



SRM
UNIVERSITY
(Under section 3 of UGC Act 1956)

MASTER OF SCIENCE IN ECONOMETRICS
CURRICULUM AND SYLLABUS
(For the students admitted from academic year 2015-16 onwards)

UNDER CHOICE BASED CREDIT SYSTEM

DEPARTMENT OF ECONOMICS
FACULTY OF SCIENCE AND HUMANITIES
SRM UNIVERSITY
SRM NAGAR, KATTANKULATHUR – 603 203

M.Sc (ECONOMETRICS)
(For students admitted from the academic year 2015-16)

CURRICULUM

Semester	Category	Subject Code	Subject Title	Hours			LTP TOTAL	Credits
				L	T	P		
I	Major core	PES15101	Micro Economics - I	4	2	0	6	4
		PES15102	Macro Economics - I	4	2	0	6	4
		PES15103	Statistics for Econometrics	4	2	0	6	4
		PES15104	Mathematics for Economists - I	4	3	0	7	4
	Elective – I	PES15E01	Industrial Economics	3	2	0	5	3
		PES15E02	Regional Economics					
		PES15E03	Labour Economics					
Total				19	11	0	30	19
Semester	Category	Subject Code	Subject Title	Hours			LTP TOTAL	Credits
				L	T	P		
II	Major core	PES15201	Micro Economics – II	4	0	0	4	4
		PES15202	Macro Economics – II	4	0	0	4	4
		PES15203	Basic Econometrics	4	1	0	5	4
		PES15204	Mathematics for Economists - II	4	1	0	5	4
	Skill Based Elective-I	PES15E51	Statistical Package for Social Science	3	0	2	5	3
	Elective – II	PES15E04	Development Economics	3	2	0	5	3
		PES15E05	Infrastructural Economics					
		PES15E06	New Institutional Economics					
	Non-Major Elective-I		Open Elective -I	2	0	0	2	2
	Total				24	4	2	30

Semester	Category	Subject Code	Subject Title	Hours			LTP TOTAL	Credits
				L	T	P		
III	Major Core	PES15301	Research Methodology	4	2	0	6	4
		PES15302	Advance Econometrics	4	2	0	6	4
		PES15303	Financial Economics	3	2	0	5	3
	Skill Based Elective-II	PES15E52	STATA	3	1	2	6	3
	Elective – III	PES15E07	Public Economics	3	2	0	5	3
		PES15E08	History of Economic Thought					
		PES15E09	International Economics					
Non-Major Elective-II		Open Elective -II	2	0	0	2	2	
Total				19	9	2	30	19
IV SEMESTER								
Semester	Category	Subject Code	Subject Title	Lecture Hours			LTP TOTAL	Credits
				L	T	P		
IV	Major Core	PES15401	Applied Econometrics	4	2	0	6	4
		PES15402	Environmental Economics	3	2	0	5	3
		PES15403	Project Work	0	0	14	14	8
	Elective – IV	PES15E10	Health Economics	3	2	0	5	3
		PES15E11	Tourism Economics					
PES15E12		Agricultural Economics						
Total				10	6	14	30	18

**I YEAR
SEMESTER – I
PAPER – I**

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15101	Micro Economics – I	4	2	0	6	4

UNIT I - CONSUMER BEHAVIOUR

Consumer preferences, opportunity sets, optimum choices, indirect utility demand functions, income and substitution effects, Slutsky equation, normal versus inferior goods.

UNIT II - DEMAND

Types of demand functions, elasticity, welfare evaluation, consumer surplus, equivalent variation and compensating variation, revealed preference (weak and strong axioms)

UNIT III- PRODUCTION AND COST

Production functions, types of production functions (Cobb-Douglas, CES, etc.), marginal products, rate of technical substitution, technical progress, cost functions, average and marginal costs, short run versus long run costs, economies of scale and scope, profit maximization, cost minimization, derivation of input demand.

UNIT IV - COMPETITIVE MARKETS

Assumptions of perfect market, competitive markets – demand and supply, demand and supply curves of individual firms, short-run versus long-run, competitive market equilibrium, price-controls and shortages.

UNIT V - IMPERFECT COMPETITION

Market failure, imperfect markets – monopolistic competition and oligopoly, sources of monopoly power, monopoly market equilibrium, price discrimination – first, second and third degree.

REFERENCES

1. Varian, H. R., *Microeconomic Analysis*, third edition, W.W. Norton and Co., 2014.
2. Nicholson, W., *Microeconomic Theory: Basic Principles and Extensions*, eighth edition, South Western Thomson Learning, 2002.

3. Henderson, M. and R.E. Quandt, *Microeconomic Theory: Mathematical Approach*, McGraw Hill, 1980.
4. Pindyck, R.S. and D.L. Rubinfeld, *Microeconomics*, fifth edition, Prentice Hall, 2004.

PAPER – II

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15102	Macro Economics – I	4	2	0	6	4

UNIT I - NATIONAL INCOME ACCOUNTING

Accounting structure, key concepts in accounting for both closed and open economies – gross national product, gross domestic product, net national product, national income, savings and investment, balance of payments, circular flow of income.

UNIT II - CLASSICAL MODELS

Says Law, quantity theory of money, price flexibility and full employment, equilibrium concept in classical model.

UNIT III - KEYNESIAN MODELS

Simple Keynesian Model, assumptions, investment function,– two sector model, goods and money market equilibrium, multiplier, liquidity trap, complete Keynesian model – three sector model.

UNIT IV – CLASSICAL VS KEYNES MODELS

IS-LM Model - Synthesis between classical models and Keynesian models - Interpretation and policy analysis.

UNIT V- MACROECONOMIC ADJUSTMENTS

Phillips curve, rules versus discretion, time consistency, inflation targeting, interest rate rules, effects of spending and taxes in models with flexible and sticky prices, perverse effects of fiscal expansion.

REFERENCES

1. Scarth, W., *Macroeconomics: An Introduction to Advanced Methods*, third edition, Thomson, 2007.

2. Mankiw, N. G., *Macroeconomics*, fifth edition, Worth Publishers, 2002.
3. Hall, E. and Taylor, J. B. *Macroeconomics*. W. W. Norton and Company, 1986.
4. Barro, R.J. *Macroeconomics*, Fifth edition, MIT Press 1997.

PAPER - III

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15103	Statistics for Econometrics	4	2	0	6	4

UNIT I - BASICS OF PROBABILITY THEORY

Random Experiments, Events and their classification – Addition and Multiplication Theorem – Random Variables: Discrete and Continuous, Probability Mass function and Probability Density function – Conditional Probability, Bayes theorem.

UNIT II - STATISTICAL DISTRIBUTIONS

Mathematical expectation – Addition and Multiplication theorem. Binomial Distribution, Poisson distribution, Normal Distribution, Exponential distribution and Lognormal Distribution (No deviation Distributions – only properties).

UNIT III - SAMPLING AND SAMPLING DISTRIBUTIONS

Basic ideas of Sampling Method – Sampling Distribution, Standard Error – Tests of Significance, Large Sample Tests (Test for single mean, Tests for the difference between two sample mean) – Test for proportion and Test for the difference between two sample proportions, Student's t-distribution, Chi-Square Distribution and F-distribution (Definition and applications of these distributions)

UNIT IV - THEORY OF ESTIMATION

Characteristics of estimators: Consistency, Unbiasedness, Efficiency and sufficiency (Basic ideas only) Method of Maximum Likelihood Estimator: Properties of MLE.

UNIT V - HYPOTHESIS TESTING

Statistical hypothesis: Simple and composite, Tests of a statistical hypothesis: Null hypothesis and Alternative hypothesis – Critical Region – Two type of Errors – Level of Significance – Power of a Test – Likelihood Ratio Test (meaning and properties)

REFERENCES

1. Mood, A. M., R. A. Graybill and R.C. Boes, *Introduction to the Theory of Statistics*, McGraw-Hill, 1974
2. Hogg, R. and A. Craig, J., *Introduction to Mathematical Statistics*, McGraw-Hill, 1965
3. Miller, I. and M. Miller, *Mathematical Statistics*, sixth edition, Prentice Hall International, 1999
4. Goon Gupta and Das Gupta, *Fundamentals of Statistics*, fifth edition, The World Press, 1986

PAPER - IV

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15104	Mathematics for Economist – I	4	3	0	7	4

UNIT I - BASICS

Exponents, Polynomials, Functions, Limits, Continuity, and Derivatives – applications.

