक्ति अर्थशास्त्र।

B.A. / B.Sc. Part I

Paper-II

INDIAN ECONOMY

PREAMBLE

The purpose of this course on Indian economy is to enable students to have an understanding of the various issues / components of the Indian economy so that they are able to comprehend and critically appraise current Indian economic problems. For this, it is essential to have a good deal of understanding about the major developments in the Indian economy at the time of Independence and during the post Independence period.

Module 1: Indian Economy at the Time of Independence

Colonial economy; Semi-feudal economy; Backward economy; Stagnant economy; Other salient features; Planning exercises in India -National Planning Committee, Bombay Plan; People's Plan; Gandhian Plan; The Planning Commission.

Module 2 : Structure of the Indian Economy

Basic features; Natural resources -Land, water and forest resources; Broad demographic features - Population size and growth rates, sex composition, rural-urban migration, occupational distribution; Problem of over-population; Population policy; Infrastructure development; National Income.

Module 3: Planning in India

Objectives; Strategy; Broad achievements and failures; Current Five Year Plan -Objectives, allocation and targets; New economic reforms - Liberalization, privatization and globalization; Rationale behind economic reforms; Progress of privatization and globalization.

Module 4 : Agriculture

Nature and importance; Trends in agricultural production and productivity; Factors determining productivity; Land Reforms; New agricultural strategy and green revolution; Rural credit, Agricultural marketing;

Module 5: Industry

Industrial development during the planning period; Industrial policy of 1948, 1956, 1977 and 1991; Industrial licensing policy - MRTP Act, FERA and FEMA; Growth and problems of small scale industries; Role. of public sector enterprises in India's industrialization.

Module 6: External Sector

Role of foreign trade; Trends in exports and imports; Composition and direction of India's foreign trade; Balance of payments crisis and the New economic reforms - Export promotion measures and the new trade policies. Foreign capital - FDI, aid; Multinational corporations (MNCs).

Module 7: Important Areas of Concern

Poverty and inequality; Unemployment; Rising prices; Industrial relations.

Books Recommended :-

- Datt, R. and K.P.M. Sundharam (2001), Indian Economy.
- Misra, S.K. and V.K. Puri (2001), Indian Economy - Its Development Experience.
- Jalan, B. (1992), The Indian Economy: Problems and Prospects.
- अग्रवाल ए० एन० - "भारतीय अर्थव्यवस्था"
- कोली, एल०, एन०- "भारतीय अर्थव्यवस्था"

B.A. / B.Sc. Part II

Paper-I

MACROECONOMIC THEORY AND PUBLIC FINANCE

REAMBLE

On account of the growing influence and involvement of the State in economic Fields, Macroeconomic theory and public finance has become a major area of economic analysis in term of theoretical, empirical as well as policy - making issues. Macroeconomics has an extensive, substantive as well as methodological content. It deals with the functioning of the economy as a whole, including how the economy's total output of goods and services and employment of resources is determined and what causes these totals to fluctuate. In modern times the activities of State have considerably increased and the theoretical understanding of different State activities through the budgetary mechanism is essential.

The Paper entitled "Macroeconomic Theory and Public Finance is designed to make an undergraduate student aware of the basic theoretical framework underlying the field of macroeconomic theory and public finance.

Module 1: National Income and Social Accounts

Concept and measurement of national income; National income identities with government and international trade; incorporation of environmental concerns in national accounts - green accounting.

Module 2: Output and Employment

Say's law of markets and the classical theory of employment; keynes' objection to the classical theory; Aggregate demand and aggregate supply functions; The principle of effective demand; Consumption function - Average and marginal propensity to consume; Factors influencing consumption spending; The investment multiplier and its effectiveness in LDCs; Theory of investment - Autonomous and induced investment; Marginal efficiency of Capital; Savings and investment - ex post and ex ante, Equality and equilibrium.

Module 3: Rate of Interest

Classical, Neo- classical and Keynesian theories of interest.

Module 4 :Nature and Scope of Public Finance

Meaning and scope of public finance; Distinction between private and public finance; Public goods vs. private goods; the Principle of maximum social advantage; Market failure; Role of the government.

Module 5 :Public Expenditure

Meaning, classification and principle of public expenditure; canons and effects of public expenditure Trends in public expenditure and causes of growth of public expenditure in India.

Module 6 :Taxation

Sources of public revenue; Taxation - Meaning, canons and classification of taxes; Division of tax burden - The benefit and ability - to-pay approaches; Impact and incidence of taxes; Taxable capacity; Effects to taxation; Characteristics of a good tax system;Major trends in tax revenue of the central and state governments in India.

Module 7 : Public Debt and Financial Administration

Sources of public borrowing; Effects of public debt; Methods of debt redemption; Growth of India's public debt; The public budget - kinds of budget; Economic and functional classification of the budget; Preparation and passing of budget in India.

Books Recommended :-

- Ackley, G. (1976) Macroeconomics: Theory and Policy.
- Keynes, J.M. (1936) , The general theory of Employment, Interest and Money.
- Shapiro, E. (1996), Macroeconomic Analysis.
- Musgrave. R.A. and P.B. Musgrave (1976), Public Finance in Theory and Practice.
- सेठी टी०टी०, समष्टि अर्थशास्त्र
पन्त जे० सी० राजस्व

B.A. / B.Sc. Part II

Paper-II

MONEY BANKING AND INTERNATIONAL TRADE

PREAMBLE

Money banking and international trade constitutes important components towards understanding of economics. A clear understanding of the operations of money and banking and their interaction with the rest of the economy is essential to realize how monetary forces operate through a multitude of channels - market, non - market, institutions and among others, the state. International trade provides the students a thorough understanding and deep knowledge about the basic principles that tend to govern the free flow of trade in goods and services at the global level.

Module 1: Basic Concepts

Money - meaning, functions and classification; Gresham's law; Role of money in capitalist, socialist and mixed economies; Monetary standards - Metallic and paper systems of note issue.

Module 2 : Value of Money and Inflation

Uses and limitations of index numbers, Quantity theory of money - Cash transaction and cash balance approaches; The Keynesian approach; Inflation, deflation and revelation - definition, types, causes and effects of inflation on different sectors of the economy; Demand-pull and cost-push inflation; Measures to control inflation.

Module 3 : Commercial Banking

Meaning and types; Functions of commercial banks; The process of credit creation - Purpose and limitations; Liabilities and assets of banks; Evolution of commercial banking in India after Independence; A critical appraisal of the progress of commercial banking after nationalization; Recent reforms in banking sector in India.

Module 4: Central banking

Functions of a central bank; Quantitative and qualitative methods of credit control - bank rate policy, open market operations, variable reserve ratio and selective methods;

Role and functions of the Reserve Bank of India; Objectives and limitations of monetary policy with reference to India.

Module 5: Importance of Trade and Theories

Importance of the study of international economics; Inter-regional and international trade; Theories of absolute advantage, comparative advantage and opportunity cost.

Module 6 : Gains from Trade

Gains from trade - Their measurement and distribution; Trade as an engine of economic growth; Concepts of term of trade and their importance in the theory of trade. Doctrine of reciprocal demand - its importance and limitations in the theory of trade.

