GURU NANAK COLLEGE (AUTONOMOUS) REVISED PROPOSED SYLLABI FOR B.A ECONOMICS

By

BOARD OF STUDIES



POST GRADUATE AND RESEARCH DEPARTMENT OF ECONOMICS GURU NANAK COLLEGE, VELACHERY CHENNAI – 600 042

JANUARY 2017

APPENDIX – 11 (R & S) UNIVERSITY OF MADRAS GURU NANAK COLLEGE (AUTONOMOUS)

DEPARTMENT OF ECONOMICS

Introduction

There has been an increasing trend for ideas and methods from economics to be applied in wider contexts. Since economic analysis focuses on decision making, it can be applied, with varying degrees of success, to any field where people are faced with alternatives -, production, consumption, saving, investment and rate of returns. Economic Theories like Consumer Choice and Public Choice are fundamental to understand the functioning of an economy. The recent developments in economic analysis go beyond the traditional boundaries of Economics. The areas of investigation in economics, therefore, overlap with other social sciences, including political science and sociology.

The starting point for any meaningful analysis requires a thorough understanding of fundamental concepts and techniques of economic analysis. It is also essential to the understanding of development dynamics and to the formulation of good economic policy. At the later stage, one gains a working knowledge of these concepts and techniques only by applying them to real-life situations. The curriculum, therefore, emphasizes the application of the analytical techniques of economics in micro and macro-economic situations.

Economics studies how human beings allocate scarce resources to produce various commodities and distribute them optimally, so as to maximize their utilities. The essence of economics lies in the fact that resources are scarce, or at least limited, and that not all human needs and desires can be met. The distribution of these resources in the most efficient and equitable way is the principal concern of economists.

The field of economics has undergone a remarkable expansion in the 20th century as the world economy has grown increasingly large and complex. In the 21st century, greater challenges have to be faced with increased integration of domestic economy with the global economy.

Today, economists are employed in large numbers in industries, government (private and public sector) departments and higher education. Apart from this, financial institutions and international bodies largely absorb persons with training in Economics. This has been made possible because of the modifications in the subjects coming under Economics – traditional, analytical and specialized papers. The modification of the curriculum should be a continuous process, and the rapid strides made in the fields of economics, business and commerce should be considered while revising the curriculum.

Scope

Economists are employed in large numbers in industries, institutions and different departments of the Government. Financial institutions – both national and international absorb Economists with some training. With globalization the need for economists in business and industry is growing. Hence constant effort should be made to improve the skill and knowledge of the students of economics and make them employable.

Aims and Goals

- 1. To take cognizance of the different economic systems that are prevailing,
- 2. To make the students know about the basic functions of an economy,
- 3. To enable the learners understand the various markets and their roles in an economic set-up,
- 4. To hone one's skill in analysis and interpretation of economic principles,
- 5. To equip enough knowledge to start an enterprise.
- 6. To develop self-confidence among student community.
- 7. To cater to the present day need of the society.

Methodology:

Interactive method of teaching in the classroom will be appreciated. It should be more of a two way communication rather than the teacher dominant lecture alone method. Apart from lectures, case studies are recommended as it improves the analytical and interpretative skill of the students. Lecture method, use of visual media, case study, field visit, Assignment, Peer learning etc. can be adopted.

Materials:

The following are the learning materials suggested:-

- Text books
- Reference books
- Journals
- Records and
- CDs

• Articles from Internet

Media:

The following are the media of learning suggested:

- Chalk Board
- Printed Sheets
- Computer
- OHP
- PP
- LCD
- Oral

Outcome:

After completion of three years, the program should be able to demonstrate the

following abilities among the students:-

- To supply young economists.
- Employability.
- Develop the opportunities in analyzing the problems of society and finding a solution.
- To develop self-confidence.
- To meet the challenges of the ever changing economic environment.
- To develop skills and ethics
- To develop value orientation.
- To make them good citizens and to discharge their social responsibility.
- To prepare them for higher studies.

Sem	Part	Course Component	Subject Name	Hours	Credits
	Ι	Language	Tamil	6	3
	II	English	English	6	3
Ι		Core - I	Micro Economics- I	5	4
	III	Core - II	Statistics - I	5	4
		Allied - I	Industrial Economics *	5	5
	IV	1. NME	Basics of Capital Market *	3	2
		2. Skill based subjects	Soft Skills - Î		3
	Ι	Language	Tamil	6	3
П	II	English	English	6	3
	III	Core - III	Micro Economics- II	4	4
		Core - IV	Statistics - II	5	4
		Allied - II	Basic Econometrics *	5	5
	IV	1. NME	Indian Economy for Civil Service Exam.*	3	2
		2. Skill based subjects	Soft Skills -II		3
	Ι	Language	Tamil	6	3
	II	English	English	6	3
III	III	Core - V	Indian Economic Development - I	5	4
		Core - VI	Money and Banking - I *	5	4
		Allied - III	Marketing - I	6	5
	IV	Part - IV	Environmental Studies	2	2
		Skill based subjects	Soft Skills -III		3
	Ι	Language	Tamil	6	3
	II	English	English	6	3
IV	III	Core - VII	Indian Economic Development - II	5	5
		Core - VIII	Money and Banking - II *	5	4
		Allied - IV	Marketing - I	6	5
	IV	Part - IV	Environmental Studies	2	2
		Skill based subjects	Soft Skills - IV		3
V	III	Core - IX	Macro Economics - I	6	4
		Core - X	Fiscal Economics - I	6	4
		Core - XI	International Economics - I	6	4
		Core - XII	History of Economic Thought	6	4
		Elective - I	Economics of Population Studies *	4	5
	IV	Part - IV	Value Education	2	2
VI	Ш	Core - XIII	Macro Economics - II	6	4
		Core - XIV	Fiscal Economics - II	6	4
		Core - XV	International Economics - II	6	4
		Elective - II	Tamil Nadu Economy	6	4
		Elective - III	Urban Economics *	6	5
	V	Extension Activities			1

GURU NANAK COLLEGE B.A. ECONOMICS - COURSE STRUCTURE

* New Papers

COURSES OF STUDY

A. Core Papers

- 1. Micro Economics I
- 2. Micro Economics II
- 3. Statistical Methods I
- 4. Statistical Methods II
- 5. Macro Economics I
- 6. Macro Economics II
- 7. Money and Banking I
- 8. Money and Banking II
- 9. Indian Economic Development I
- 10. Indian Economic Development II
- 11. Development of Economic Doctrine
- 12. Fiscal Economics I
- 13. Fiscal Economics II
- 14. International Economics I
- 15. International Economics II

B. Allied Papers

- 1. Industrial Economics
- 2. Entrepreneurial Development
- 3. Basic Mathematics for Economists
- 4. Basic Econometrics

C. Elective Papers

- 1. Economics of Population Studies
- 2. Marketing
- 3. Urban Economics

D. Non-Major Electives (NME)

- 1. Basics of capital Market
- 2. Indian Economy for civil Services

E. Part IV

- 1. Environmental Studies
- 2. Value Education

Evaluation Pattern

The Evaluation pattern comprises of Continuous Internal Assessment (CIA) and External Examination (EE).