UNIT II- RULES

Derivatives – partial and total, economic applications, marginal and elasticity concepts, functions of several variables, implicit function theorem, higher order derivatives and Young's theorem – Integration – Rules-Economic Applications

UNIT III - BASICS OF SETS

Convex and concave sets and functions – Local and global maximum and minimum - Optimization – Maxima and minima

UNIT IV - LINEAR ALGEBRA

Vectors – Basis - Matrix – Definition- types – Relations and Operations – Trace, Determinants –Rank- Properties

UNIT V - SOLUTION TO A SYSTEM OF LINEAR EQUATIONS

Existence of Uniqueness of solution - Cramer's rule – Inversion method
Inverse – Properties of Inverse

REFERENCES

1. Chiang A.C., *Fundamental Methods of Mathematical Economics*, McGraw-Hill International students edition, IIIrd Edition, 1984.
2. Intriligator M.D., *Mathematical Optimization and Economic theory*, Prentice Hall Inc. USA. Chapters 5,7& 8 and Appendices A & B.
3. Edward T.Dowling ., *Introduction to Mathematical Economics* –Tata McGraw-Hill Publishing Company Ltd., 2004.
4. Hadley G., *Linear Algebra*, Narosa Publishing House, 1988.

PAPER – V ELECTIVE - I

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E01	Industrial Economics	3	2	0	5	3

UNIT I - FRAMEWORK AND PROBLEMS OF INDUSTRIAL ECONOMICS

Concept and Organization of a firm – Ownership control and objectives of a firm - Passive and active behavior of a firm.

UNIT II - MARKET STRUCTURE

Seller's Concentration; Product Differentiation, Entry Conditions, Economies of Scale; Market Structure and Profitability; Market Structure and Innovation; Theories of Industrial Innovation; Theories of Industrial Location – Weber and Sargent Florence; Factors affecting location.

UNIT III - MARKET CONDUCT – PERFORMANCE

Product Pricing – Theories and evidence – Investment Expenditure –Methods of evaluating Investment Expenditure; theories and empirical evidence on Mergers and acquisitions (M & As) and diversification.

Market performance: Growth of a firm; size and growth of a firm; Growth and profitability of a firm; Constraints on Growth; Productivity, Efficiency and Capacity utilization – Concept and Measurement.

UNIT IV - INDUSTRIAL PROJECT APPRAISAL

Project Appraisal; Cost – Benefit analysis – Capital Budgeting – Net Present Value (NPV) and Internal Rate of Return (IRR) Criteria – Balancing Private and Social Returns.

UNIT V- INDUSTRIAL FINANCE, INDUSTRIAL LABOUR

Industrial Finance: Owned, external and other components of funds; Financial Statement-balance Sheets, Profit and Loss account; assessment of financial soundness, Ration analysis- Industrial labour: structure of industrial labour, industrial relations; exit policy and social security; wages and problem of bonus-labour market reforms

REFERENCES

1. Ahluwalia I.J , *Industrial Growth in India*, Oxford University Press, New Delhi, 1985.
2. Barthwal R.R, *Industrial Economics*, Wiley Eastern Ltd, New Delhi, 1985.
3. Hay D. and D. J Morris ,*Industrial Economics and Theory of Evidence*, Oxford University Press, New Delhi, 1979.
4. Desai B , *Industrial Economy in India (3rd edition)*, Himalaya Publishing House, 1999.
5. Singh A and A N Sadhu , *Industrial Economics*; Himalaya Publishing House, 1988.

PAPER – V ELECTIVE - I

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E02	Regional Economics	3	2	0	5	3

UNIT I - OBJECTIVES

Scope of regional economic analysis – Inter-disciplinary aspects of regional economics – The regional economic problems – Causes.

UNIT II - THEORIES OF REGIONAL ECONOMIC DEVELOPMENT

Cumulative causation: Per roux - Myrdal- Hirschman - Export base theory - Central place theory: Christaller - Sector theory: Colin-Kuznets - Stage theory: Rostow.

UNIT III - THEORY OF LOCATION

Weber's theory of location – Migration and Regional Development – Todaro Model - Spatial dispersion of progress – Dispersion of innovation and technical progress – Sectoral growth centres – Area – Urban bias.

UNIT IV - REGIONAL DISPARITIES

Trends in regional income disparities – Inter-state variations of poverty and unemployment – Comparative analysis of industrial development in different states – Agricultural development in different stages.

UNIT V - REGIONAL GROUPING

Regional economic advantages and regional optimization– Interstate disparity - Problems of developing the backward area

REFERENCES

1. Richardson, *Elements of Regional Economics*, Penguin Books, London. 1960.
2. Myrdal G, *Economic theory and Underdeveloped Regions*, Vora, New Delhi. 1968.
3. Misra R.P , *Regional Development Planning in India*, Vikas, New Delhi. 1974.
4. Brahmananda, P.R. and Panchmukhi, *Development Experience in the Indian Economy*, Bookwell, New Delhi. 2001.

PAPER – V ELECTIVE - I

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E03	Labour Economics	3	2	0	5	3

UNIT I - INTRODUCTION

Concept of Labour and Labour Economics-Labour Problems - Labour Market – Demand and Supply of Labour-Characteristics of labour market in India - Recruitment Procedure and Employment Exchange.

UNIT II - ORGANISATION OF INDUSTRIAL LABOUR

Role and functions of Trade Union - Theories of Trade Unionism (i) Webbs (ii) KarlMarx (iii) Gandhi - Trade Union Movement in India – Recent Trends-Justifications of Strikes and Lockouts.

UNIT III - INDUSTRIAL DISPUTES AND INTERNATIONAL LABOUR ORGANIZATION

Industrial Disputes: Causes and Consequences - Industrial Disputes in developing countries- ILO Purposes-Constitution-Function.

UNIT IV - INDUSTRIAL RELATION

Need for Industrial Relation Machinery-Preventive and Curative methods- Collective Bargaining, Arbitration and Adjudication - Industrial Democracy, concept of Workers participation in management - Role of State in Industrial Relations.

UNIT V - LABOUR WELFARE

Labour Welfare concept, significance, classification, principles and programmes.

REFERENCES

1. Pani C., “*Indian Labour Problems*”, Chaitanya Publishing House, Allahabad. 1978.
2. Singh S.S. and Metha S. , “*Labour Economics*”, Ajanta Prakashan, New Delhi. 1989.
3. Singh V.N. , “*Industrial Labour in India*”, Asia Publishing House, Bombay. 1980.
4. Tyagi P.B. , “*Labour Economics and Social Welfare*”, Jaiprakash Nath & Co.Meetur. 1995.
5. Baholiwal,T.N. , “*Economics of Labour and Industrial Relations*”, Sahity Bhawan, Agra. 1981.

**I YEAR
SEMESTER – II
PAPER I**

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15201	Micro Economics – II	4	0	0	4	4

UNIT I - GENERAL EQUILIBRIUM

Absolute versus relative prices, perfectly competitive price and general equilibrium models – with and without production, uniqueness and determinacy, Edgeworth box, Pareto improvement and efficiency, Walrasian equilibrium, money in general equilibrium

UNIT II- WELFARE ECONOMICS

Arrow-Debreu economy, welfare theorems, existence of Walrasian equilibrium, fixed-point theorem, core and core convergence, general equilibrium with time and uncertainty, Jensen's Inequality, social welfare function, transfer efficiency; Kaldor-Hicks-Samuelson criterion, Rawls's theory of social justice.

UNIT III- PUBLIC GOODS

Types of public goods, theory of public goods – provision and pricing, government intervention, second-best solution, free riding, rent seeking and regulation, types of externalities – production and consumption externalities, Pigovian and Coasian solutions.