Module 7 : Tariffs and Quotas

Types of tariff and quotas; Their impact in partial equilibrium analysis; Free trade and policy of tariffs in relation to economic growth with special reference to India; Concept of optimum tariff.

Module 8: Balance of Trade and Balance of Payments

Concepts and components of balance of trade and balance of payments; Equilibrium and disequilibrium in balance of payments; Consequences of disequilibrium in balance, of payments Various measures to correct deficit in the balance of payments; Relative merits, demerits and limitations of devaluation; Concept and implications of foreign trade multiplier; Functions of IMF, World Bank and GATT/WTO; Reform of the international monetary system and India.

Module 9: Foreign Trade in India

Recent changes in the composition and direction of foreign trade; Causes and effects of persistent deficit in the balance of payments, Measures adopted by the government to correct the deficit before and after 1991;

Books Recommended :-

- Gupta, S.B. (1994), Monetary Economics.
- Kindlberger, C.P. (1973), International Economics.
- Halm, G.N. (1955), Monetary Theory.
- Seth, M.L. Money, Banking and International Trade.
- सेठी टी०टी०, मुद्रा, बैंकिंग एवं अन्तर्राष्ट्रीय व्यापार।

B.A. / B.Sc. Part III
Paper-I
BASIC STATISTICS

PREAMBLE

The object of this paper is to make the students understand a few important statistical techniques along with their limitations and uses. It is also necessary for the students to know about measure of central tendency, dispersion, techniques of simple correlation and index numbers. This paper would also acquaint the students with the methods of survey collection of data and presentation of data in the forms of graphs and diagrammes. The treatment is to be elementary.

Module 1: Basic concepts

Population, Sample, Parameter, Frequency Distribution, Cumulative frequency; Graphic and diagrammatic representation of data, Techniques of data collection; Sampling vs. Population, primary and secondary data.

Module 2: Measures of Central Tendency

Mean, Median, Mode, Geometric mean, Harmonic mean and weighted mean.

Module 3: Measures of Dispersion and Skewness

Range, Mean Deviation, Standard deviation, Coefficient of variation, Quartile deviation, Skewness. First (Karl Pearson's method) and second (Bowley's Method) Coefficient of skewness.

Module 4: Correlation

Simple, Coefficient of correlation - (Karl Pearson and Rank Correlation)

Module 5: Index numbers

Concept, price relative, quantity relative, value relative; Fisher, Family budget method; Problems in the construction and limitations of index numbers, Tests for ideal index number.

Books Recommended :-

- Gupta, S.C. and V.K. Kapoor (1993), Fundamental of Applied Statistics
- Nagar, A.L. and R.K. Das (1993), Basic Statistics
- Gon, A.M., M.K. Gupta and B. Das Gupta (1993) Fundamental of Statistics
- Elhans, D.N. - Fundamental of Statistics
- सिंह एस० पी० – "प्रारम्भिक सांख्यिकी"
- नागर, के० एन० "सांख्यिकी के मूल तत्व" – भाग-1

B.A. / B.Sc. Part III

Paper-II

ECONOMIC DEVELOPMENT AND PLANNING

PREAMBLE

Modules incorporated in this Paper would enable the students to know about theories of growth and development, sectoral aspects of development investment criteria, allocation of resources, interrelations of international trade and development, domestic macro policies, international aspects of development and the techniques of planning and its recent adaptations in the light of market dominated strategy, Issues relating to sustainable development, also find their due place in the modules.

Module 1 : Development and Economic Growth

Economic growth and development - Factors affecting economic growth - Capital, labour and technology.

Module 2 : Economic Development, Population and Institutions

Development and Underdevelopment - Perpetuation of underdevelopment; Poverty absolute and relative; Measuring development and development gap - per capita income, inequality of income and wealth, Human development index and other indices of development and quality of life; Concept of intellectual capital; Food security, education, health and nutrition - Human resource development - Population problem and growth pattern of population; Theory of demographic transition; Population, poverty and environment; Economic development and institutions; Markets and market failure; State and state failure; Issues of good governance.

Module 3 : Theories of Economic Development

Theories of development - Classical theory of development; Karl Marx in the theory of development - theory of social change; Immutable laws of capitalist development - Crisis in capitalism; Schumpeter and capitalistic development.

Module 4 : Approaches to Economic Development

Partial theories of growth and development - Vicious circle of poverty, circular

causation, unlimited supply of labour, big push, balanced growth, unbalanced growth, critical minimum effort thesis; Low income equilibrium trap -Dualism Technical, behavioural and social.

Module 5 : Sectoral View of Development

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

Module 6: International Aspect of Economic Development

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

Module 7: Macro Economic Policy and Economic Development

Role of monetary and fiscal policies in developing countries; External resources; FDI; Aid vs. trade; Technology inflow; MNC activity in developing countries; IMF and World Bank policies in developing countries.

Module 8 : Planning and Development

Need for planning - Democratic, decentralized and indicative planning, micro level planning; Review of Indian plan models.

Books Recommended :-

- Adelman, I(1961), Theories of Economic Growth and Development.
- Kindleberger, C.P.(1977), Economic Development.
- Brahmananda, P.R. and C.N. Vakil (1956), Planning for an Expanding Economy.
- Chakravarti, S. (1987), Development planning The Indian Experience.
- झिंगन, एम० एल० – विकास का अर्थशास्त्र एवं आयोजन
- सिंह एस० पी० – "आर्थिक विकास एवं नियोजन"

MA. (Previous) Compulsory Paper

Paper-I

MICRO ECONOMIC ANALYSIS

PREAMBLE

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

Module 1 : Introduction and Basic Concepts

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

Module 2: Demand Analysis

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

Module 3 : Theory of Production and Costs

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

Module 4: Price and Output Determination

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

Module 5: 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.

Module 6 : Welfare Economics

Pigovian welfare economics; Pareto optimal conditions; Value judgement; Social welfare, function; Compensation principle; Inability to obtain optimum welfare -

Imperfections, markets failure, decreasing costs, uncertainty and non-existent and incomplete markets; Theory of Second Best - Arrow's impossibility theorem; Rawl's theory of justice, equity - efficiency trade off.

Module 7 : General Equilibrium

Partial and general equilibrium, Walrasian excess demand and input - output approaches to general equilibrium, existence, stability and uniqueness of equilibrium and general equilibrium, coalitions and monopolies.

Books Recommended :-

- Koutsoyiannis, A.(1979), Modern Microeconomics,
- Sen. A. (1999), Microeconomics Theory and Applications.
- Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory: A Mathematical Approach.
- Seth M.L. "Principles of Economics"
- Ahuja H.L. -" Principles of Microeconomics"
- झिंगन, एम० एल० - उच्च आर्थिक सिद्धान्त

MA. (Previous) Compulsory Paper

Paper-II

ECONOMICS OF GROWTH AND DEVELOPMENT

PREAMBLE

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

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

Module 1: Economic Growth -I

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

Module 2: Economic Growth - II

Technological progress - embodied and disembodied technical progress; Hicks, Harrod; learning by doing, production function approach to the economic growth.