- For Continuous Internal Assessment (CIA) 50 marks may be allotted. The components may be as follows:
 - (a) Test (for one hour) = 15 marks (3 tests may be conducted, the average of the best 2 may be taken into account)
 - (b) Assignment Individual or Group = 5 marks
 - (c) Presentations = 5 marks
- (2) External Evaluation The total marks 100 (50 marks) Question paper pattern for all subjects:

Section A ($10 \ge 20$ marks) Short Answer Questions

Ten questions out of twelve

Section B (5 x 8 = 40 marks) Paragraph questions

Five questions may be answered out of seven, with open choice. Each answer shall not exceed 4 pages.

Section C ($4 \ge 40$ marks) Essay type questions

Four questions out of six. Each answer shall not exceed six pages.

Passing Minimum

For passing, put together an aggregate of (both internal and external) 40 marks in each paper is mandatory. However, for External Examination, the passing minimum is 40 marks.

For Awarding Classes:

40% to 49%	Third Class
50% to 59%	Second Class
60% to 74%	First Class
75% and above	Pass with Distinction

GURU NANAK COLLEGE

UNIVERSITY OF MADRAS

B.A. DEGREE COURSE IN ECONOMICS

CHOICE BASED CREDIT SYSTEM

FIRST SEMESTER

CORE PAPER I: MICRO ECONOMICS - I

Objectives

- 1. To acquaint students with the fundamental concepts, methods and principles of consumption and production branches of economics.
- 2. To enable students to understand the economic motives and behaviour patterns of individual consumer.
- 3. To help the students to relate their day to day experience to the principles of economics.

Unit – I: Scope and Methodology of Micro Economics

Definition of Economics – Adam Smith – Marshall – Robbins – Samuelson – Modern – Micro Economics – Its importance and limitations - Methodology of Economics – Deductive method and Inductive method – Static and Dynamics - Economic Laws

Unit – II: Theory of Consumer Behaviour – Cardinal Utility Analysis

Concept of Utility – Cardinal Utility – Ordinal Utility - Law of Diminishing Marginal Utility – Law of Equi-marginal utility – Concepts of Demand and Supply – Law of Demand – Law of Supply.

Elasticity of Demand – Price Elasticity of Demand – Income Elasticity of Demand – Cross Elasticity of Demand – Measurement of Elasticity of Demand – Factors influencing Elasticity of Demand – Concept of Demand Forecasting - Consumer's Surplus – Importance and Weakness.

Unit – III: Theory of Consumer Behaviour – Ordinal Utility Analysis

Indifference Curve Technique– Features of Indifference Curve – Consumer's Equilibrium – Price Effect – Income Effect – Substitution Effect – The Principles of DMRs – Hicks Revealed Preference Theory.

Unit – IV: Theory of Production

Factors of Production – Features – Production Function – Cobb Douglas Production Function – Law of Diminishing Returns – Law of Increasing Returns – Law of constant Returns – Law of Variable Proportions – Returns to Scale – Equal Product Curves – The Principle of DMRTS – Producer's Equilibrium Internal and External Economies and Diseconomies of scale of production.

Unit – V: Cost and Revenue Curves

Concepts of Cost – Fixed Cost – Variable Cost – Total Cost – Average Cost – Marginal Cost – Average Cost Curves – Nature of Short Run and Long Run Average Cost Curves – Derivation of LAC Curve – Revenue Concepts – Total Revenue – Average Revenue – Marginal Revenue – Relationship between Average Revenue & Marginal Revenue – Break-even Analysis.

Text Books

- 1. Salvatore Micro Economics, 4/e, Oxford University Press, New Delhi, 2002.
- 2. Dewett.K.K Micro Economics.
- 3. Jhingan M.L. and C.Murthy Micro Economics, Vrindha Publication, New Delhi, 2016.

- 1. Ahuja H.L. (1996) Principles of Micro Economics, A New look at Economic Theory, S.Chand & Company Ltd. New Delhi.
- 2. Jhingan M.L., Micro Economic Theory, Konark Publishers Pvt Ltd, New Delhi.

CORE PAPER 2: STATISTICAL METHODS - I

Objective:

To understand the importance of essential concepts of Statistics.

Unit - I: Importance of Statistics and Presentation of Data

Statistics, Definition – Relationship with other subjects – Functions, Objects, Importance and Limitations; Classification, Tabulation and Editing of Data – Diagrammatic and Graphic Presentation of Data.

Unit - II: Sources and Methods of Data Collection

Primary and Secondary Data – Methods of Collecting Primary data: Census Method– Planning a Statistical Investigation – Questionnaire – Interview Schedule – Sampling Error – Sources of Secondary Data: Published and Unpublished – Sourcing through Online searches.

Unit - III: Measures of Central Tendency

Measures of Central Tendency – Types of Averages – Mean, Median, Mode, Harmonic Mean, Geometric Mean.

Unit – IV: Measures of Dispersion

Measures of Dispersion – Meaning – Properties of Dispersion – Range, Quartile Deviation – Mean Deviation, Standard Deviation – Coefficient of Variation – Lorenz curve – Gini Co-efficient.

Unit – V: Skewness and Kurtosis

Skewness – Meaning – Difference Between Dispersion and Skewness, Karl Pearson's and Bowley's Measures of Skewness – Co-efficients Based on Moments – Kurtosis – Meaning – Patterns of Kurtosis.