UNIT IV- MARKET FAILURE

Reasons for market failure – market imperfections, public goods, asymmetric information, externality, macro-economic factors.

UNIT V- GAME THEORY

Sequential and simultaneous games, extensive forms and normal forms, dominant strategies and elimination of dominant strategies, Nash equilibrium, backward induction, sub-game perfect equilibrium, applications with oligopoly markets: Cournot, Bertrand and Stackleberg, Product Differentiation, cartel.

REFERENCES

1. Varian, H. R., *Microeconomic Analysis*, third edition, W.W. Norton and Co., 2014.
2. Nicholson, W., *Microeconomic Theory: Basic Principles and Extensions*, eighth edition, South Western Thomson Learning, 2002.
3. Henderson, M. and R.E. Quandt, *Microeconomic Theory: Mathematical Approach*, McGraw Hill, 1980.
4. Mas-Colell, A., M.D. Whinston, and J. Green, *Microeconomic Theory*, Oxford University Press, 1995.

PAPER - II

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15202	Macro Economics – II	4	0	0	4	4

UNIT I- GROWTH THEORY

Economic growth and economic development, Harrod-Domar model, Solow model, empirics of economic growth, technological progress, growth accounting and total factor productivity

UNIT II- NEOCLASSICAL MODEL OF ECONOMIC GROWTH

Foundation of neoclassical growth, dynamic programming and optimum growth, the Ramsey- Cass-Koopmans model, growth with overlapping generations, applications of neoclassical growth model, social security: pay-as-you-go and unfunded, models with bequest motives

UNIT III- ENDOGENOUS GROWTH THEORY

Basics of endogenous growth, the AK-Model, Putty-Clay model, human capital and economic growth, product variety and innovation, learning by doing, role of R&D and economic growth

UNIT IV- BUSINESS CYCLE

Dating recession: NBER procedure, measurement, dissection and synchronization, indicators, coincident, forward and leading indicators

UNIT V - LABOUR MARKETS: NEW KEYNESIAN PERSPECTIVE

Nominal versus real rigidities, inter-temporal substitution in labor supply, employment relationships, search theory, natural rate of unemployment, menu cost

REFERENCES

1. Romer, D., *Advanced Macroeconomics*, second edition, McGraw-Hill, 2001.
2. Blanchard and Fischer, *Lectures on Macroeconomics*, MIT Press, 1989.
3. Barro, R.J., *Macroeconomics*, Fifth edition, MIT Press 1997.
4. Sargent, T., *Macroeconomic Theory*, Academic Press, 1987.
5. Pandit, V.N. and K. Krishnamurty, *Macroeconometric Models for India*, Oxford University Press, 2005.

PAPER- III

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15203	Basic Econometrics	4	1	0	5	4

UNIT I- ECONOMETRICS

Definition – Scope-Methodology - Analysis of Variance- Review of Basic Statistical Concepts

UNIT II- TWO VARIABLE REGRESSION MODEL

Assumptions – method of least squares-properties – BLUE – R-square-Testing of Hypotheses – Forecasting – Point and Interval Prediction- Solving Problems using STATA

UNIT III- EXTENSION OF TWO VARIABLE REGRESSION MODEL

Nonlinear Relationships-Transformation of variables -Functional Forms - Double Log, Semi-log, Reciprocal and Polynomial – Applications using STATA

UNIT IV- GENERAL LINEAR MODEL

Assumptions – Specification – Least squares method - BLUE property – Testing of Hypothesis – Prediction – Applications

UNIT V- LINEAR RESTRICTIONS

Testing joint hypothesis – Chow Test- Dummy variables – Multicollinearity - Problems-detections, Remedial measures and Application using STATA

REFERENCES

1. Gujarathi, D.N. “*Basic Econometrics*,” Fourth Edition, New Delhi: Tata-McGraw Hill, 2004.
2. Johnston, J. “*Econometric Methods*,” Third Edition, McGraw Hill International Students Edition, 1984.
3. Stata: User’s Guide , Version 13.0, Texas: Stata Press, 2013.

PAPER - IV

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15204	Mathematics for Economists - II	4	1	0	5	4

UNIT I- CALCULUS

Taylor’s approximation, Production Function – Cobb-Douglass Production Function-Properties of linear homogenous functions, Euler's theorem

UNIT II - OPTIMIZATION METHODS AND ECONOMIC ANALYSIS

Application of constrained and unconstrained optimization methods to consumer and producer behaviour – Constrained – Lagrangean Multiplier method - First and second order conditions – Solving numerical problems..

UNIT III - LINEAR PROGRAMMING

Primal – dual, graphic method, simplex method, application to production and diet problem – Non-linear Programming-Method and applications.

UNIT IV - INPUT – OUTPUT ANALYSIS

Structure of an economy- assumptions- Technical Co-efficient, outputs and price determination, Static and Dynamic - Hawkin-Simon Conditions

UNIT V- DIFFERENCE AND DIFFERENTIAL EQUATIONS

First & Second Order linear differential & Difference equations - Application to growth and trade cycle models – Cobb-Web Model, Domar Model.

REFERENCES

1. Chiang A.C.– *Fundamental Methods of Mathematical Economics*, McGraw Hill International Edition.1984.
2. Henderson J. and R.E.Quandt – *Micro Economic Theory: A Mathematical Approach*, Tata – McGraw Hill,2003.
3. Intrilligator M.– *Mathematical Optimization and Economic Theory* – Prentice Hall, 1971 (Chapters 3,4,5,6,7 & 8)

PAPER – V
Skill Based Elective-I

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E51	Statistical Package for Social Science	3	0	2	5	3

UNIT I- AN OVERVIEW OF SPSS

Mouse and keyboard processing, frequently –used dialog boxes - Editing output – Printing Results -Creating and editing a data file.

UNIT II - MANAGING DATA

Listing cases, replacing missing values, computing new variables, recording variables, exploring data, selecting cases, sorting cases, merging files- Creating and editing graphs and charts- Frequencies, bar charts, histograms, percentiles.

UNIT III - DESCRIPTIVE STATISTICS

Measures of central tendency, variability, and deviation from normality, size and stability - Cross Tabulation and chi-square analyses – The means procedure.

UNIT IV - BIVARIATE CORRELATION

Bivariate Correlation, Partial Correlations and the correlation matrix - T-test procedure: Independent –samples, paired samples, and one sample tests - one way ANOVA procedure;
One way analysis of variance.

UNIT V - GENERAL LINEAR MODEL

Two –way analysis of variance - three –way analysis of variance and the influence of covariates- Simple Linear Regression - Multiple regression analysis - Multidimensional scaling – Factor Analysis - Cluster analysis

REFERENCES

1. Dr. S. L. Gupta and Hitesh Gupta ., *SPSS 17.0 for Researchers*, International Book House Pvt Ltd (2011). New Delhi
2. James B. Cunningham, *Using SPSS: An Interactive Hands – on approach*, Sage Publications, New Delhi.
3. Darren George, *SPSS for Windows Step by Step: A Simple Study Guide and Reference, 17.0*, Pearson Education, 2011.

**PAPER – VI
ELECTIVE - II**

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E04	Development Economics	3	2	0	5	3

UNIT I- GROWTH, DEVELOPMENT AND CAPACITY

Characteristics of underdeveloped countries, poverty and inequality, measurement and correlates, the capacity curve, income distribution and nutrition

UNIT II- MARKET FAILURES, INSTITUTIONS AND FACTOR MARKETS

Theories of growth: the two-sector model, market failures and institutions, history and coordination failure, markets for land and capital, competing models of share cropping, land reform

UNIT III- POPULATION AND DEVELOPMENT

Malthusian theory, Economics of child labour, labour markets, labour migration and its impact.