Total factor productivity and growth accounting; Growth models of Kaldor and Pasinetti, optimal savings and Ramsay's rule, golden rule of accumulation, two -sector model of Ujawa, Stability of equilibrium, money in economic growth, Tobin, Levhari, Patinkin and Johson; Endogenous growth; Intellectual capital; role of learning, education and research; AK model - Explanations of cross country differentials in economic growth.

Module 3 : Social and Institutional Aspects of Development

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

Module' 4 Theories of Development

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

Module 5 : Approaches to Development

Partial theories of growth and development - vicious circle of poverty, circular causation, unlimited supply of labour, big push, balanced growth, unbalanced growth, critical minimum effort thesis, low - income equilibrium trap; Dualism -technical, behavioural and social; Ranis and Fei model; Dixit and Marglin model, Kelly et. al. Model; Dependency theory of development; Structural view of development.

Module 6 : Sectoral Aspects of Development

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

Module 7: Macroeconomic Policies and Development

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

Module 8: Planning and Development

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

Books Recommended:-

- Adelman, I. (1961). Theories of Economic Growth and Development.
- Kindleberger, C.P. (1977). Economic Development.
- Rostow, W.W. - "Theories of Economic Growth".
- Jhingon M,L. - "The Economics of Development and Planning".
- सिंह एस०पी० - "आर्थिक विकास एवं नियोजन"।

MA. (Previous) Compulsory Paper
Paper-III

QUANTITATIVE METHODS

PREAMBLE

In order to understand economic problems clearly, the knowledge of quantitative techniques in the area of mathematics and statistics is very essential. The students in this direction are expected to have an elementary knowledge of concept of functions, differential and integral calculus. Further, in the field of statistics techniques of simple correlation and regression, association of attributes, interpolation and extrapolation theory of index numbers and time series and knowledge of Indian statistics should be clearly understood by the student.

Module 1 : Basic Concepts

Variables, Sets Functions, Equations, Identities, Systems of equations, Application of straight line system, Slope of the line. Homogenous function.

Module 2 : Calculus

Differentiation of a Function; Maxima and Minima; Elasticities; Equilibrium of a firm and consumer; Inter-relationships among total, marginal and average cost and revenues; Constrained optimisation problem; Integration of a function, consumer's and producer's surplus.

Module 3: Matrix and Determinants

Various types of matrices, Determinants, Inverse of a matrix, Cramer's rule, Inputoutput analysis Simple static model, Linkages, Concept of linear programming - Graphic Method.

Module 4 : Correlation Analysis

Meaning and types. Measures of Correlation-Scatter Diagram, Karl Pearson's method, Least Squares Method. Concurrent Deviation method and Rank Differences method. Concept of probable error and Standard errors.

Module 5: Regression Analysis

Meaning and uses. Difference between Correlation and Regression analysis. Regression Lines and regression equations. Regression Co- efficient -Properties, calculation and interpretation. Standard Error of estimate. Limitations of Regression Analysis.

Module 6: Index Numbers

Simple and weighted Index number, Laspeyer's, Paasche's and Fisher's ideal Index numbers and test of reversibility.

Module 7 : Association of Attributes

Meaning and purpose. Difference between correlation and association. Consistency of data Methods of studying Association (two attributes & three attributes)

Module 8: Interpolation and Extrapolation

Meaning, Significance and Assumptions. Methods of Interpolation Binomial Expansion method. Newton's Advancing Difference method. Lagrange's method.

Module 9 : Analysis of Time Series

Meaning, Utility and Components of Time series measurement of trend by moving average method and Least squares method.

Module 10: Indian Statistics

Statistical organisations of India, National Income and Social Accounting, Population and Vital statistics, National Sample Survey organisation Price statistics A Critical appraisal of Indian Statistics.

Books Recommended :-

- Allen. R.G.D (1974) Mathematical Analysis for Economists.
- Chiang A.C. (1986) Fundamental Methods of Mathematical Economics
- Yule and Kendall, An Introduction to the theory of Statistics.
- Elhance, D.N. "Fundamentals of Statistics"
- सिंह ए०पी० – "सांख्यिकी सिद्धान्त एवं व्यवहार"
- नागर के० एन० – "सांख्यिकी के मूल तत्व"

MA. (Previous) Compulsory Paper

Paper-IV

INTERNATIONAL TRADE AND FINANCE

PREAMBLE

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

Module 1 : Theory of International Trade

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

Module 2: Measurement of Gains and Theory of Interventions

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

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

Module 3 : Balance of Payments

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

Module 4: The Theory of Regional Blocs

Forms of economic cooperation; Reforms for the emergence of trading blocks at the global level: Static and Dynamic effects of a customs and free trade areas; Rational and economic progress of SAARC/SAPTA and ASEAN regions. Problems and prospects of forming a customs union in the Asian region. Regionalism (EU, NAFTA); Multilateralism and WTO; Rise and fall of gold standard and Brettonwoods system; Need, adequacy and determinants of international reserves; Conditionality clause of IMF; Emerging International Monetary System with special reference to PostMaastricht developments and developing countries; Reform of the International Monetary System, India and developing countries; Theory of short-term capital movements and East-Asian Crisis and lessons for developing countries;

International trade and financial institutions-Functions of GATT/WTO (TRIPS, TRIMS), UNCTAD, IMF, World Bank and Asian Development Bank - Their achievements and failures; WTO and World Bank from the point of view of India.

Module 5 : Trade Policies in India

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

Books Recommended :-

- Kindleberger, C.P. (1973), International Economics.
- Bhagwati, J. (Ed.) (1981), International Trade
- Verma, M.L. (1995) International Trade.
- झिंगन, एम० एल० - अन्तर्राष्ट्रीय अर्थशास्त्र
- अग्रवाल एवं वरला - अन्तर्राष्ट्रीय अर्थशास्त्र

MA. (Final) Compulsory Paper

Paper-V

MACRO ECONOMIC ANALYSIS

PREAMBLE

Macroeconomics or aggregative economics analyses and establishes the functional relationship between the large aggregates. The aggregate analysis has assumed such a great significance in recent times that a prior understanding of macroeconomic theoretical structure is considered essential for the proper comprehension of the different issues and policies. Macroeconomics now is not only a scientific method of analysis; but also a body of empirical economic knowledge. The paper entitled "Macro Economic Analysis" equips the students at the postgraduate level to understand systemic facts and latest theoretical developments for empirical analysis.

Module 1: National Income and Account

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

Module 2 : Consumption Function

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

Module 3 : Investment Function

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

Module 4: Supply of Money

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

Module 5 : Demand for Money

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

Module 6: Neo - classical and Keynesian Synthesis

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

Module 7: Post Keynesian Demand For Money

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

Module 8 : Monetary Policies

Objectives and instruments of monetary Policy. Monetary Policy in developing economy.

Module 9 : Theory of Inflation

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

Module 10: Business Cycles

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

Books Recommended :-

- Ackley, G. (1978), Macroeconomics Theory and Policy.
- Bra nson, W.A. (1989), Macroeconomic Theory and Policy.
- Dornbusch, R. and F. Stanely (1997), Macroeconomics.
- Seth, M.L. - Macroeconomics.
- आहूजा, एच० एल० - "उच्चतर समष्टि अर्थशास्त्र"
- सेठी, टी० टी० - "मौद्रिक अर्थशास्त्र"
- झिंगन, एम० एल० - "समष्टि अर्थशास्त्र"

MA. (Final) Compulsory Paper

Paper-VI

PUBLIC ECONOMICS

PREAMBLE

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

Module 1: Introduction

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

Module 2: Public Choice

Private and public mechanism for allocating resources: Problems for allocating resources; Problems of preference revelation and aggregation of preferences: Voting

systems; Arrow impossibility theorem; An economic theory of democracy; Politicoeco-bureaucracy; Rent seeking and directly unproductive profit seeking (DUP) activities.