PRACTICALS

Preparation of Interview schedule

- 1. Gupta, S.P. Statistical Methods, S.Chand & Company, New Delhi, 1982.
- 2. Pillai, R.S.N. and V.Bhagavathi Statistics Theory and Practice, S.Chand & Company, New Delhi, 1993.
- 3. Croxton, F.E., D.J.Cowden and S.Klein Applied General Statistics
- 4. Gupta, S.C. and V.K. Kapoor Speigal, M.R. Theory and Problems of Statistics

ALLIED – I: INDUSTRIAL ECONOMICS

Objective

To expose the students to understand the relationship between industry and economic development, and its dynamics.

Unit – I: Introduction

Meaning and importance of industrial economics - Rationale of industrialization – Concepts of industrialization – Innovation – Entrepreneurship – Technology – Industrial Organization: Proprietorship – Partnership – Joint Sector – Co-operative Sector – Public Sector Enterprises – Multinational Corporations.

Unit – II: Industrial Location

Industrial Location – Theories of Industrial Location – Alfred Weber – Bosch – Sergeant Florence – Methods of Induction and Deduction – Factors determining Industrial Location – Industrial Location and Performance – Industrial Size – Large – Small – Tiny and Cottage Industries – Micro Enterprises.

Unit – III: Industrial Productivity

Industrial Productivity – Scope and Significance – Measurement – Factors influencing productivity – Productivity Movement in India – National Productivity Council – Principles of Industrial Management.

Unit – IV: Industrial Finance

Industrial Finance – Term Finance: Short Term, Long Term – Lease Financing – Sources: Capital Market – Financial Institutions – Indian Capital Market – Specialized Financial Institutions: IFCI – IDBI – SIDBI – SFCs.

Unit – V: India's Industrial Performance

Contribution of Industries to GNP – Major Indian Industries – Traditional: Cotton Textile – Sugar – Paper – Cement – Coal – Iron & Steel – Modern: Electronics – Engineering Goods – Food processing – Industrial Entrepreneurship: Need for EDPs – Development of Women Entrepreneurship.

- 1. Ahuluwalia I.J. Industrial Growth in India Oxford University Press, New Delhi (1995)
- 2. Barthawal R.R. Industrial Economics An introductory text book, Wiley Eastern Ltd., New Delhi (1992)
- 3. Singh A. and A. N.Sadhu, Industrial Economics, Himalaya Publishing House, Bombay (1988)
- 4. Devine P.J. An introduction to Industrial Economics, George Allen and Unwin, London (1978)
- 5. Dhingra. I.C, Indian Industrial Economy, Sultan Chand & Co, New Delhi (1972).
- 6. Dutt Ruddar and Sundaram K.P.M., Indian Economy, S.Chand and Co, New Delhi (2004)
- 7. Kuchal S.C. Industrial Economy of India Chitanya Publishing House, Allahabad.

NME - I -BASICS OF CAPITAL MARKET

Unit - I

Capital Market - Definition - Growth of Capital Markets - Functions - Structure of Capital Market.

Unit - II

Long Term finance - sources - Financial Institutions - LIC - UTI - IDBI - ICIO - Mutual Funds.

Unit. III

Corporate Securities - Equity Shares - Preference Shares - Debentures and Bonds - Global Depository Receipts.

Unit - IV

Public Issue of Shares - Primary market - Secondary market - Issue of shares at par and at premium - Functions of Stock Exchanges - Role of Securities and Stock Exchange Board of India (SEBI).

- 1. Kuchal S.C. Corporate Finance.
- 2. Chandru Financial Management.
- 3. Varma & Agarwal Corporation Finance.
- 4. Aganrual, A.N. Indian Economy.

SECOND SEMESTER

CORE PAPER III: MICRO ECONOMICS - II

Objectives

- 1. To impart an understanding about the behaviour of the producer in different types of market and pricing of factors of production.
- 2. To study the pattern of resource allocation for the well being of the society.

Unit – I: Theory of Product Pricing

Market structure – Meaning – Types – Perfect competition – Price and Output determination – Equilibrium of the firm and industry in short and long run – Role of time element.

Unit – II: Monopoly

Simple Monopoly – Discriminating Monopoly – Price and Output determination under simple and discriminating Monopoly – Concept of Bilateral Monopoly – Monopsony – Duopoly.

Unit - III: Monopolistic Competition & Oligopoly

Features of Monopolistic Competition – Equilibrium of firm and Industry under short run and long run (Group Equilibrium) – Selling cost – Oligopoly: Features – Price determination – Kinked demand curve model – Price leadership.

Unit – IV: Theory of Factor Pricing

Marginal productivity theory of distribution – Rent – Ricardian theory of Rent – Modern theory of rent – Wages – Real and Nominal Wage – Demand and supply theory – Causes for wage difference – Trade Unions and Wages – Interest – Classical – Neoclassical – Keynes' Modern theory of Interest – Profit – Gross and Net Profit – Theories of Profit – Risk and uncertainty theory – Innovation theory.

Unit – V: Welfare Economics

Meaning of Social Welfare – Different concepts of Social Welfare – Pareto criteria – Amartya Sen's views on Welfare Economics.

- Stonier and Hague, A Text Book of Economic Theory, Long Mans Green & Co, London, 1958.
- 2. Seth M.L., Principles of Economics, Lakshmi Narain Agarwal, Agra, 1991.
- 3. Ahuja H.L. Principles of Micro Economics, S.Chand & Co, New Delhi, 2001.
- 4. Price, M.C, Welfare Economics, Macmillan, London, 1977.
- 5. Samuelson Paul. A, Price Theory.

CORE PAPER- IV: STATISTICAL METHODS - II

Objective:

To understand the significance of advanced concepts of Statistics.

Unit – I: Correlation

Correlation – Meaning, Types, Importance – Correlation and Causation – Methods of Studying Correlation – Scatter Diagram – Karl Pearson's Coefficient of Correlation – Spearman's Coefficient of Correlation – Rank Correlation.

Unit – II: Regression

Regression Analysis: Definition, Uses – Methods of Studying Regression – Method of Least Squares – Correlation and Regression.

Unit – III: Index Number

Index Numbers: Meaning and Need – Construction of Index Numbers – Procedure of Construction – Methods of Measuring Price Index Numbers – Laspeyre's, Paasche's, Fisher's Index Numbers – Problems in the Construction of Index Number – Construction of Cost of Living Index Number and its use.

Unit – IV: Time Series

Analysis of Time Series – Components – Measurement of Secular Trend – Uses of Time Series Analysis – Moving averages - three years and five years – least square method of trend analysis.

Unit – V: Probability

Meaning and Importance of Probability – Types of Probability – Probability Theorems - addition and multiplication theorem.