UNIT IV- CREDIT MARKETS: FORMAL AND INFORMAL

Demand for and supply of rural credits, information asymmetries, credit constraints, intermediaries in the credit market, credit elasticity and microfinance, consumption smoothing, inter-firm relationships and informal credit, ethnicity and credit

UNIT V- TRADE, AID AND GROWTH

Gains from trade in Solow model, East Asian growth miracle; Learning by trading and endogenous growth; trade and technological progress, Saving constraint, foreign exchange constraint and aid: Dual gap model of aid

REFERENCES

1. Ray, D., *Development Economics*, Princeton University Press, 1998.
2. Basu, K., *Analytical Development Economics*, MIT Press, 2003.
3. Bardhan, P. and C. Udry, *Development Microeconomics*, Oxford University Press, 1999.
4. Agenor, P-R., and P. J. Montiel, *Development Macroeconomics*, Princeton University Press, 2008.

5. Hendrik Van Den Berg and Joshua J Lwer: International Trade and Economic Growth (Prentice Hall of India), Chapter 3: Sections 3.5, 3.6; Chapter 4, Section 4.5; Chapter 6.

**PAPER – VI
ELECTIVE - II**

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E05	Infrastructural Economics	3	2	0	5	3

UNIT I - PRICING

Infrastructure and Economic Development - Infrastructure as a Public Good: Social and Physical Infrastructure- Characteristics of Public Utilities- The case for Nationalization- The peak- load problem and the dual pricing controversy, marginal cost pricing in public utilities- Electric power System- Pricing of electric power.

UNIT II - TRANSPORT ECONOMICS

The structure of transport cost and the location of economic activity-cost functions in the Transport sector-Pricing Principles- Cost Benefit Analysis in the Transport Sector- Demand for Transport, Special problems of individual modes of transport; The rationale of Government Intervention in the transport Sector.

UNIT III - COMMUNICATION

Rate making in the Telephone Utilities- Decreasing Cost principle in the Telephone Industry- characteristics of postal services.

UNIT IV - ENERGY AND ECONOMICS

Energy and Economic Development-factors determining demand for energy- Effects for energy Shortages-Conservation of energy-renewable and non conventional sources of energy-Energy Modeling-Search for an optional energy policy.

UNIT V - SOCIAL INFRASTRUCTURE

The concept of social infrastructure-Financing and Organisation of the social services-Private vs Public Sector financing-Pricing of Social Services-Specific Social Infrastructure-Health Insurance-Education-Approaches to

Educational Planning-Rate of return and Manpower Balances Approach-The New Education Policy- General and Specific training of Human Resources.

REFERENCES

1. Rakesh Mohan Committee – *India Infrastructure Report: Vol II and III*, Govt of India Press, 1995.
2. National Council of Applied Economic Research, *India Infrastructure Report : Policy Implications for Growth and Welfare*, New Delhi. 1996
3. Parikh, K.S, *India Development Report*, Oxford, New Delhi. 1999-2000
4. Economics of Infrastructure Vol.VI, ICSSR, ICSSR. (1976),
5. Crew, M.A. and P.R. Kleindorfer *Public Utility Economics*, MacMillan, New York,1979.

**PAPER – VI
ELECTIVE - II**

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E06	New Institutional Economics	3	2	0	5	3

UNIT I - INTRODUCTION

Nature and Significance of institutional Approach in Economics – Meaning and Definitions of Economic Institutions – Old Institutional Economics— New Institutional Economics

UNIT II - NEW INSTITUTIONAL ECONOMICS APPLIED TO MARKETS

Firms and the State Markets – Markets as an organization – Elementary Rules of a private Ownership Economy- Price Rigidity – market Organization as a result of Market Cooperation Firms – The Orthodox Neo-Classical Firm – Incentive and Limits to Integrations – Ownership and Control –New Institutional Economics of the firm State – A Simple Neo Classic view of the state – Role of the Political Institutions – Political Markets – Institutional Relations – General Remarks on Organizations: The Firm, The Markets and the State

UNIT III - TRANSACTION COSTS

Concept of Transaction – Transaction – Definitions – Estimation of Transaction Costs – Transaction Costs in an Institutional Framework

UNIT IV - OWNERSHIP AND COSTS

Property Right – Absolute and Relative Property – Common Pool Resources – Economic Analysis of Property Right – Elements of Contract Theory – Three Types of Contract Theory – Managerial Theory of the Firm – Expenses – Preferences Module – The Principal Agent Model – Moral Hazard – Adverse Selection – Implicit Contract – Incomplete Contract Model – Self Enforcing Agreements

UNIT V - NEW INSTITUTIONAL ECONOMICS AND DEVELOPMENT

NIE and Third World Development – Implications for Development Theory – State failure in Weak States – Institutional Approach to Structural Adjustments.

REFERENCES

1. Harris John Hunter and Colin M Lewis (Eds), *The Institutional Economics and the Third World Development*, 1995.
2. Eirik G Furubotn and Rudolf Richter., *Institutions and Economic Theory*, University of Michigan press. 2002.
3. Shanmugasundaram.V., *The New Institutional Economics*, Deep and Deep Publications,2011.

**II YEAR
SEMESTER – III
PAPER - I**

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15301	Research Methodology	4	2	0	6	4

UNIT I- INTRODUCTION TO RESEARCH

Meaning of research – Importance – Objectives of research – Formulation of research problem – Formulation of hypothesis – Research design – Features of good research design – Pure and applied research – Evaluation of research – Research in Social Sciences.

UNIT II- THEORIES AND CONCEPTS IN SOCIAL SCIENCE RESEARCH

Facts, theories and concepts in social science research – Deductive and inductive methods – stages of scientific method – Case study method – Schedule and questionnaire – Principle underlying construction of a questionnaire – Tabulation – Diagrammatical representation.

UNIT III- SAMPLING TECHNIQUES

Simple Random Sampling, Stratified Sampling – Systematic Sampling, Cluster Sampling – Quota Sampling – Sample Size Determination and Optimum Sample Size.

UNIT IV- RESEARCH SOURCES

Some of Information: Literature Search, Search tools, Literature Review, Ethical and Moral issues in Research, Plagiarism.

UNIT V- ACADEMIC WRITING & PRESENTATION

Elements of style, Research Report writing, Submission of research articles for publication in the reputed journals, Elements of excellent presentation and Oral Communication skills.

REFERENCES

1. Rao K.V. Research, *Methodology in management methods and techniques*, Sterling Publishers Pvt. Ltd., 2012
2. Kothari C.R., *Research methodology*, New Age International, 2004.

3. Donald R.Cooper and Pamela S.Schindler - *Business Research Methods* - Tata McGraw Hill, 2010.
4. Uma Sekaran, *Research Methods for Business*, Wiley Publications,4th Edition.

PAPER – II

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15302	Advance Econometrics	4	2	0	6	4

UNIT I- VIOLATION OF CLASSICAL ASSUMPTIONS

Autocorrelation – Heteroscedasticity – Problem – Causes – Consequences – Remedial Measures – Model Specification and Diagnostic Testing.

UNIT II- DYNAMIC ECONOMETRICS

Autoregressive and Distributed Lag Models – Estimation methods – Lagged variables – Problem & Applications using STATA

UNIT III- SIMULTANEOUS EQUATION MODEL

Specification – Identification – Rank and Order Conditions – problems

UNIT IV- ESTIMATION METHODS

Single equation and Systems Estimation Methods- Numerical Problems – Applications using STATA

UNIT V- Limited Dependent Variable Models

Introduction to binary variables, limitation of LPM, logistic curve, Probit and Logit models, predicted probabilities, censored versus truncation, TOBIT model, ordinal models, multinomial models, and nested models

REFERENCES

1. Gujarathi, D.N. “*Basic Econometrics*,” Fifth Edition, New Delhi: Tata-McGraw Hill, 2004
2. Johnston, J. “*Econometric Methods*,” Third Edition, McGraw Hill International Students Edition, 1984.
3. Green, W. *Econometric Analysis*, 5th Edition, Pearson Education, 2003
4. Stata: User’s Guide , Version 13.0, Texas: Stata Press 2013.

PAPER- III

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15303	Financial Economics	3	2	0	5	3

UNIT I- INTRODUCTION TO FINANCIAL MARKETS

Capital markets, consumption and investments with and without capital markets, market places and transaction costs and the breakdown of separation; Fisher separation theorem; the agency problem; maximization of shareholder's wealth.