Module 3 : Rationale for Public Policy

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

Module 4: Public Expenditure

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

Module 5 : Taxation

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

Module 6: Public Debt

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

Module 7 : Fiscal Policy

Objectives of fiscal policy - full employment, anti-inflation, economic growth, redistribution of income and wealth; Interdependence of fiscal and monetary policies;

Budgetary deficits and its implications; Fiscal policy for stabilization -automotive vs. discretionary stabilization; Alternative measures of resource mobilization and their impact on growth, distribution and prices; Balanced budget multiplier.

Module 8: Fiscal Federalism

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

Module 9 : 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.

Books Recommended :-

- Houghton, J.M. (1970), The Public Finance: Selected Readings
- Musgrave, R.A. (1959), The Theory of Public Finance
- Shoup, C.S. (1970), Public Finance
- Bhatia H.L. - Public Finance
- Hajela T.N. - Public Finance
- पन्त जे० सी० – लोक अर्थशास्त्र

MA. (Final) Compulsory Paper

Paper-VII

INDIAN ECONOMIC POLICY

PREAMBLE

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

Module 1: Economic Development and its Determinants

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

Module 2: Planning in India

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

Module 3: Demographic Features, Poverty and Inequality

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

Module 4: Resource Base and Infrastructure

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

Module 5 : The Agricultural Sector

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

Module 6: The Industrial Sector

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

Module 7: Public Finance

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

Module 8 : Money, Banking and Prices

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

Module 9: External Sector

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

Module 10: Economic Reforms

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

Books Recommended :-

- Ahluwalia, I.J. and I.M.D. Little (EDs.) (1999), India's Economic Reforms and Development
- Bawa, R.S. and P.S. Raikhy (Ed.) (1997), Structural Changes in Indian Economy
- Jalan, B. (1996). India's Economic Policy - Preparing for the Twenty First Century.
- Sandesara, J.C. (1992), Industrial Policy and Planning.
- Sen, R.K. and B. Chatterjee (2001), Indian Economy.

MA. (Final) Compulsory Paper

Paper-VIII

VIVA - Voce (Oral Examination)

MA. Optional Paper

Paper- IX

INDUSTRIAL ECONOMICS

PREAMBLE

In the contemporary world with globalization and liberalization more and more attention is being given to industry. This course intends to provide knowledge to the students on the basic issues such as productivity, efficiency, capacity utilization and debates involved in the industrial development of India. The objective is to provide a thorough knowledge about the economics of industry in a cogent and analytical manner, particularly in the Indian context.

Module 1: Framework and Problems of Industrial Economics

Concept and organization of a firm - ownership, control and objectives of the firm; Passive and active behaviour of the firm.

Module 2: Market Structure

Sellers' concentration; Product differentiation; Entry conditions; Economies of scale; Market structure and profitability; Market structure and innovation; Theories of industrial location - Weber and Sargent Florence; Factors affecting location.

Module 3: Market Conduct

Product pricing - Theories and evidence; Investment expenditure - Methods of evaluating investment expenditure ; Theories and empirical evidence on Mergers and acquisitions (M & As) and diversification.

Module 4: Market Performance

Growth of the firm - Size and growth of a firm; Growth and profitability of the firm; Constraints on growth; Productivity, efficiency and capacity utilization - Concept and measurement, Indian situation.

Module 5 : Indian Industrial Growth and Pattern

Classification of industries; Industrial policy in India - Role of public and private sectors; Recent trends in Indian industrial growth; MNCs and transfer of technology; Liberalization and privatization; Regional industrial growth in India; Industrial economic concentration and remedial measures; Issues in industrial proliferation and environmental preservation; Pollution control policies.

Module 6: Industrial Finance

Owned, external and other components of funds; Role, 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, ratio analysis.

Module 7: Industrial Labour

Structure of industrial labour; Employment dimensions of Indian industry; Industrial legislation; Industrial relations; Exit policy and social security; Wages and problem of bonus - labour market reforms.

Module 8 : Current Problems of Selected Industries

Iron and steel; Cotton textiles; Jute; Sugar; Coal; Cement and engineering goods; Development of small-scale and cottage industries in India.

Books Recommended :-

- Desai, B. (1999), Industrial Economy in India
- Government of India, Economic Survey (Annual)
- Bains, J.S. (1996) Industrial Organization.
- Mamoria and Mamoria (2000) - Dynamics of Industrial Relations in India".
- सिंह एस० पी० – "औद्योगिक अर्थशास्त्र"

M.A. Optional Paper
Paper-X
LABOUR ECONOMICS

PREAMBLE

Issues pertaining to the labour market, wage theories, employment policies, trade unions and collective bargaining in the globalized economy have become vitally important for developing countries. In a country like India where the bulk of the labour force is in the unorganized sector and the organized sector is witnessing "jobless" growth, the importance of Issues such as employment and unemployment as well as livelihood and social security for the growing millions continues to assume significance. This Paper exposes students to theoretical as well as empirical issues relating to the labour market with special reference to India.

Module 1 : Labour Markets

Nature and characteristics of labour markets in developing countries like India; Paradigms of labour market analysis - classical, neo-classical and dualistic economy; Demand for labour in relation to size and pattern of investment; Choice of technologies and labour policies; Supply of labour in relation to growth of labour force; Labour market policies, Mobility and productivity of labour; Rationalization; Methods of recruitment and placement; Employment service organization in India.

Module 2: Employment

Employment and development relationship - Poverty and unemployment in developing countries; Unemployment - Concept, Types, and Measurement, particularly in India; Impact of rationalization, technological change and modernization on employment in organized private industry, Public sector and employment in agricultural sector; Analysis of educated unemployment; Employment policy in Five Year Plans and evaluation.

Module 3 : Wage Determination

Classical, neo- classical and bargaining theories of wage determination; Concepts of minimum wage, living wage and fair wage in theory and practice; Discrimination in labour markets; wage determination in various sectors - rural, urban, organized, unorganized and in informal sectors; Non-wage component of labour

remuneration; inflation-wage relationship at micro and macro levels; Productivity and wage relationship; Analysis of rigidity in labour markets; Asymmetric information and efficiency of labour markets in wage determination; National wage policy; Wages and wage Boards in India; Bonus system and profit sharing.

Module 4: Industrial Relations

Theories of labour movement -Growth, pattern and structure of labour unions in India, Achievements of labour unions; Causes of industrial disputes and their settlement and prevention mechanism; Role of tripartism; Current trends in collective bargaining; Role of judicial activism; Labour legislation in India; Indian labour laws and practices in relation to international labour standards.