- 1. Gupta, S.P. Statistical Methods, S. Chand & Company, New Delhi, 1982.
- 2. Pillai, R.S.N. and V.Bhagavathi, Statistics Theory and Practice, S Chand & Company, New Delhi, 1993.
- 3. Croxton, F.E., D.J.Cowden and S.Klein Applied General Statistics
- 4. Gupta, S.C. and V.K.Kapoor Speigal, M.R. Theory and Problems of Statistics

ALLIED II: ENTREPRENEURIAL DEVELOPMENT

Unit – I

Meaning of entrepreneur – Theories – Classical – Neo Classical – Schumpeter's Innovations theory.

Unit – II

Role and importance of Entrepreneurship – Character of entrepreneur – Relationship between entrepreneur, Entrepreneurial and Entrepreneurship – Functions of Entrepreneur – Types of entrepreneur – classification of entrepreneur.

Unit – III

Evolution of Indian entrepreneurship – Ideology of Mahatma Gandhi on entrepreneurship – Role of entrepreneurship in Economic Development – Role of Government and non-government organization policies and programmes on entrepreneur development – Industrial Policy.

Unit – IV

Micro, Small, Medium Enterprises (MSME) and Indian Economic development – Small scale industries and entrepreneurial development – Concessions – Incentives and subsidies to Small scale Industries – SIDBI – Venture Capital.

Unit – V

Project appraisal – Classification of Projects – Project appraisal – Formation of business ideacontents of Project Report.

- 1. Bhattacharya, H Entrepreneurial Development
- 2. Gupta, C.8. & Srinivasan. N.P. Entrepreneurial Development in India
- 3. Jayashree Suresh Entrepreneurial Development.
- 4. Kuldeep Mathbus.A.P. Entrepreneurship Development under TRysEM.
- 5. Misra.P.N. Development Bank and New Entrepreneurship in India.
- 6. Rao, S.K. Entrepreneurial Development in India.

NME – II - INDIAN ECONOMY FOR CIVIL SERVICE EXAMINIATIONS

Unit - I

Economic Development - Measurement of Development - Cause of under development - Development and the New Economic Policy - Development and the environment.

Unit - II

Population - population growth - Age composition of population - population policy.

Unit III

Poverty - Measurement of Poverty - Poverty line - Policies for poverty alleviation - Poverty and Regional Disparity.

Unit IV

Price policy and Inflation History to price rise in India. causes of Inflation- Inflation and Price control in the post - reform period - Monetary and fiscal policies.

- 1. Ruddar Datt and Sundaram K.P.M. Indian Economy.
- 2. Jhingan, M.L. The Economic of Development & Plan- ning.
- 3. Ahuja, H.L. Economic Environment of Business, Macro Economic Analysis.
- 4. General Studies Manual for the UPSC Civil Seruices Preliminary Examination (Latest edition).
- 5. Indian Economy Exam Oriented Series Praitiyogita Darpan.

THIRD SEMESTER

CORE – V MACRO ECONOMICS - I

Objectives

- 1. To make the students understand the functional relationship between macro aggregates.
- 2. To study the various concept of macro economics

Unit – I: Introduction to Macro Economics

Definition – Nature and scope of Macro Economics significance and limitations of macro economics. Difference between micro and macro economics. Types of macro economics, static macro economics, comparative static macro economics and dynamic macro economics.

Unit – II: National Income

Definition – concept of national income, personal income and disposable income, GNP, NNP, National income and other related concepts. Methods of measurement of national income – Difficulties in measurement of national income – Uses of National income estimates.

Unit – III: The classical theory of Employment

Meaning, assumptions of classical theory of employment, say's law of markets, determination of output and employment, labour market equilibrium, wage price flexibility, goods market equilibrium money market equilibrium. Keynes's criticism of classical theory.

Unit – IV: Consumption Function

Consumption function hypothesis, average and marginal propensity of consume, relationship between APC and MPC Keynes's psychological law of consumption function, implications of keynes's law, determinants of the consumption function, Equation of linear consumption function.

Unit – V: Investment function

Meaning of investment, types of investment – business fixed investment, residential investment, inventory investment, Autonomous and induced investment – Determinants of investment, marginal efficiency of capital and MEI Keynesian model of income and employment determinations.

- 1. Dillard .D Macro Economics
- 2. Shapiro .E Macro Economic Analysis
- 3. Gupta R.D. Introduction to Post Keynesian Economics
- 4. Mithani. D.M. Macro Economics
- 5. Ahuja .H.L. Macro Economics

CORE VI: MONEY AND BANKING - I

Unit – I: Introduction to Monetary Economics

Meaning and nature of monetary economics, scope of monetary economics – importance of monetary economics – Barter system – Evolution of money – Qualities of good money.

Unit – II: Functions of Money

Definition of money, kinds of money, functions of money, Role of money in capitalist economy, socialist and mixed economy. Evils of money and need for control.

Unit – III: Monetary Standards

Farm of monetary standard – metallic monetary standards – paper standard. Gold standard – Features of Gold standard – Causes of failure of Gold standard.

Unit - IV: Money Supply and Demand

Components of money supply and demand – Neutrality of money – Classical dichotomy – Quantity theory of money – transaction approach cash balance approach of Cambridge approach – Real balance approach. Cash balance approach vs Transaction approach.

Unit – V: Inflation and Deflation

Inflation	:	Meaning, causes, types, effects – Theories of inflation – inflationary gap – control of inflation – philip's curve.
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Deflation : Meaning, causes, effects control of deflation – stagflation.

- 1. Gupta .S.B. : Monetary Economics
- 2. Sethi .T.T. : Monetary Economics
- 3. Kishore, G. Kulkarni : Modern Monetary Theory
- 4. Gupta .G.P. : Monetary Policy of the Reserve Bank of India
- 5. Mithani, D.M. : Money, Banking, International trade & Public finance

ALLIED – III: BASIC MATHEMATICS FOR ECONOMISTS

Unit I: Introduction to Mathematics for Economists

Nature of mathematical economics – Ingredients of a mathematical model in economics – Terminology, concepts, and tools – graphs and Co-ordinates – intercept and slope of a straight line equation in Economics.

Unit II: Mathematical Modeling

Elementary functions – Linear functions – non linear functions –Simple Applications of functions in Economics: derivation of linear demand and supply functions.