UNIT II- THEORY OF UNCERTAINTY

Axioms of choice under uncertainty; utility functions; expected utility theorem; certainty equivalence, measures of risk-absolute and relative risk aversions; stochastic dominance-first order, second order and third order; measures of investment risk-variance of return, semi-variance of return, shortfall probabilities.

UNIT III- MEAN-VARIANCE PORTFOLIO THEORY

Measuring portfolio return and risks, effect of diversification, minimum variance portfolio, perfectly correlated assets, minimum variance opportunity set, optimal portfolio choice; mean-variance frontier of risky and risk-free asset, portfolio weights.

UNIT IV- INDEX MODELS, CAPM & APT

Models of asset returns, multi index models, single index model, systematic and specific risk, equilibrium models-capital asset pricing model, capital market line, security market line, estimation of beta,; arbitrage pricing theory

UNIT V- FIXED INCOME SECURITIES

Bond prices, spot prices, discount factors, and arbitrage, forward rates and yield-to-maturity, Price sensitivity, Hedging.

REFERENCES

1. Copeland, T.E. and J. F. Weston, *Financial Theory and Corporate Policy*, Addison Wesley, 1992.
2. Brealey, R. and S. Myers, *Principles of Corporate Finance*, fifth edition, New York, McGraw Hill, 1997.
3. Elton, E.J and M.J. Gruber, *Modern Portfolio Theory & Investment Analysis*, (fourth edition) John Wiley & Sons 1991.
4. Houthakker, H.S. and P.J. Williamson, *Economics of Financial Markets*, Oxford University Press, 1996.

PAPER – IV
SKILL BASED ELECTIVE-II

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E52	STATA	3	1	2	6	3

UNIT I- INTRODUCTION TO STATA

Working with Stata - Creating empty datasets - Data import- Describing the data - Import data from main public data sources - Data manipulation

UNIT II - BASIS STATISTICAL ROUTINES

Mean, standard deviation, correlation- Percentiles- (t-)Test on mean difference. Compare groups within one variable; compare two variables- Cross-tabulation of two binary variables and corresponding tests (Pearson)- Cross-tabulation of two discrete variables and corresponding tests (Pearson)- OLS with one explanatory variable- Internal variables-Post estimation commands

UNIT III – PROGRAMMING AND GRAPHING

If condition- Loops- Commenting- Graphing - Line plot- Legend- labels- Scatter plot- Combining graphs- two way- Histogram - Kernel density- intuitive discussion of bandwidth - Step function- Multicollinearity – Heteroskedasticity.

UNIT IV – PANEL DATA

Data structure: Wide vs. long - Reshape – Xtset – Xtdes - Regression with Panel Data.

UNIT V – TIME SERIES DATA

Time-Series Models - Tsset - Lag and forward operator - First difference and dlog - Dummy Dependent Variable Techniques - Presenting results

REFERENCES

1. Studenmund, A.H - *Using Econometrics: A Practical Guide*, 6th Edition, Prentice Hall, 2011.
2. STATA -Version 8.0, Base Reference Manuals, Volume 1- 4, Stata Press Publication, 2004.
3. *Stata Longitudinal-Data/Panel-Data Reference Manual: Release 11*, Stata Press -June, 2009.

PAPER – V
ELECTIVE - III

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E07	Public Economics	3	2	0	5	3

UNIT I- THEORY OF PUBLIC GOOD

Role of government in managing Economy under different economic systems – Social Welfare Function – Theory of Public Goods – Pure and Impure goods - Merit wants and Merit goods.

UNIT II- PUBLIC EXPENDITURE

Theories of Public Expenditure – Structure and Growth of Public Expenditure – Criteria for Public Investment – Income Redistribution – Expenditure Programmes for the Poor.

UNIT III- BUDGET

Concept of PPB – Zero-based Budgeting – Deficit Budgeting – Types of Deficits – Public Dept: Trends and composition of Indian Public Dept – Dept Management

UNIT IV- TAXATION

Theory of Taxation – Benefit and Ability-to-pay approaches – Indian Direct and Indirect Taxes – Tax reforms since 1975 – Chelliah Committee Report – Evaluation of Tax Reforms – Taxation Incidence and alternative concepts of incidence.

UNIT V- FISCAL POLICY

Role of Fiscal policy in India – Principles of fiscal Federalism in India – Vertical and Horizontal Imbalance – Finance commissions and Planning commission – Issues in Revenue devolutions and grants-in-aid – Local Finance

REFERENCES

1. Tyagi B.P “*Public Finance,*” Jai Prakash Natu & Co, Meerut,7th Edition,1994.
2. Singh S.K. “*Public Finance in Theory and Practices,*” Sultan Chand & Co,1996.
3. Srivastava D.K., “*Issues in Indian Public Finance,*” New Century Publications,2005.

PAPER – V
ELECTIVE - III

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E08	History of Economic Thought	3	2	0	5	3

UNIT I- EARLY PERIOD

Nature and importance of history of economic thought – ancient economic thought –Aristotle,Plato-Medieval economic thought – contribution of early Muslim scholars to economic thought: Abu Yusuf, Marwadi, Gazali, Ibn Themiah, Ibn Hazm and Ibn Khaldun, Mercantilism: Main characteristics – Physiocracy: main characteristics.

UNIT II- CLASSICAL PERIOD

Adam Smith – David Ricardo – Thomas R. Malthus – German romantics and socialists – Sismondi, Karl Marx – economic ideas of J.B.Say – J.S.Mill – Historical School: Senior, List.

UNIT III- MARGINALISTS

The precursors of marginalism – Cournot, Thunen, Gossen – the marginalist revolution – Jevons, Walras and Menger-Bohm-Bawerk, Wicksell and Fisher – the rate of interest – Wicksteed and Weiser – distribution-Marshall as a great synthesizer – Pigou:welfare economics – Schumpeter: role of entrepreneur and innovations.

UNIT IV- J M KEYNES AND HIS CONTRIBUTIONS

A Treatise on Money – The General Theory of Employment, Interest and Money.

UNIT V- INDIAN ECONOMIC THOUGHT

Early economic ideas: Kautilya, Valluvar – Modern economic ideas: Naoroji, Ranade, R.C.Dutt, Gokhale, J.K.Metha and M.N.Roy – Economic ideas of Gandhi: Village, swadesi,place of machine and labor, cottage industries, trusteeship – Early approaches to planning – cooperation as a strategy – Contributions of Vakil, Gadgil and VKRV Rao – Economic thought of Dr.Ambedkar.

REFERENCES

1. Bhatia H.L , *History of Economic Thought*, Vikas Publishing House, New Delhi, 1994.
2. Ganguli,B.N, *Indian Economic Thought: A Nineteenth Century Perspective*, TMH, New Delhi, 1977.
3. Roll, Eric, *History of Economic Thought*.
4. Seshari,G.B, *Economic Doctrines*, B.R.Publishing Corporation, New Delh, 1997.

PAPER – V ELECTIVE - III

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E09	International Economics	3	2	0	5	3

UNIT I – INTRODUCTION

Modern Theory of International Trade: Heckscher - Ohlin Theorem - International Trade and Factor Prices - Leon tiff Paradox - Terms of Trade - Factors Affecting Terms of Trade - Gains from Trade.

UNIT II - FOREIGN EXCHANGE RATE

Theories of Foreign Exchange Rate: Mint par Parity Theory, Purchasing Power Parity Theory - Balance of Payments Theory. Foreign Exchange Rate Policy: Fixed Exchange Rate Flexible Exchange Rate - Foreign Exchange Markets: Spot and Forward Exchange Market.

UNIT III – BOP/BOT

Balance of Payments - Balance of Trade - Disequilibrium in BOP - Methods of Correcting Disequilibrium - Free Trade vs Protection - Methods of Protection (Tariffs and Quotas), Tariffs: Classification - Impact - Non-tariff Barriers - Quotas: Types and Impact.

UNIT IV – EXIM POLICY

Foreign Trade Control and EXIM Policy - Export Promotion: Incentives - Production assistance - Marketing Assistance - Export and Trading Houses - Letter of Credit - Export Procedures and Documents - Bill of Lading – Export Risk Insurance.