Module 5 : State and Labour

State and social security of labour - Concept of social security and its evolution; Social assistance and social insurance; Review and appraisal of states policies with respect to social security and labour welfare in India; Special problems of labour: Child labour, female labour, Discrimination and gender bias in treatment of labour; Receding state and its effect on working of labour markets; Labour market reforms - Exit policy, need for safety nets, measures imparting flexibility in labour markets; Second National Commission on Labour; Globalization and labour markets.

Books Recommended:

- Hajela, P.D. (1998), Labour Restructuring in India: A Critique of the New Economic Policies.
- Venkata Ratnam, C.S. (2001), Globalization and Labour - Management Relations: Dynamics of Change
- Papola, T.S. and Rodgers, G. (Eds.) (1992), Labour Institutions and Economic Development in India
- Sharma, A.N. and A. Kundu (Ed.) (2001), Informal Sector in India: Emerging Perspectives.
- Misra, L. (2000), Child labour in India.
- Saxena, R.C-" Labour Problems and Social Welfare".

M.A. Optional Paper

Paper-XI

ECONOMICS OF SOCIAL SECTOR AND ENVIRONMENT

PREAMBLE

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

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

Module 1 : Welfare Economics, Social Sectors and Environment

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

Module 2: Measurement of Environmental Values

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

Module 3 : The Theory of Environmental Policy

Environmental externalities - Pigouvian taxes and subsidies, marketable pollution permits and mixed instruments (the charges and standards approach), Coase's

bargaining solution and collective action; Informal regulation and the new model of pollution control, Monitoring and enforcement of environmental regulation, Environmental institutions and grass root movements; Global environmental externalities and climatic change-Tradable pollution permits and international carbon tax Trade and environment in WTO regime.

Module 4 : Economics of Natural Resource Management and Sustainable Development

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

Module 5 : Environmental and Natural Resource Problems in India

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

Module 6: Economics of Education

Education as an instrument for economic growth; Human capital - Human capital vs. Physical capital, components of human capital; Demand for education - private demand and social demand, Determinants of demand; Cost of Education - Expenditure on education, private costs and social costs and wastage and stagnation Benefits of education - Direct and Indirect benefits, private and social benefits; Educational planning and economic growth - Cost-benefit analysis, production function models, growth accounting equations of Schultz and Denison, Manpower requirements approach, programming and input-output models; Educational financing - Resource mobilization and utilization, pricing and subsidies and effects of educational financing on income distribution; Education and labour market - Effects of education, ability and

family background on earnings, poverty and income distribution, education and employment; Economics of educational planning in developing countries with special emphasis on India.

Module 7: Health Economics

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

Books Recommended :-

- Baumol, W.J. and W.E. Oates (1988), The Theory of Environmental Policy.
- Berman, P. (Ed.) (1995), Health Sector Reform in Developing Countries. Making Health Development Sustainable.
- Bromely, D.W. (ED.) (1995), Handbook of Environmental Economics,
- Kolstad, C.D. (1999), Environmental Economics.
- Pearce, D.W. and R. Turner (1991), Economics of Natural Resource use and Environment

M.A. Optional Paper

Paper-XII

DEMOGRAPHY

PREAMBLE

The main objective of this paper is to make the students aware of the importance of population in economic development and the various theories that explain the growth of population in a country. The paper also enlightens the student on the qualitative and the quantitative aspects and characteristics of the population through various demographic techniques. In recent times, gender characteristics of the population have acquired importance and these have also been included in the framework of study. Migration and urbanization are the characteristics of structural change taking place in a society. Their study is essential to understand the dynamics of this change. The paper exposes the students to sources of population and related characteristics as also to the rationale, need and evolution of population policy.

Module 1: Population and Development

Meaning and scope of demography; Components of population growth and their inter-dependence; Measures of population change; Structure, distribution and sources of population data; Theories of population - Malthus, Optimum theory of population; Theory of demographic transition views of Medows, Enke and Simon; Population and development.

Module 2 : Structure of Population

Population trends in the twentieth century; Population explosion - Threatened or real, distant or imminent; International aspects of population growth and distribution; Pattern of age and sex structure in more developed and less developed countries; Determinants of age and sex structure; Demographic effects of sex and age structure, economic and social implications; Age pyramids and projections -Individual aging and population aging.

Module 3: Fertility, Nuptiality and Mortality

Importance of study of fertility - Total fertility rate, Gross reproduction rate and net reproduction rate; Levels and trends of fertility in more and less developed countries; Factors affecting fertility - Socio-economic factors, economic status, health, education, nutrition, caste, religion, race, region, rural-urban and status of husband and wife; Nuptiality - Concept and analysis of marital status, single mean age at marriage; Synthetic cohort methods; Trends in age at marriage; Mortality-Death rates, crude and age-specific; Mortality at birth and infant mortality rate; Levels and trends in more and less developed countries; Sex and age pattern of mortality; Factors for decline in mortality in recent past; Life table - construction and uses; Concepts of stable population; Methods of population projection.

Module 4: Migration and Urbanization

Concept and types - Temporary, internal and international; International migration - Its effect on population growth and pattern; Factors affecting migration; Theories of migration related to internal migration; Urbanization - Growth and distribution of rural - urban population in developed and developing countries.

Module 5 : Demographic Data Base in India

Study of census in India - Methodology and characteristics of census; Nature of information collected in 1971, 1981, 1991 and 2001 census in India; National Family Health Survey 1 and 2 and Rapid Household Survey; Changing characteristics of population in India; Population growth rates, trends and regional variations in sex ratio; Age structure of population, foetal, infant and child mortality rates; Maternal mortality rates; Life expectancy; Appraisal of Kerala model; Pattern of Migration and Urbanization in India.

Module 6 : Population and Development with Reference to India

Population, economy and environment linkages - Population, health, nutrition, productivity nexus; Population and human development issues; Culture and fertility; Education and fertility, Demography and household economic behaviour.

Module 7: Population Policy in India

Evolution of population policy in India - The shift in policy from population control to family welfare, to women empowerment; Family planning strategies and their outcomes; Reproductive health, maternal nutrition and child health policies; population and strategies for human development of different social groups; Social impact of new reproductive technologies and their regulation; The new population policy; Tasks before the National Population Commission.

Books Recommended :-

- Agarwala S.N. (1972). India's Population Problem.
- Choubey, P.K. (2000), Population Policy in India.
- Simon, J.L. (1992), Population and Development in Poor Countries.
- Agnihotri S.B. (2000), Sex ratio in Indian Population; A Fresh Exploration.
- Seth M. (2000), Women and Development: The Indian Experience.
- पंत, जे०सी० - 'जनाकिकी'

M.A. Optional Paper

Paper - XIII

MATHEMATICAL ECONOMICS

PREAMBLE

This course is designed to equip students to understand the economic concepts and theories which use mathematical tools and techniques to refine the verbal logic. The use of calculus has permitted formulation of economic problems in multivariable mode and yield valuable insight about optimizing human behaviour. Modern algebraic tools allow convenient handling of simultaneous equations in the context of linear programming, game theory and input-output analysis.

Mathematical economics deals with various applications of mathematical tools and techniques in defining and developing economic relationship. This course has been accordingly designed to include various mathematical techniques/methods/models related to the different parts of economic theory like consumer theory, theory of production, pricing, trade cycles, growth models, etc. The paper covers important aspects of microeconomics, macroeconomics and development theory and the various modules have been accordingly designed.