Unit III: Vector and Matrix Notations

Matrix – introduction to matrix – matrix addition, subtraction and multiplication – solving the equations through matrix analysis – inverse of matrix – rank of a matrix – Linear programming – Uses of linear programming in economics – Calculating linearity – using graphical method.

Unit IV: Differentiation

Basics of differential calculus – Derivations of differential calculus formula – Simple calculation on differential calculus – General equilibrium – Partial equilibrium analysis. Applications of differential calculus – maxima and minimum – cost and production analysis – elasticity – revenue function – profit analysis.

Unit V: Exponentials and Natural Logarithms

Integral calculus – simple analysis – definite and indefinite integrals – area under the curve – Consumers surplus – Producer's surplus – Production and costs.

- 1. Anthony, Martin & Biggs, Norman (2009), Mathematics for Economics and Finance Methods and Modelling, Cambridge University Press, New York.
- 2. Bradley, Teresa & Patton, Paul (2002), Essential Mathematics for Economics and Business, Wiley India Private Ltd., New Delhi.
- 3. Chiang, A.C. (1986), Fundamental Methods of Mathematical Economics, McGraw Hills, New York.

PART – IV: ENVIRONMENTAL STUDIES

Unit - I

Economics and Environment - Definition and role of Environmental Economics - Scope and Significance of Environmental economics - Ecology and Ecosystem - Relationship between the environment and the Economic system - Environment as a Resource - Environmental Quality.

Unit - II

Resources - Concepts and definition - Classification of Resources - Renewable and nonrenewable resources -Definition and meaning of Conservation of Resources - Material Substitution - Product Life Extension - Recycling - Rain Water Harvesting - Waste Reduction.

Unit - III

Energy - Definition - Sources of Energy and their classification - Renewable and non-renewable sources of energy - Conventional and non-conventional energy resources - Direct and indirect energy - Atomic Energy - Energy Scenario in India.

Unit - IV

Pollution as an Economic problem - Pollution control - Optimum Level - Moral suasion - Direct control - Regulation - Fiscal technique - Effluent Charges and subsidies compared.

Unit - V

International Environmental Policy - Transfrontier Pollu- tion - International Agreements -Stockholm Conference on Human Environment - Recommendations - United Nations Conference on Environment and Development at Rio-De Janeiro (Agenda 21, June, 1992) -An assessment.

- 1. Pearce .G.W. Environmental Economics
- 2. Joseph .J. Sereca & Micheal K. Taussig Environ- mental Economics
- 3. Kneese, A.V. Economics of Environment
- 4. Krister Higalte, Karl Lidgren & Ingenar Stand Envi- ronmental Policy and Welfare Economics
- 5. Burrows Paul The Economics Theory of Pollution Control
- 6. Jayant Bandhopadhyay India's Environmental Crisis and responses

FOURTH SEMESTER

CORE: VII MACRO ECONOMICS - II

Unit – I: Theory of Multiplier

The concept of investment multiplier – Diagrammatic representation of multiplier, leakages in the multiplier process, static and dynamic multiplier, induced investment multiplier, govt. expenditure multiplier, tax multiplier, balanced budget multiplier and foreign trade multiplier. Principle of acceleration, super multiplier.

Unit - II: Keynes' Theory of Output and Employment

Simple Keynesian model, demand for money in the Keynesian theory – Liquidity trap – Keynesian economics in developing countries, Keynesian theory, tools policy measures.

Unit - III: Post Keynesian Theories of Demand for Moeny

Tobin's portfolio Approach to demand for money – Tobin's Liquidity preference function – Baumols Inventory approach to transactions demand for money – Friedman's theory of demand for money.

Unit - IV: Unemployment and full Employment

Types of unemployment, meaning of Full employment, measures to achieve and maintain full employment. Nature and causes of unemployment in development countries.

Unit – V: Keynes versus Classics

Keyne's versus classical theory of aggregate demand – the classical and Keynesian theories of aggregate supply – saving – investment relation classics vs Keynes explanation about depression and inflation.

- 1. Jhingan .M.L. Macro Economic Theory
- 2. Vaish .M.C. Macro Economic Theory
- 3 Sankaran .S Macro Economics
- 4. Brooman Macro Economics
- 5. Derberg and Mc. Dougal Macro Economics

CORE PAPER VIII: MONEY AND BANKING- II

Unit – I: Introduction of Banking

Definition of Bank, classification of banks evolution of banking – Branch banking and unit banking – banking operations sources of banking funds – investment policy of banks – Bank's investments profitable and non-profitable investments. Securities regarding loans – personal security and collateral security.

Unit – II: Commercial Banking

Meaning, structure and functions of commercial bank – credit creation. Nationalisation of commercial bank. Balance sheet of the commercial bank.

Unit – III: Central Banking (RBI)

Definition, nature and functions of central banking principles of RBI, comparison between RBI and commercial banking. RBI and economic growth.

Unit – IV: Monetary Policy

Meaning and objectives of monetary policy – methods of credit control – objectives of credit control – limitations of monetary policy.

Unit – V: International Monetary Fund and world Bank (IBRD)

Objectives, organization, IMF and gold standard, advantages and criticism of IMF India an IMF – special drawing rights (SDR) – World Bank objectives – organization – functions and limitations.

- 1. Jhingan .M.L. : Monetary Economics
- 2. Sankaran .S : Monetary Economics
- 3. Seth M.L. : Money, Banking and International Trade
- 4. Vaish .M.C. : Monetary Theory
- 5. Cauvery and Others : Monetary Economics

ALLIED - II : BASIC ECONOMETRIC METHODS

Objectives:

On successful completion of the course the studentsshould have understood the estimation techniques, learned the difficulties involved in the estimation process, evaluation of parameters and understand scientific decision making process.

UNIT –I: Econometrics

Meaning, Definition and Scope of Econometrics – Types and Methodology of Econometrics – Importance of Stochastic Assumptions – Random Variables- Functions of Random Variables.

UNIT -II: Correlation

Types of Correlation - Simple Linear Regression Model - Methods of Ordinary Least Squares – Assumptions and Properties of OLS Estimators –Standard Errors of Least Square Estimates - Test of Significance of the Parameter Estimates – Measure of Goodness of Fit.

UNIT-III: Regression Analysis

Analysis of Variance - Functional Forms of Regression Model - Assumptions of Randomness of 'u' – Probability Distribution of Disturbances 'u' – Properties of OLS Estimator Under the Normality Assumption.