UNIT V - FINANCIAL INSTITUTIONS

Current International Monetary and Trade Issues - IMF -IBRD - North-South Dialogue - WTO - UNCTAD - Multinational Corporations - Foreign Direct Investments - Foreign Institutional Investments.

REFERENCES

1. Sodersten B. , *International Economics*. 1985.
2. Varma M.L , *Foreign Trade Management in India*", Vikas, New Delhi. 1983.
3. Deepak Nayyar , *India's Export and Import Policies in the 1960's*, Cambridg University Press. 1976.
4. Haberler.G , *The Theory of International Trade*, William Hodge Company, London. 1985.
5. Kindleberger C.P. , *International Economics*, R.D.Irwin, Homewood, 1976.

**II YEAR
SEMESTER – IV
PAPER I**

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15401	Applied Econometrics	4	2	0	6	4

UNIT I- STATIONARY TIME SERIES

Autocorrelation and partial autocorrelation, auto regressive and moving average models, conditions for stationary and invertible process, box-jenkins approach, forecasting, permanent versus temporary abruption, simple exponential smoothing and choice of parameter, seasonal models with trend, seasonal decomposition

UNIT II NONSTATIONARY TIME SERIES AND VOLATILITY

Integrated process and random walk, unit root, testing for unit root, introduction to cointegration, Engle Granger method and Johansen test, error correction model, vector auto regressive model, impulse response function, variance decomposition, forecasting; volatility clustering, leverage effect, ARCH model, GARCH model and its various extension, multivariate GARCH modelling, forecasting

UNIT III PANEL DATA MODELS

Introduction to panel data, pooled model, within and between estimators, fixed effects, random effects, Hausman test, one way and two way model, random coefficients, dynamic panel data models, difference in difference methodology and dynamic panel data, generalised method of moments estimator

UNIT IV PRODUCTION FUNCTION

Relationship among production, cost and profit functions, specification, estimation and applications; frontier production functions: DEA and SFA, measurement of multifactor productivity.

UNIT V DEMAND ESTIMATION

Demand functions – Theory, Specification and estimations of demand functions – Engel curves, complete demand models; general and particular restrictions on demand functions, estimation and applications of complete demand systems

REFERENCES

1. Hamilton, J. D., “*Time Series Analysis*”, Princeton University Press, 1994.
2. Enders, W., “*Applied Econometric Time Series*”, second edition, John Wiley and Sons, 2006.
3. Wooldridge, J. M., “*Econometric Analysis of Cross Section and Panel Data*”, MIT Press, 2001.
4. Greene, W.H. “*Econometric Analysis*”, fifth edition, Pearson Education Inc., 2003.
5. Coelli, T., D.S. Prasada Rao, and G. E. Battese, “*An Introduction to Efficiency and Productivity Analysis*”, Kluwer Academic Publishers, 1997.

PAPER II

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15402	Environmental Economics	3	2	0	5	3

UNIT I- ISSUES IN ENVIRONMENTAL ECONOMICS

An introduction to environmental economics, economy-environment interaction, open access resources, property rights, collective action, environment and development trade-off – environmental Kuznet’s curve

UNIT II- ECONOMICS OF EXHAUSTIBLE AND RENEWABLE RESOURCES

Hotelling's rule - Solow-Harwick's rule, market structure and optimal extraction policy, uncertainty and the rate of resource extraction, resource scarcity; economic models of forestry and fisheries, economics of biodiversity.

UNIT III- ENVIRONMENTAL VALUATION

Market and non-market valuation; Physical linkage methods; Revealed and stated preference methods.

UNIT IV- ENVIRONMENTAL POLICY

Command and control versus market mechanisms; Uncertainty and instrument choice; regulatory compliance and enforcement; Eco-taxes and other fiscal measures.

UNIT V- GLOBAL ENVIRONMENTAL ISSUES

Transboundary pollution, economics of global warming, impact of trade on environment and environment on trade, Porter's hypothesis, Pollution havens hypothesis, case studies.

REFERENCES

1. Kolstad, C., *Environmental Economics*, Oxford University Press, 2000
2. Baumol, W.J, and W.E. Oates, *The Theory of Environmental Policy*, Cambridge University Press, 1988
3. Freeman, A. M., *The Measurement of Environmental and Resource Values*, 2nd Edition, Resources for the Future, 2003
4. Hanley, N., J.F. Shogren, and B. White, *Environmental Economics: In Theory and Practice*, Macmillan India Ltd., 1997

PAPER- III

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15403	Project Work	0	0	14	14	8

OBJECTIVE

1. To provide the student with the opportunity of doing a research in their area of interest.

Stage I: Identifying Topic and Allotment of Guides

Stage II: Review I

Stage III: Review II

Stage IV: Review III

Stage V: Final Submission of the Project Report

PAPER – IV
ELECTIVE – IV

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E10	Health Economics	3	2	0	5	3

UNIT I- INTRODUCTION, DEMAND FOR HEALTH AND HEALTH CARE

Welfare economics of medical care, production of health, demand for health and health care, equity, efficiency and the need, link between development and health, investing in health for economic development, public-private partnership and the role of state.

UNIT II- HEALTH PRODUCTION FUNCTION

Nature of production function, different types of production function and their applications, national and international perspective, distributional inequities in opportunity and commercialization of medical and para-medical education, cost escalation in the health care system, easy access and availability to appropriate technology, need for regulation and control.

UNIT III- HEALTH CARE INCENTIVES AND FINANCING

Goals of health care provision and financing, competitive health insurance and risk adjustment, demand and supply of health insurance, asymmetric information and agency, market insurance, self- insurance and protection, employment based insurance, health insurance in developing countries.

UNIT IV- MEASURING AND VALUING HEALTH OUTCOMES

Measurement of health state utilities, QALYs and its alternatives- different approaches of valuing health, multi-attribute utility instruments and their development.

UNIT V- HEALTH CARE IN INDIA

Various health indicators and its recent trend, health care expenditures, target of health care and achievements, different options for financing healthcare, taxation, user fees, health insurance, role of urban and rural local bodies, role of non-governmental organizations, economic impact of HIV/AIDS in developing countries and gender issues.

REFERENCES

1. Folland, S., A.C. Goodman and M. Stano, *Economics of Health and Health Care*, fifth edition, Pearson Prentice Hall, 2006
2. Culyer, A. J. and J.P. Newhouse (eds.), *Handbook of Health Economics*, Volumes 1A& B, North-Holland, 2000
3. Zweifel, P., *Health Economics*, Oxford University Press, 1997

PAPER – IV ELECTIVE – IV

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E11	Tourism Economics	3	2	0	5	3

UNIT I - INTRODUCTION

Economics and Tourism - Tourism Demand - Theoretical background - Types of Tourism Demand - Determinants of Tourism Demand – Life Cycle Factors- the Global View – Measurement of Tourism Demand - National and International Tourism Demand. Tourism Supply – Augmenting Tourism Products.

UNIT II - TOURISM DEMAND FORECASTING

Methods of Forecasting – Public and Private Sectors in Tourism - Need for Public and Private Sector Co-operation in Tourism – Growth of Tourism Demand in India.

UNIT III - COST CONCEPTS

Short Run Vs. Long Run Costs - Production Function - Input: Output Relationship - Law of Variable Proportions - Returns to Scale - Break Even Analysis - Market Structure and Competition - Pricing in Tourism - Determinants of Price.

UNIT IV - MACRO ECONOMIC ENVIRONMENT

National Income Analysis - Business Cycles - Fiscal and Monetary Policies - Economic Transition in India - Inflation Analysis - Liberalization, Privatization and Globalization - Government's role in Tourism – Tourism Policies of Government of India.

UNIT V - IMPACT OF TOURISM

Economic Aspects - the Multiplier Effect - Displacement Effect and Tourism
- Tourist Spending - Costs and Benefits of Tourism to Community -
Environmental Aspects – Contingency Valuation Method.