Module 1 : Theory of Consumer Behaviour

Cardinal and ordinal utility; ordinal utility maximization; Slutsky equation, compensated demand functions, income, substitution, and price effects; concept of elasticities - generalizations to n variable case; Separable and additive utility functions; homogenous and homothetic utility functions; constant elasticity of substitution (CES) and transcendental logarithmic utility functions; indirect utility functions; duality theorem; consumer's surplus; Theory of revealed preference and index numbers; Linear expenditure systems; Treatment of demand for durable goods. Empirical demand functions; Consumer behaviour under risk and uncertainty.

Module 2 : Theory of Production

Production function - homogeneous and non - homogenous; Properties of Cobb -Douglas production function; CES; VES and trans-log production function; Simple derivation of short and long run cost functions; Modern approach to theory of costs; Cost function; Producers equilibrium-Laws of return and returns to scale; Constrained optimization of a producer; Generalization to n variable case; Input demand functions; Adding up theorem; Technical progress through production function; Analysis of joint profit maximization and multi- product firm; Production possibility curve; Empirical uses production function analysis.

Module 3 : Price Determination in Various Markets

Price determination in perfect competition, monopoly, monopolistic competition, duopoly, oligopoly and monopsony; Pricing of factors of production; Bilateral monopoly.

Module 4: Market Equilibrium

Single market equilibrium-Marshallian and walrassian equilibrium conditions; Lagged market equilibrium; Multi-market equilibrium-General equilibrium systems of Walras and Debreu; Conditions of stability of equilibrium.

Module 5 : Determination of Income and Fluctuations in Income

Classical and Keynes's macro system; Static and dynamic multiplier; Determinates of investment; Accelerator; Trade cycle model of Samuelson and Hicks, Goodwin, Kalecki and Philips; Stabilization policy; Rational expectations and economic policy; Lucas's model.

Module 6 : Growth Models

Harrod problem; Neoclassical model of growth; Solow and Meade growth with technical progress; Optimal growth; and golden rule of accumulation; Turnpike theorem; Endogenous growth.

Module 7 : Game Theory and Linear Programming and Input-Output Analysis

Concept of game - Two-person Zero-sum game, Pay- off matrix, pure and mixed strategies, Maximin and minimax solution, Saddle point solution; Non-constant

sun game; Prisoner's dilemma; 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, Hawkins-Simon conditions; Leontief's dynamic system; Testing consistency of planning models.

Books Recommended :-

- Allen, R.G.D. (1976). Mathematical Economics.
- Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory; A Mathematical Approach.
- Allen, R.G.D. (1974), Mathematical Analysis for Economists.
- Chiang A.C. (1986), Fundamental Methods of Mathematical Economics.
- Hadley, G. (1962), Linear Programming.

M.A. Optional Paper

Paper - XIV

ECONOMETRICS

PREAMBLE

Applications of economic theory need a reasonable understanding of economic relationships and relevant statistical methods. The econometric theory thus becomes a very powerful tool for understanding of applied economic relationship and for meaningful research in economics. This paper accordingly is devoted to equip the students with basic theory of econometrics and relevant applications of the methods. The topics covered in the course include various problems faced in estimation of both single equations and simultaneous equations models.

Module 1: Basic Econometrics

Nature, meaning and scope of econometrics; Simple and general linear regression model- Assumptions, Estimation (through OLS approach) and properties of estimators; Gauss-Markov theorem; Concepts and derivation of R^2 and adjusted R^2 ; Concept and analysis of variance approach and its application in regression analysis; Estimation of non-linear equations - parabolic, exponential, geometric, hyperbolic, modified exponential; Gompertz and logistic functions.

Module 2: Problem 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 3 : Regressions with Qualitative Independent Variables

Dummy variable techniques - 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; The LPM, Logit, Probit and Tobit models-Applications.

Module 4: Dynamic Econometric Model

Autoregressive and distributed lag models-Koyak model, Partial adjustment model, adaptive expectations; Instrumental variables; Problem of auto-correlation - Application; Almon approach to distributed - lag models; Error correlation mechanism, Causality test, Granger test and Sim's test.

Module 5 : Simultaneous Equation Models

Introduction and examples; The simultaneous equation bias inconsistency of OLS estimators; The identification problem; Rules of identification - order and rank conditions; Methods of estimating simultaneous equation system; Recursive methods and OLS; indirect least squares (ILS); 2SLS, 3SLS and ML methods -Applications.

Module 6 Time Series Analysis

Stationarity, unit roots, co-integration-spurious regressing, Dickey-Fuller test, EngleGranger test, Random walk model, Forecasting with ARIMA modeling; Box-Jenkins methodology; Vector autoregression; Problems with VAR modeling - Applications; Time varying parameters and Kalman filter.

Module 7: Panel Data Techniques

Panel data techniques - Random coefficients model; Fix effect model; Random effect model.

Module 8: Multivariate Analysis

Multivariate probability distribution, marginal and conditional probability distribution, multivariate normal distribution and its properties; Hotelling T-scale; Discriminant analysis.

Books Recommended

- Goldberger, A.S.(1998), Introductory Econometrics.
- Gujarati, D.N. (1995), Basic Econometrics.
- Koutsoyiannis, A. (1977), Theory of Econometrics.
- Johnston, J. (1991), Econometric Methods.
- Chow, G.C. (1983), Econometrics.
- Singh, S.P. Anil Parashar and H.P. Singh- Econometrics and Mathematical Economics.

M.A. Optional Paper

Paper-XV

AGRICULTURAL ECONOMICS

PREAMBLE

The objective of this course is to provide a detailed treatment of issues in agricultural economics to those intending to specialize in this area. Its objective is to familiarize students with policy issues that are relevant to Indian agriculture economics and enable them to analyze the issues, using basic micro-economic concepts.

Module 1 : Agriculture and Economic Development

Nature and scope of agricultural and rural economics; Traditional agriculture and its modernization; Role of agriculture in economic development; Interdependence between agriculture and industry -some empirical evidence; Models of interaction between agriculture and the rest of the economy; Agricultural development, poverty and environment.

Module 2: Diversification of Rural Economic Activities

Livestock economics - Livestock resource and their productivity; Problems of marketing; White revolution; Fishery and poultry development; Forestry, horticulture and floriculture issues and problems in rural industrialization and development of agro-based industries.

Module 3: Economics of Rural Infrastructure

Use of land, water and energy; Rural transport, communication, banking, extension services, role, modes and problems of rural electrification; Rural social infrastructure, - education and health and information dissemination.

Module 4: Agriculture production and Productivity

Resource use and efficiency. Production function analysis in agriculture, factor combination and resource substitution, cost and supply curves, size of farms and laws of returns - farm budgeting and cost concepts, supply response of individual crops and aggregate supply, resource use efficiency in traditional agriculture technical change, labour absorption and gender issues in agricultural services.

Module 5: Land Reforms and Land Policy

Principles of land utilization, land distribution - Structure and trends, land value and rent, land tenures and farming systems - peasant, capitalist and state farming, tenancy and crop sharing forms, incidence and effects, land reform measures and performance, women and land reforms, problems of marginal and small farmers.