UNIT – IV: Forecasting

Nature of Forecasting – Econometric Approach to Forecasting – Policy Evaluation Using an Econometric Model - Forecasting with a Single Equation Linear Regression Model - Testing the Difference Between a Single Prediction and Realization.

UNIT –V: Maximum Likelihood

Introduction to Maximum Likelihood Estimation – Maximum Likelihood Applied to a Linear Regression Model – Transformation of Variables and Maximum Likelihood – Using SPSS, E-Views and STATA Packages.

- 1. William H. Greene "Econometric Analysis," Pearson Education.
- 2. A.Koutsoyiannis, "Theory of Econometrics: An Introductory Exposition of Econometric Methods", Educational Low-Priced Books Scheme, McMillan Education Ltd.,(1992)..ls2
- 3. Damodar Gujarathi "Basic Econometrics", Tata MCGrawHill Ltd, 1999.4th ed.

FIFTH SEMESTER

CORE PAPER - IX: INDIAN ECONOMIC DEVELOPMENT - I

Objectives:

- 1. To understand the nature and characteristic feature of Indian Economy.
- 2. To familiarize the students on sector wise development issues.

Unit – I Characteristic Features of Indian Economy

Pre Independence Era: British Regime – Drain Theory – Underdeveloped Country – Post Independence Scenario: Socialistic Pattern of Society – Planning – Nationalization – Meaning of Development and Growth – Indicators of Development – Major issues of Development – Determinants of Development – Developing Economy: Reforms – Towards Development – Vision 2020.

Unit – II Population and Human Resource

Size and Growth of Population in India – Demographic indicators – Population Policy in India – Occupational Structure – Work Participation Rate – Literacy – Higher Education – Health Infrastructure – HDI – India's Rank and Position.

Unit – III Natural Resources, Agriculture and Rural Development

Natural Resources – Land – Minerals – Fresh Water – Fisheries – Role of Agricultural Sector in Indian Economy – Agricultural Growth since 1951 – Cropping Pattern – Productivity – Green Revolution – National Agriculture Policy – Infrastructure and Rural Development – PURA Model.

Unit – IV Infrastructure and Industrial Sector

Infrastructure and Economic Development – Energy – Power – Transport – Science and Technology – Industrial Policy – 1948, 1956, 1991 – Role of Public Sector Undertakings – Shortcomings – Disinvestment – Its critique – SSIs – Ancillary Industries – Modern Sectors: Engineering, Electrical and IT Sectors.

Unit – V Emergence of Service Sector

Service Sector – Performance and Growth – Banking – Insurance – Telecommunications – Reforms and Foreign Participation in Service Sector.

- 1. Ruddar Dutt. and K.P.M. Sundaram, Indian Economy, Sultan Chand, New Delhi, 2000.
- 2. Dhingara I.C, The Indian Economy, Environment and Policy, Sultan Chand, New Delhi,1992.
- 3. Misra S.K. and V.R.Puri Indian Economy: Its Development Experience, Himalaya Publications, Bombay, 1983.

CORE PAPER X: FISCAL ECONOMICS - I

Objectives

To enable the students to be acquainted with sources of revenue of Government and its method of Financial Management.

Unit – I: Nature and Scope of Public Finance

Nature and Scope of Public Finance – Difference between Public and Private Finance – Principle of Maximum Social Advantage – Fiscal Functions – Allocation, Distribution and Stabilization.

Unit – II: Public Expenditure

Meaning, Classification, Canons of Public Expenditure – Theories of Public Expenditure – Wagner's Law of State Activity – Pigou – Samuelson – Growth of Public Expenditure – Trends – Causes for Increasing Public Expenditure – Effects of Public Expenditure – Growth.

Unit – III: Taxation

Public revenue sources – Distinction between tax revenue and non-tax revenue – Taxation – Meaning – Sources of taxation – Classification of taxes – Proportional, progressive, Regressive, Direct and Indirect taxes – Canon of taxation – Theories of taxation – Ability to pay and benefit principle - Impact and incidence of taxation – Effects of taxation.

Unit – IV: Individual Taxes

Individual taxes - (with reference to India) Income Tax - Expenditure tax - Wealth tax - Property tax - Estate duty - Gift tax - Death duty - Customs duty - Excise duty - Sales tax - Value Added Tax - Service tax and entertainment tax.

Unit – V: Taxation Capacity

Characteristics of a good tax system - Taxable capacity - Factors determining taxable capacity - Limits - Measurements of taxable capacity.

- 1. Dalton Hugh Principles of Public Finance, Routledge and Keygan Paul, London, 1954.
- 2. K. Vasudevan Public Finance
- 3. Rajah J. Chelliah Fiscal Policy in Underdeveloped Countries, George Allen and Unwin, London, 1980.
- 4. Tripathy R.N. Fiscal Policy in Underdeveloped Countries
- 5. Tyagi, B.P. Public Finance, Jai Prakash Nath & Co, Merrut, 2000.

CORE PAPER XI: INTERNATIONAL ECONOMICS - I

Unit - I

Foreign Trade - Need, Inter Regional and International Trade, Theories of International Trade - Adam Smith - Ricardo, Haberler and Heckscher - Ohlin Theory.

Unit - II

Terms of Trade - different Concepts of Terms of Trade - Determinants of Terms of trade - static and dynamic gains from trade - capital saving and labour saving technologies and its impact on terms of trade.

Unit - III

Gains from trade - Trade Policy - Free Trade: Meaning - Case for and against Free Trade. Protection: Meaning - Arguments for and against protection.

Unit - IV

Tariff: Meaning and types - Effects of Tariff. Quotas: Mean- ing and Types - Effects of quotas on imports.

Unit - V

Balance of payment - Meaning - Structure - Balance of Payment and Balance of Trade - Disequilibrium in BOP & BOT - Causes for disequilibrium in BOP - Measures for correcting disequilibrium.

CORE PAPER XII: DEVELOPMENT OF ECONOMICS DOCTIRINE

Objective:

Economic ideas did not evolve in isolation. A student graduating in Economics should get familiarized with at least the significant contributions made by great Economists from time to time, so that she/he is able to understand and appreciate the controversial questions in the development of the subject. The course is also essential for a student who aspires for an advanced study in the field of Economics.

UNIT – I Evolution of Early Economic Ideas

Nature and significance of the subject – Mercantilism – Physiocracy - Adam Smith: Division of Labour – Theory of value-capital accumulation – Distribution – Views on Government – Economic progress - David Ricardo – Value – Theory of rent – Distribution – Ideas on Economic Development – International Trade - Thomas Robert Malthus – Theory of Population – Theory of Gluts - J.S.Mill – Stationary State – Value – Production – Distribution.