REFERENCES

1. Sipra Mukhopadhyay, “*Tourism Economics*”, Ane Books Pvt. Ltd., New ,Delhi, 2010.
2. Jhon Trive , “*the Economics of Leisure and Tourism*’, Oxford Butterworth, Heinemann, 1995.
3. Ronila Chawla “*Economics of Tourism & Development*”., Sonali Publications, New Delhi, 2004.
4. M.T.Sinclair & Mike Stabler *Economics of Tourism & Development*, Routledge, New York, 1997.

PAPER – IV ELECTIVE – IV

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E12	Agricultural Economics	3	2	0	5	3

UNIT I - AGRICULTURAL PRODUCTION

The structure of agricultural production - Farm size and returns to scale, economies of scope and diversification - Production function analysis - Mobility of capital and labour in agriculture - Technological innovation and the agricultural sector.

UNIT II - AGRICULTURAL MARKETS AND PRICE FIXATION

Policy intervention in agricultural markets: regulatory measures - Market infrastructure and institutions - Agricultural price policy – India’s food grain market - Theory of food market intervention.

UNIT III - RISK MANAGEMENT IN AGRICULTURE

Types of risks in agricultural sector - Risk management strategies: formal and informal mechanisms, ex-ante and ex-post strategies - Crop insurance Risks and types of crop insurance.

UNIT IV - RURAL POVERTY AND EMPLOYMENT

Poverty measurement: methodological issues - Pathways out of rural poverty - Drivers of rural poverty reduction - Cash transfers and public distribution system - Rural non-farm employment - employment trends in rural sector, determinants of female work participation.

UNIT V - SUSTAINABLE DEVELOPMENT AND THE AGRICULTURAL SECTOR

On-site and off-site environmental problems in agriculture - Drivers of resource degradation - Impact of Climate change on Indian agriculture - Sustainable water management in agricultural sector – Cropping mechanisation and Agrarian Distress.

REFERENCES

1. Gardner, Bruce L and Gordon C Raussereeds “*Handbook of Agricultural Economics*” North-Holland, chapter 1, 2000.
2. World Bank “*Agriculture for Development*” (World Development Report 2008, 2007).
3. Government of India, Planning Commission: “*Risk Management in Agriculture*”, 2007
4. Gardner, Bruce L and Gordon C Raussereeds “*Handbook of Agricultural Economics*”, North-Holland, 2000.
5. Basu, Kaushik “*India’s Foodgrain Policy: An Economic Theory perspective*”, in Uma Kapila Ed, “*Indian Economy since Independence*”, Academic Foundation, New Delhi, 2012.

Non-Major Elective: Papers offered by the Department of Economics to other major students

II SEMESTER

Non-Major Elective -I Subject Code		Subject Title
1	PES15E81	Money and Banking
2	PES15E82	Managerial Economics
3	PES15E83	Demography

III SEMESTER

Non-Major Elective -II Subject Code		Subject Title
1	PES15E84	International Business
2	PES15E85	Economic Administration
3	PES15E86	Women Studies

II SEMESTER
Non-Major Elective -I

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E81	Money and Banking	2	0	0	2	2

UNIT I - INTRODUCTION

Evolution and functions of money – the barter system – evolution of money classification-functions – circular flow of money- monetary standard – the gold standard- bimetallism- greshams law- paper currency- principles and methods of note issue.

UNIT II – VALUE OF MONEY

Fishers quantity-theory of money- the cash transactions approach-the Cambridge equation-the cash balance approach- Milton Friedman’s restatement of quantity theory of money- Keynes reformulated quantity theory of money- its superiority.

UNIT III – SUPPLY OF MONEY

Supply of money- different views- determinants- changes in supply of money- supply function-volume of money supply in India- factors affecting inflation- definitions-types- effects- control.

UNIT IV – COMMERCIAL BANKING

Origin and growth- types – process of credit creation- credit instruments- bankers clearing house-progress of nationalized banks.

UNIT V – CENTRAL BANK

Nature and functions of central bank-reserve bank of India-history structure traditional and promotional central banking- functions of reserve bank of India.

REFERENCES

1. R.Cauvery, Sudhanaya U.K., *Monetary economics*, S.Chand and Co,2011
2. Chandler, L.V., *Economics of Money and Banking* (UBS) Revised Edition, Harper and Brothers Publishers , New York,1948.
3. Sachdeva.T.N., *Money, Banking and international trade* ,Sudha Publications,2007

5. Suraj B.Gupta, *Monetary Economics, Institutions, Theory and Policy*, S.Chnad and Co.
6. Gail E.Makinen, *Money, Interest and the Price Level*, Prentice Hall, 1978.

II SEMESTER
Non-Major Elective -I

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E82	Managerial Economics	2	0	0	2	2

UNIT I - INTRODUCTION TO MANAGERIAL ECONOMICS

Meaning and Definition – Nature and scope – Economic Theory and Managerial Theory – Role and Responsibility of Managerial Economist – Managerial Economics and Decision Making – objectives of Business firms - Fundamental Economic concepts - Incremental Principle– Opportunity cost principle – Discounting Principle – Equi marginal principle.

UNIT II – THEORY OF DEMAND AND SUPPLY

Law of demand – Demand Function – Demand curves – Types of Demand - Elasticity of Demand – Types of Elasticity of Demand – Measurement of price Elasticity of Demand – Application of Elasticity in Managerial Decisions - Law of Supply and Elasticity of Supply.

UNIT III - THEORY OF CONSUMER CHOICE

Indifference curve Approach, Revealed preference theory of consumer. Choice under Risk – demand Forecasting – Methods of Demand forecasting.

UNIT IV - PRODUCTION THEORY

Production Function – Production with one and two variable inputs, law of Diminishing returns and Business Decisions – Cost Concepts – their Nature, Shape and Interrelationship.

UNIT V - MARKET STRUCTURE

Market Structure and Price Determination-Characteristics of Different Market structures- Price Determination and firms Equilibrium in short run and long run under Perfect Competition- monopoly – monopolistic competition & oligopoly - Pricing Practices - Classification and Measurement of Profit – Break Even Analysis

REFERENCES

1. D. N. Dwivedi, *Managerial Economics*, 7th edition, Vikas Publishing, 2009.
2. Prof. ABN Kulkarni and Dr. A. B. Kalkundrikar, *Managerial Economics*, R.Chand & Co, 2009.
3. Dr. D. M. Mithani, *Managerial Economics*, 5th edition, Himalaya Publishing House, 2009.
4. Paul A. Samuelson, *Economics*, 19th edition, Tata McGraw Hill, 1948.
5. Petersen, Lewis and Jain, *Managerial Economics*, 4th edition, Pearson, 2006

II SEMESTER Non-Major Elective -I

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E83	Demography	2	0	0	2	2

UNIT I - INTRODUCTION TO DEMOGRAPHY

Meaning and scope of demography; Components of population growth and their inter-dependence; Theories of population — Malthus; Optimum theory of population; Theory of demographic transition

UNIT II - POPULATION CHANGE: DETERMINANTS AND TECHNIQUES

Determinants – Fertility, Nuptiality, Migration and Mortality; Techniques - Crude birth and death rates, age specific birth and death rates, standardized birth and death rates; Fertility - Factors affecting fertility — Socio-economic factors; Nuptiality - Concept and analysis of marital status, single mean age at marriage - Migration – Net migration rate - Mortality — Mortality at birth and infant mortality rate; Sex and age pattern of mortality; Factors for decline in mortality in recent past.

UNIT III - POPULATION: STRUCTURE AND PROJECTION

Population trends in the twentieth century; Population explosion - International aspects of population growth and distribution; Demographic effects of sex and age structure, economic and social implications, Demographic Dividend and Age pyramids; concept of stationary, stable and quasi - stationary population; Projections — Uses and techniques – Cohort Component Projection technique.

UNIT IV - SOURCE OF DEMOGRAPHIC DATA IN INDIA

Study of census in India— History of Census in India; Nature of information collected in 2001 and 2011 census in India; National Family Health Survey (NFHS) I, II and III and District Level Household Survey(DLHS); their relative merits and demerits.

UNIT V: POPULATION AND DEVELOPMENT WITH REFERENCE TO INDIA

Population policy in India — Population, economy and environment linkages – population and human development issues – Population and Millennium Development Goals (MDG); education and fertility, Migration and urbanization – trends, pattern and consequences; population aging – Causes, trends, issues and consequences; Skewed sex ratio in India.