Module 6: Rural labour supply

Interlocking of factor markets, mobility of labour and segmentation in labour markets, marginalisation of rural labour, nature extent and trends in rural unemployment, agricultural wages in India. Male-female wage differences, nonagricultural rural employment - trends and determinants.

Module 7: Role of Capital and rural credit

Organized and unorganized capital market, rural saving and capital formation, characteristics and sources of rural credit -Institutional and non-institutional, Reorganization of rural credit - cooperatives, commercial banks, regional rural banks, role of NABARD.

Module 8 : Cooperation in India

Cooperative movement; Genesis and growth of cooperative sector; Agricultural cooperation in India; Problems and prospects of cooperative institutions.

Module 9 : Agricultural Prices

Marketing and state policy; Agricultural markets and marketing efficiency - Marketing functions and costs; Market structure and imperfections; Regulated markets; Marketed and marketable surplus; Behaviour of agricultural prices -Cobweb model; Price and income stability; State policy with respect to agricultural marketing; Warehousing; Prices; Taxation and crop insurance; Terms of trade between agricultural and non-agricultural prices; Need for state intervention; Objectives of agricultural price policy-Instruments and evaluation; Food security in India and public distribution system.

Module 10; 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 - Irrigation, power,

seed and fertilizers; 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 and technological progress; Sustainable agriculture-indigenous practices; Bio - technological practices and growth potential.

Module 11 : Agriculture and External Sector

International trade in agricultural commodities; Commodity agreements - Role of World trade Organization; Issues in liberalization of domestic and international trade in agriculture - Nature and features of agri-business; Role of MNCs; Globalization of Indian economy and problems and prospects of Indian agriculture; Impact of World Trade organization on Indian agriculture.

Book recommended :-

- Dantwala, M.L. et.al (1991), Indian Agricultural Development Since Independence.
- Government of India (1976), Report of the National Commission on Agriculture.
- Government of India, Economic Survey (Annual).
- Joshi, P.C. (1975), Land Reforms in India; Trends and Prospects.
- Soni, R.N. (1995), Leading Issues in Agricultural Economics.
- Mamoria, C.B.- "Agricultural Economics"

M.A. Optional Paper

Paper-XVI

FINANCIAL INSTITUTIONS AND MARKETS

PREAMBLE

The positive and significant role of financial institutions in the process of growth and development has been very well recognized in the literature and indeed has become more important during the last two decades as the financial systems of different countries have become integrated in the process of globalization. India is no exception and has taken far reaching measures since 1991 in this direction, It is, therefore, essential that the student of economics should be well conversant with the theory and practice of different financial institutions and markets to understand and analyse the interconnection between the monetary forces and real forces, their developmental role and limitations in shaping and influencing the monetary and related policies both at the national and international levels.

Module 1: Nature and Role of Financial System

Money and finance - Money and near- money - Financial intermediation and financial intermediaries - The structure of the financial system - Functions of the financial sector - Indicators of financial development - Equilibrium in Financial Markets - Financial System and Economic Development - Criteria to evaluate assets; Risk and financial assets; types of risk, return on assets, Risk - Return trade off -Valuation of Securities.

Module 2 : Structure of Interest Rates

Theories of interest rate determination - Level of interest rates - Long period and short period rates - Term structure of Interest rates - Spread between lending and deposit rates Administered interest rates - Appropriate interest rate policy.

Module 3: The Central Bank, Commercial Banks and Monetary Policy

• Functions of Central Bank - The aims and objectives of the monetary policy in developed and developing countries - Instruments of monetary policy - Proliferation of banking and non-bank financial intermediaries - Effectiveness of monetary policy - Credit creation and its control; Profitability and efficiency of banks; Development banks - role and functions; Investment banking and merchant banking; Financial sector reforms in India.

Module 4: Non-Bank Financial Intermediaries.

Definition and types of non-bank financial institutions: Their growth and impact on India's economic development, Measures taken to control their operations.

Module 5 : Financial Markets

Role and structure of money market and capital market - Call money market, Treasury bill market, Commercial bill market including commercial paper and certificate of deposits, Discount market - Government securities market - Markets for derivatives; futures and options, and other derivatives: types, uses and pricing of derivatives - Primary and Secondary market for securities; SEBI; Its impact on the working of capital market in India; IRDA and its role in financial markets.

Module 6: International Financial Markets

Nature, organization and participants - Exchange rates - devaluation, and depreciation - Working of floating exchange rates since 1973 - Risk hedging and futures in exchange rates - International Financial Flows, forms and volume - Rise and fall of Brettonwood Institutions - International Liquidity - Post Maastricht developments - Reforms in International monetary system for developing countries - Lending operation of World Bank and its affiliates - Working of IDA and IFC. The Theory of optimum currency areas - Growth of Regional financial institutions. Asian Development bank and its lending activities; Asian Development Bank and India. Euro-dollar and Euro-Currency markets; their development role and regulation at the International level.

Books Recommended :-

- Bhole, L.M. (1999), Financial Institutions and Markets.
- Hanson, J.A. and S. Kathuria (Eds). (1999), India: A Financial Sector for the Twenty-first Century.
- Johnson, H.J. (1993), Financial Institutions and Markets.
- Machiraju, H.R. (1997), International Financial Markets in India.
- R.B.I. (1985), Report of The Committee to Review the Working of the Monetary system (Chakravarty Committee).
- R.B.I. (1995), Report of the working Group on Foreign Exchange Market in India.

M.A. Optional Paper

Paper - XVII

ECONOMICS OF INFRASTRUCTURE

PREAMBLE

The important role infrastructure plays in a country's development need not be reiterated. In case of developing countries, lack of adequate infrastructure has been held as a major obstacle to growth. Of the various categories of infrastructure, the category of social overhead capital has gained particular prominence. The contents of the paper 'Economics of infrastructure' exposes the student wholly to issues involved in development of infrastructure in developing countries like India.

Module 1: Introduction

Infrastructure and economic development - Infrastructure as a public good; Social and physical Infrastructure; Special characteristics of public utilities. The peak-load, Off-Load Problem, Dual Principle Controversy; Economies of scale of Joint supply; Marginal Cost-Pricing vs. other methods of pricing in public utilities; CrossSubsidization - free prices, equity and efficiency.

Module 2 : Transport Economics

The structure of Transport Costs and Location of Economic Activities. Demand for Transport Models of Freight and Passenger Demand. Model Choice; Cost Functions in the Transport Sector. Principle of Pricing. Special Problems of Individuals Modes of Transport; Inter-modal condition in the Indian Situation.

Module 3 : Communications

Rate-making in Telephone Utilities. Principles of Decreasing Costs in Telephone Industry. Characteristics of postal services. Criteria for Fixation of Postal Rates. Measurement of Standards of Service in Telephone and Postal Utilities.

Module 4: Energy Economics

Primacy of Energy in the Process of Economic Development. Factors Determining Demand for Energy, Effects of Energy Shortages. Energy Conservation.

Renewable and Non-conventional Sources of Energy. Energy Modelling. The Search for an Optimal Energy Policy in the Indian Context.

Module 5: Electricity, Gas and Water Supply

Bulk Supply and Pricing of Electricity. The Relative Economics of Thermal, Hydel and Nuclear Power Plants. The Case for a National Power Grid. Financing Water Utilities. Urban and Rural Water Supply. The Exploitation of Natural Gas. Pricing Problem.