Unit – II Alternative to Classical Economics

Karl Marx – Marxian Philosophy – Surplus theory of value - Nationalist School – Fredrick List - Institutional School – Thorstein Veblen.

Unit – III The Marginal Revolution

Marginalist School – Features - Economic Doctrines of Gossen, Menger and Jevons - Pigou's Welfare Economics - Schumpeter – Role of Entrepreneur and Innovations.

Unit – IV Modern Developments in Economics

Neo-Classical Economics – Theory of Rational Expectations – Market clearing mechanism – Supply side economics – Neo-Keynesian Economics – Features – Micro foundations to Macro Economics – Alternative approach to market clearing mechanism – Applied welfare economics – Amartya Sen

Unit – V Indian Economic Thought

Evolution – Ancient Texts – Arthasasthra – Thirukural – Naoroji – Ranade – Gokhale - Economic ideas of Gandhiji – Village and Swadeshi – Place of

Machinery and Labour – Cottage Industries – Trusteeship – Approaches to planning (Nehru and Mahalanobis): Gajendra Gadgil – Co-operation as a strategy of development – V.K.R.V. Rao and National Income Analysis -J.K.Mehta: Ideal on the ideal of wastelessness – J.C. Kumarappa – Economy of Permanance – C.N. Vakil – B.R. Bramananda: Wage Goods Model.

- 1. Blackhouse, R (1985), A history of Modern Economic Analysis, Basil Blackwell, Oxford
- Ganguli, B.D.(1977), Indian Economic Thought; A 19th Century Perspective, Tata Mc Graw Hill, New Delhi.
- 3. Gide, A. and A.E. Thomson (1980), The Development of Economic doctrine, (2nd edition), Longman Group, London.
- 4. Gandhi, M.K. (1947), India of my dream, Navajivan publishing house, Ahmedabad
- 5. Schumpeter, J.A. (1957), Ten Great Economists, Oxford University Press, New York.
- 6. Roll, Erick, History of Economic Thought, Faber & Faber, London, 1973.
- 7. Balasubramanyam, V.N, Conversation with Indian Economists, Macmillan, Delhi, 2001.

ELECTIVE – I: ECONOMICS OF POPULATION STUDIES

Objectives:

On successful completion of the course the studentsshould have an understanding about (i) basic concepts in Economics I, (ii) population growth and economic development, (iii) basic concepts in manpower and labour force, and (iv) labour force in India.

Unit I: Basic Concepts in Economics

Economic goods, wealth, welfare, utility, consumer preference. Indifference curves, law of diminishing marginal utility, law of substitution, Demand, supply, price, income and price elasticity, production: function, factors of production, laws of substitution, Demand, supply, price, income and price elasticity, Production: function, factors of production, laws of return.

Unit II: Manpower and Labour Force: Basic Concepts

Economic Structure of labour force: Industrial and occupational classifications, Age-sex patterns of participation, social, economic, cultural, factors influencing participation. Unemployment and underemployment. Factors influencing manpower supply and patterns. Effects of factor pricing and factor proportions on the labour market. Labour force and migration.

Unit III: Labour Force in India

Measurement of labour force participation in India, Census and NSS data. Changes in concept, structure, levels and trends inlabour force participation. Changing occupational structure and its implications. Unemployment and underemployment, problems of skilled labour and employment generation and its problems in India.

Unit IV: Population Growth and National Income

National Income, GDP, GNP, NNP and income distribution, personal, disposable, money, purchasing power parity; Levels and trends in National income and per capita income; Elementary notions of opportunity cost, shadow price and consumer surplus.

Unit V: Population Growth and Economic Development

Concept of development, indicators of development, consequences of population growth for total and per capita income, income distribution, capital formation, size of investment, allocation of resources, size of the labour force and industrialization, Malthusian and Boserupian perspectives.

- 1. Cassen, Robert, 1979. India: Population, Economy and Society. Delhi: McMillan Company of India Ltd.
- 2. Coale A. J., and E. M. Hoover, 1968. Population Growth and Economic Development in Law Income Countries.Princeton: Princeton University Press.
- 3. Jhingan, M. L., Bhatt B. K and Desai J. N., 2004. Demography. Delhi: Vrinda Publications (P) Ltd.
- 4. Mishra, R. S., 1973. Economics of Development. Bombay: Somaya Publications Pvt. Ltd.
- 5. Samuelson Paul A. and Nordhaus, W. D., 1976. Economics.12 Th edition. New York: McGra w-Hill Kooakusha Ltd.
- 6. Smith, Robert et al., 1972. Population Economics.North Carolina: Duke University Press.
- 7. Tabah, L., 1975. Population Growth and Economic Development in the third World, Vol. 2.Dolhain: Ordinal Editions.
- 8. Todaro, Michal P., 1981. Economics Development in the third World.New York: P. Longman.
- 9. United Nations, 1982. Population of India. ESCAP Country Monograph Series No.

SIXTH SEMESTER

CORE: XIII INDIAN ECONOMIC DEVELOPMENT - II

Objectives:

- 1. To familiarize the students with the models in economic development.
- 2. To provide the knowledge of various issues in economic development.
- 3. To impart the knowledge regarding planning techniques and role of Government.

Unit – I: Economic Development and Growth – Concepts and factors

Meaning of Economic Development and Economic Growth – Difference between growth and development – Indicators of development: economic indicators (GNP, GNP per capita and welfare) and social indicators – obstacles of development – Concept of underdevelopment, General characteristics of an underdeveloped country – Characteristics of modern economic growth – Gross National Happiness (GNH).

Unit – II: Strategies of Economic Development

The Classical theory – The Marxian theory – Rostow's stages of Economic Growth – Nurkse Theory – The Doctrines of Balanced Growth and Unbalanced growth.

Unit – III: Growth Models

The Harrod-Domar Models – Joan Robinson's Model of Capital Accumulation – Meade's Growth Model – The Mahalanobis Model.

Unit – IV: Role of State in Economic Development

Role of Public Sector – Self-Sufficiency and Self-reliance – Importance of infrastructure in economic development – Types and role of foreign capital in economic development – Role of Price Policy in economic development – Role of Technology in economic development – Growth Vs. Equity: Intervention of State in poverty eradication and reduction of inequality.