REFERENCES

1. Jacob S. Siegel and David A. Swanson , *The Methods and the materials of Demography*, Second Edition, Elsevier Science. USA, 2004
2. John Weeks, *Population: An introduction to concepts and issues*, Wordsworth Learning.Singapore 9th edition, 2005.
3. Pathak, K.B. and F.Ram, *Techniques of Demographic Analysis*, Mumbai: HimalayaPublishing House,1998.
4. Agarwal, S.N.,*India's Population Problem*, Tata McGraw Hill, Mumbai, 1985.

III SEMESTER
Non-Major Elective -II

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E84	International Business	2	0	0	2	2

UNIT I- GLOBALISATION

The Globalisation of the world Economy -The Changing Nature of International Business.Differences in International Business.

UNIT II- WORLD BUSINESS ENVIRONMENT

Political Environment -Economic Environment – Legal Environment -The Determinants of Economic Development - States in Transition. Difference in Culture: Introduction - Social Structure - Religion - Language - Education - Culture and the Workplace - Cultural Change -Cross-Cultural Literacy - Culture and competitive Advantage - Risks in international business.

UNIT III- THE GLOBAL TRADE AND INVESTMENT ENVIRONMENT

Introduction – An Overview of Trade Theory - Absolute Advantage - Comparative Advantage - Heckscher - Ohlin Theory - The New Trade Theory - National Competitive Advantages - Porter’s Diamond The Revised Case for Free Trade - Development of the Multilateral Trading System-WTO & development of World trade - Regional grouping of countries and its impact.

UNIT IV- FOREIGN DIRECT INVESTMENT

Introduction - Foreign Direct Investment in the World Economy - Horizontal Foreign Direct Investment - Vertical Foreign Direct Investment. Benefits and advantages to host and home countries. The Global Monetary System -The Foreign Exchange Market: Introduction - The Function of the Foreign Exchange Market.

UNIT V- STRATEGIES OF INTERNATIONAL BUSINESS

Strategy and the Firm - Profiting from Global Expansion - Pressure for Cost Reductions and Local Responsiveness - Strategic Choice. Mode of Entry and Strategic Alliances: Introduction - Entry Modes - Selecting and Entry Mode - Strategic Alliances - Making Alliances Work – International Marketing Operations. Exporting, importing and counter trade- introduction - Export and Import Finance- Export assistance.

REFERENCES

1. Hill.C.W; *International Business: Competiting In The Global Market Place*, Irwin – McGraw Hill 1999.
2. Philip R.Cateora, *International Marketing*, Irwin McGraw Hill, 9th Edn,2007.
3. Shivaramu, *International Business*, Macmillan India.
4. Francis Cherunilam, *International Business*, heeler Publications,2007.
5. Charles W.L, *International Business*, Irwin - McGraw Hill, 1998.

III SEMESTER
Non-Major Elective -II

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E85	Economic Administration	2	0	0	2	2

UNIT I- NATIONAL INCOME

Concept of National Income -Circular flow of income; Methods of calculating National Income: Value Added or Product method, Expenditure method, Income method. Concepts and Aggregates Related to National Income: Gross National Product (GNP), Net National Product (NNP), Gross and Net Domestic Product (GDP and NDP) – at Market Price, at Factor Cost; National Disposable Income (Gross and Net), Private Income, Personal Income and Personal Disposable Income; Real and Nominal GDP-GDP and Welfare.

UNIT II- GOVERNMENT BUDGET AND THE ECONOMY

Concept and Types of Tax – Direct Tax and Indirect Tax, Canons of Taxation, Subsidy, Transfer Policy ; Budgetary Procedure-Types of Budget-Classification of Receipts : Revenue Receipt and Capital Receipt; Classification of Expenditure : Revenue Expenditure and capital expenditure; Various Measures of Government Deficit : Revenue Deficit, Fiscal Deficit, Primary Deficit-their Meaning and Implications.

UNIT III- REVENUE RESOURCES AND PUBLIC DEBT

Deficit Financing and Methods - An Evaluation of Fiscal Policy of Government of India – Highlights of Recent Budget; Sources of Public Debt-Internal and External Debt; Burden of Public Debt; Redemption of Public Debt; Debt Trap; Role of Public Debt with Special Reference to Developing Countries.

UNIT IV- MONEY MARKET AND CAPITAL MARKET

Nature and Functions of Indian Money Market- Nature and Functions of Indian Capital Market-Stock Markets - Meaning and functions of Stock Market - Functions of Securities Exchange Board of India (SEBI). Credit Control: Quantitative Measures: Bank Rate -Open Market Operations - Variable Reserve Ratio - Statutory Liquidity Ratio - Qualitative Credit Control: Limitations.

UNIT V- INDEX NUMBERS AND INFLATION

Inflation – Meaning and types – Effects of Inflation – Measures to Control Inflation – Inflationary Gap – Deflation – Meaning, Causes, Types, Effects – Deflationary Gap. Index Numbers: Type – Construction of Simple ,Weighted, Chain-Base Index Numbers-Difficulties-Limitation- Index Numbers and Inflation.

REFERENCES

1. Dutt and Sundaram- *Indian Economy*, S Chand and Company, Delhi,2013
2. Agarwal- *Indian Economy*, Vikas Publishing Company, Delhi,2012
3. Misra and Puri -*Indian Economy*, Himalaya Pub.House,2005

III SEMESTER
Non-Major Elective -II

COURSE CODE	COURSE TITLE	L	T	P	Total Of LTP	C
PES15E86	Women Studies	2	0	0	2	2

UNIT I - WOMEN AND EMPLOYMENT

Sex Vs Gender-Visible and invisible work - Feminisation of Employment-Rural and Urban - Organised and unorganised sector-Time allocation and gender - Women in corporate sector-Globalisation and its impact on women's work - Women as entrepreneurs - Farm and non farm - Self employment and wage employment - Theories of labour market discrimination-Women and migration - Economic evaluation of women's work-Women's role in GDP.

UNIT II - WOMEN AND EDUCATION

Human capital Theory- Women's education - Determinants-school dropouts-Obstacles in women's higher education- Poverty and rural women's education-gender divide in higher education-professional and non professional education-Educational opportunities of rural women and urban women-Role of marriage in women's higher education-Women and technical education-Women's educational benefits in the family and in the economy.

UNIT III - WOMEN AND DEVELOPMENT

Theories of development-The paradigm shift in women's development-Women in development - Women and Development - HDI-GDI-GEM-Millennium Development Goals-Women and decision making-Intra household allocation of resources-Gender equality and equity-Dimensions and measurement of gender gap-Causes of gender inequalities-Wellbeing and quality of life-Empowerment and gender equality.

UNIT IV - WOMEN, ENVIRONMENT AND HEALTH

Environment and gender issues-Women in nature - Women and CPR management - Waste management in the households-Environmental degradation - women in green economy-Green budgeting problems in healthy environment - women and environment in rural and urban. Reproductive healthcare-health care programmes - ageing problems- behaviour-nutritional status – Role of institution in women's health – Occupational health hazards.

UNIT IV - ROLE OF STATE AND WOMEN

Rights of women legal, social and political - Policies and programmes – Poverty employment and welfare programmes - National commission on women -Ministry of women and child development – Women’s participation in local governance - women in administration – women as leaders-capacity building programmes - Role of NGO’s-Panchayet Raj and co-operative institutions-Educational and health policies of women.

REFERENCES

1. Becker G.S. “*Human Capital: A Theoretical and Empirical Analysis*”, Columbia University Press, New York, 1995.
2. Kind M and Hill M.A (eds) “*Women’s Education in Developing Countries: Barriers Benefits and Politics*”, John Hopkins, Baltimore, 1993.
3. Seth M “*Women and Development*”, Sage Publications, New Delhi, 2001
4. Shanthi K. “*Women in India*”, Anmol Publications, New Delhi, 2005.
5. ILO “*Women’s Participation in the Economic Activity of Asian Countries*”, ILO, Geneva, 1978.