Module 6 : Social Infrastructure

Organization and Financing of Supply of Social Services. Private vs. Public Sector Financing; Recent debate about the fixation of prices of social services. Development of social services in the successive Indian Plans.

Module 7: Education and Health

Education and Economic Growth. Approaches to Educational Planning. Social Demand. Rate of Return and Manpower Balance Approaches. The Case for Universal, Free, Primary Education; structure of higher education and problems of its flanking in India; Human Resources and Human Capital Development. The issues in education policy; Health dimensions of development; Determinants of Health - poverty, malnutrition, illiteracy and lack of information; Economic dimensions of health care -Demand and supply of health care; Financing of health care and resource constraints; Inequalities in health - class and gender perspectives Institutional issues in health care delivery.

Books Recommended :-

- Indian Council of Social Sciences Research (ICSSR) (1976), Economics of Infrastructure.
- Parikh, K.S. (Ed.) (1999), India Development Report- 1999-2000
- Keneafsey, J.T. (1975), Transportation Economic Analysis.
- Jha, R.M.N. Murty and S. Paul (1990), On Fixing Prices for Postal Services in India.
- Becker, G.S. (1974), Human Capital (2nd Edition).
- Tlak, J.B.G. (1994)-" Education for Development in Asia"

M.A. Optional Paper

Paper -XVIII

HISTORY OF ECONOMIC THOUGHT

PREAMBLE

This course is essential for a student who aspires for advanced training in economics. Contemporary economic science has evolved over many centuries. The evolution of economic ideas in each instance was as much a response to immediate economic problems and policy issues as much as it was a self-conscious attempt to refine earlier analysis by correcting mistakes and filling in the gaps in analysis. Economic ideas did not evolve in isolation, but were an integral and important part of the evolution of modern social thought. Prevailing ideas of science, scientific rigour and measurement played a significant role in the shaping of economic science at each stage of its evolution. This course, tracing the history of economic thought, would enable the student to understand how contemporary economics came to be what it is.

Module 1 : Early Period

Economic thought of Plato and Aristotle - Doctrines of just cost and just price; Mercantilism: main characteristics; Thomas Mun - Physiocracy; natural order, primacy of agriculture, social classes, Tableau Economique, taxation, Turgot - Economic ideas of Petty, Locke and Hume.

Module 2 : Classical Period

Adam Smith - division of labour, theory of value, capital accumulation, distribution, views on trade, economic progress; David Ricardo - value, theory of rent, distribution, ideas on economic development and international trade; Thomas R. Malthus - theory of population, theory of gluts; German romantics and socialists - Sismondi, Karl Marx - dynamics of social change, theory of value, surplus value, profit and crisis of capitalism; Economic ideas of J.B. Say, JS. Mill; Historical School - Senior, List.

Module 3 : Marginalists

The precursors of marginalism - Cournot, Thunen, Gossen - The marginalist revolution: Jevons, Walras and Menger - Bohm - Bawark, Wicksell and Fisher: the rate of interest - Wicksteed and Weiser: Distribution - Marshall as a great synthesizer: role of time in price determination, economic methods, ideas on consumer's surplus, elasticities, prime and supplementary costs, representative firm, external and internal economies, quasi-rent, organization as a factor of production, nature of profits; Pigou: Welfare economics; Schumpeter: role of entrepreneur and innovations.

Module 4: Keynesian Ideas

The aggregate economy, Liquidity Preference Theory and Liquidity trap, Marginal Efficiency of Capital and Marginal Efficiency of Investment, wage rigidities, underemployment equilibrium, role of fiscal policy: deficit spending and public works, multiplier principle, cyclical behaviour of the economy, uncertainty and role of expectations, impetus to economic modeling.

Module 5 : Indian Economic Thought

Early economic ideas: Kautilya, Valluvar; Modern economic ideas; Naoroji, Ranade, R.C. Dutt and M.N. Roy; Economic ideas of Gandhi; Swadeshi, Place of machine and labour, cottage industries, trusteeship; Early approaches to planning (The national planning committee); Gadgil: Co-operation as a way of life and strategy of development; J.K. Mehta: Wantlessness.

Books Recommended :-

- Gide, C. and G. Rist (1956), A History of Economic Doctrines,
- Roll, E. (1973). A History of Economic thought.
- Hajela, T.N. - "History of Economic Thought"
- सिन्हा एवं सिंघइ - "आर्थिक विचारों का इतिहास"
- पन्त, जीवन चन्द - "आर्थिक विचारों का इतिहास"

M.A. Optional Paper
Paper - XIX
ADVANCED STATISTICS

PREAMBLE

The main objective of this paper is to train the students to use the techniques of statistical analysis, which are commonly applied to understand and analyze economic problems. Application of statistical methods to problems dealt with in economic theory has been increasing over time. The emphasis of this paper is on understanding economic concepts with the help of statistical methods. Hence in this paper a student will be initiated into various economic concepts, which are amenable to statistical treatment. The paper also deals with simple tools and techniques which will help a student in drawing inferences about various hypothesis.

Module 1: Probability and expected value

Classical and empirical definitions of probability, laws of addition and multiplication, conditional probability and concept of interdependence, Bayes theorem and its applications, Elementary concept of random variable, mathematical expectation, moments and kurtosis.

Module 2 : Theoretical Distributions

Binomial, Poisson and Normal distribution, their properties and uses.

Module 3 : Basic Concept of Sampling

Sampling from finite population, types of sampling, small and large samples, sampling distributions, sampling from a normal population distribution of the sample means and variance.

Module 4: Estimation

Point and interval estimates, desirable properties of an estimator, estimate of true mean of population concept of confidence interval, estimation of difference in means and properties.

Module 5 : Hypothesis testing

Concept of simple and composite hypothesis, type I and type II errors, tests of significance for large samples. Two tailed test for difference between the means of two samples, standard error of the difference between two standard deviations, tests of significance for small samples - student's t-distribution, properties of t-distribution and application of the t-distribution.

Module 6 Chi - square test and goodness of fit

Definition, properties and uses of chi square test, conditions for applying X^2 test, Yates's correction.

Module 7 : Variance Ratio Test and Analysis of Variance

Application of F test, Analysis of Variance-one way classification and two way classification.

Module 8: Linear regression models

In two and three variables, method of least squares, specification and estimation Gauss Markov Theorem, confidence interval and testing hypothesis about coefficient of determination, simple multiple and partial correlation, rank correlation.

Module 9: Indian Statistics

Characteristics and reliability agricultural industrial, labour, population and national income statistics, A critical appraisal of Indian statistics.

Book Recommended :-

- Millen, J (1996) - "Statistics for Advanced Level"
- Gupta, S.c. (1993), Fundamentals of Applied Statistics"
- Speigal, M.R. (1992) "Theory and Problems of statistics"
- Elhance, D.N. "Fundamentals of Statistics"
- Gupta, S.P. - "Statistical Methods".
- सिंह एस०पी० - "सांख्यिकी सिद्धान्त एवं व्यवहार"
- नागर के० एन० - "सांख्यिकी के मूल तत्व"