Unit – V: Economic Planning

Meaning and Objectives of Economic Planning – Types of Planning – Planning techniques – Input-Output ratio – Investment Criteria and Choice of techniques – Review of Planning Exercise of India.

Text Book:

1. M.L. Jhingan – The Economics of Development and Planning, Konark Publishers, New Delhi, 2003.

- 1. A.N. Agarwal Indian Economy Problems of Development and Planning New Age International (P) Ltd, Chennai 2000.
- 2. Ruddar Dutt and K.P.M. Sundaram Indian Economy, S.Chand and Sons, New Delhi, 2004.
- 3. Ishwar C. Dhingra Indian Economy, Sultan Chand and Sons, New Delhi 2003.
- 4. S.K. Misra and V.K.Puri Indian Economy, Himalaya Publishing House, Mumbai, 2004.
- 5. K.K. Dewett and Satish Madhawan Economics of Growth and Development.

CORE PAPER XIV: FISCAL ECONOMICS - II

Unit – I: Public Debt

Public Debt - Sources Public debt - Types of Public debt - Effects of public debt - Repayment of Public debt - Man- agreement of public debt - Need for public debt

Unit – II: Public Budget

Budget techniques – canons – Types of budget effect of budget – balanced, unbalanced, zero based budgeting - Budget in India - Deficit financing - Meaning - Objectives - Role of deficit financing in India - Effects on prices, production and distribution.

Unit – III: Federal Finance

Federal finance - Principles - Analysis of division of revenue, expenditure and other powers between union, State and Local Governments - Finance Commissions - Analysis of latest finance commission recommendation.

Unit – IV: Fiscal Policy

Fiscal policy - Objectives and instruments of fiscal policy - Role of Fiscal Policy in a developing economy with reference to India.

Unit – V: Local Finance

Local bodies - Types and functions - Sources of finance to local bodies - Village Panchayat - Municipalities - Corporation - Problems of Local Finance.

- 1. Tyagi .B.P. : Public Finance
- 2. Sankaran .S : Fiscal Economics
- 3. Sundaram .K.P.M. : Fiscal Economics
- 4. Cauvery & Others : Fiscal Economics
- 5. Bhargava R.N. : Indian Public Finance
- 6. Mithani .D.M. : Public Finance
- 7. Bhatia : Public Finance
- 8. Chellaiah .R : Fiscal policy in under developed countries
- 9. Dalton .H : Principles of Public Finance
- 10. U.R. Hicks : Public Finance
- 11. Richard A. Musgrave & Peggy A. Musgrave : Public Finance

CORE PAPER XV: INTERNATIONAL ECONOMICS - II

Unit - I

Exchange Rate: Meaning - Determination of Equilibrium of exchange rate - Fixed and Flexible Exchange Rate.

Unit - II

Foreign Exchange Market: Functions - Transfer function - Credit Function - Hedging Function. Theories of Exchange Rate: Mint theory - Purchasing power parity theory - Balance of payment theory.

Unit - III

Role of foreign capital in economic development - issues in foreign capital in economic development - issues in foreign direct investment - FDI and FI - Multinational Corporations - Joint Ventures.

Unit - IV

Foreign aid - International Monetary System - IMF - SDR - International Liquidity.

Unit - V

Trade and Development - Economic Integration, Meaning, Types - World Bank, GATT, WTO: Structure, Objectives, Functions and Working.

- 1. Mithani, D.M. : International Economics
- 2. Jhingan. M.L. : International Economics
- 3. Sankaran .S : International Economics
- 4. Sodersten. B.O. : International Economics
- 5. Vaish .M.C. : International Economics
- 6. Cherunilam Francis : International Economics
- 7. Mannur, H.G. : International Economics
- 8. Ellsworth, P.T. : International Economics

ELECTIVE – II: MARKETING

Unit - I

Nature, scope and significance of marketing - Evolution of marketing - Basic concepts of marketing - Different types of markets - Modern marketing - Marketing environment.

Unit - II

Functions of marketing - Function of exchange - Function of physical distribution - Storage and warehousing - Transportation - Different modes of transport - Roadways, rail- ways, waterways and airways - Choice of transport.

Unit - III

Facilitating function - Grading and Standardization - Branding, packaging and labeling - Marketing information sys- tem - Marketing research - Marketing risk - Marketing finance.

Unit - IV

Product - New Product - Product planning and development - Product Life Cycle - Marketing of manufactured goods - Manufactured consumer goods - Manufactured industrial goods - Their classification - Characteristics and channels of distribution.

Unit - V

Marketing of agricultural products - Regulated and organized market - Co-operative marketing bodies.

- 1. Ramaswamy and Ramakumari : Marketing Management
- 2. Converse, Huegym, Mitchell : Elements of Marketing
- 3. Mamoria and Joshi : Principles of Practice of Mar- keting in India.
- 4. Moore Joshi and Khusro : Indian Food grain Marketing
- 5. Saxena and Nigam : A study of marketing in India.
- 6. J.C. Sinna : Principles of Marketing and Salesman- ship
- 7. Tousley, Clark and Clark : Principles of Marketing
- 8. Pillai Bagavathi : Modern Marketing
- 9. William J. Stantion : Fundamentals of Marketing

ELECTIVE – III: URBAN ECONOMICS

Objective

To understand the causes and consequences of urban growth and economic issues in the provision of urban amenities.

Unit – I: Introduction to Urban Economics

Meaning and importance of urban economics - Structure of Human settlement – Spatial economic organization – Urban system – Functional dependencies between human settlements of different sizes.

Unit – II: Economics of City Size

Economics of city size – Agglomeration economics – Economics of location – City size distribution.

Unit – III: Urban Infrastructure

Urban infrastructure and Urban planning – Land use pattern – Urban housing and problems of slum renewal, upgradation – Urban crimes.

Unit – IV: Urban Environmental Planning

Urban environmental planning – Transport, Industrial Complex – Energy use.

Unit – V: Financing Urban Infrastructure

Financing Urban Infrastructure – Different Methods – Federal Finance - Local Public Finance – Municipal Administration – Urban Planning and Policy – Private Sector Participation – PPP.

- 1. Diamon, Tolley (1982) The Economics of urban amenities, Academic Press, New York.
- 2. Richardson, (1971) Urban Economics, Penguin, Harmondsworth
- 3. Sivarmakrishnan & Green (1986) Metropolitan Management, The Economic Development Institute of the World Bank, Oxford University Press