

SYLLABUS FOR ECONOMICS UNDER CHOICE BASED CREDIT SYSTEM

B.A. in Economics

(Honours, Regular, GE and SEC)

2017

Approved by

The Board of Studies in Economics on 13.06.2017



**COOCH BEHAR PANCHANAN BARMA UNIVERSITY
COOCH BEHAR, WEST BENGAL**

COOCH BEHAR PANCHANAN BARMA UNIVERSITY

CURRICULUM

B. Sc. HONOURS IN ECONOMICS

(6 Semesters Pattern)

(With effect from 2017-2018 academic Sessions and onwards)



B.A. Honours in Economics

There will be six semesters in the three year B.A Honours in Economics. The Curriculum consists of 14 Core Courses (C), 2 Ability Enhancement Compulsory Courses (AECC), 2 Skill Enhancement Courses (SEC) and 4 Discipline Specific Elective (DSE) Courses and 4 Generic Elective (GE) courses [to be taken from the pool of Generic Elective courses]. Each course is of 50 marks. L stands for Lecture Hour, T for Tutorial Hour and P for Practical Hour.

B.A. HONOURS IN ECONOMICS: 1ST SEMESTER

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Microeconomics-I	C-1	5 - I - 0	6	50
	Mathematical Methods for Economics-I	C-2	5 - I - 0	6	50
	Choose from Pool of Generic Electives	GE-1		6	50
	Environment Studies	AECC-1	4 - 0 - 0	4	50
		SEMESTER	TOTAL:	22	200

B.A. HONOURS IN ECONOMICS: 2ND SEMESTER

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Macroeconomics-I	C-3	5 - I - 0	6	50
	Statistical Methods for Economics-I	C-4	5 - I - 0	6	50
	Choose from Pool of Generic Electives	GE-2		6	50
	English / MIL	AECC-2	2 - 0 - 0	2	50
		SEMESTER	TOTAL:	20	200

B.A. HONOURS IN ECONOMICS: 3RD SEMESTER

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Microeconomics-II	C-5	5 - I - 0	6	50
	Indian Economic History during British Rule	C-6	5 - I - 0	6	50
	Mathematical Methods for Economics-II	C-7	5 - I - 0	6	50
	Choose from Pool of Generic Electives	GE-3 (any one to be chosen)		6	50
	Choose from Pool of Generic Electives				
	Foundation Course in Mathematics-I Foundation Course in Statistics-I Foundation Course in Economic Theory	SEC-1 (Choose any one)	2 - 0 - 0	2	50
		SEMESTER	TOTAL:	26	250

B.A. HONOURS IN ECONOMICS: 4TH SEMESTER

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Macroeconomics-II	C-8	5 - I - 0	6	50
	Indian Economic Problems	C-9	5 - I - 0	6	50
	Statistical Methods for Economics-II	C-10	5 - I - 0	6	50
	Choose from Pool of Generic Electives	GE-4 (any one to be chosen)		6	50
	Choose from Pool of Generic Electives				
	Foundation Course in Mathematics-II Foundation Course in Statistics-II Foundation Course in Indian Economy	SEC-2 (Choose any one)	2-0-0	2	50
		SEMESTER	TOTAL:	26	250

B.A. HONOURS IN ECONOMICS: 5TH SEMESTER

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Public Economics	C-11	5 - I - 0	6	50
	International Economics	C-12	5 - 1 - 0	6	50
	Any two from Group A (Given below)	DSE-1	5 - I - 0	6	50
	DSE Group A	DSE-2	5 - I - 0	6	50
	(i) Introductory Econometrics		5 - I - 0		
	(ii) Labour Economics		5 - I - 0		
	(iii) Data Analysis and Computer Application		5 - I - 0		
		SEMESTER	TOTAL:	24	200

B.A. HONOURS IN ECONOMICS: 6TH SEMESTER

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Development Economics	C-13	5 - I - 0	6	50
	Environmental Economics	C-14	5 - I - 0	6	50
	Any two from Group B (Given below)	DSE-3	5 - I - 0	6	50
	DSE Group B	DSE-4	5 - I - 0	6	50
	(iv) Dissertation/Project		4 - I - I		
	(v) Rural Economics and Social Change		5 - I - 0		
	(vi) Financial Economics		5 - I - 0		
		SEMESTER	TOTAL:	24	200
		GRAND	TOTAL:	142	1300

**Generic Elective (GE) to be offered by Department of Economics (for Honours) – for others
Department (Excluding Economics honours)**

1st Semester

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Introductory Microeconomics	GE-I	5 - I - 0	6	50

2nd Semester

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Introductory Macroeconomics	GE-II	5 - I - 0	6	50

3rd Semester

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Indian Economy-I	GE-III	5 - I - 0	6	50

4th Semester

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Indian Economy-II	GE-III	5 - I - 0	6	50

B.A. (Regular) PROGRAMME IN ECONOMICS

There will be six semesters in the three-year B.A Program in Economics. The Curriculum consists of 12 Core Courses (C) of which 4 core courses are to be taken from Discipline 1(the **program in the subject** selected by the candidate) ; 4 core courses are to be taken from Discipline 2(any subject other than Discipline 1) and 4 core courses are to be taken from AECC-Core. Apart from these, 2 Generic Elective courses (GE) [to be taken from the pool of Generic Elective courses], 2 Ability Enhancement Compulsory Courses (AECC-Elective), 4 Skill Enhancement courses (SEC) (from the **program in the subject** selected by the candidate) and 2 Discipline Specific Elective courses (DSE) from Discipline-1 and 2 such courses from Discipline-2 are to be taken. Each paper is of 50 marks. L stands for Lecture Hour, T for Tutorial Hour and P for Practical Hour.

B.A. PROGRAM IN ECONOMICS: 1ST SEMESTER

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Principles of Microeconomics–I	C-1	5 - I - 0	6	50
	Discipline-2(Core 1)	C-2	5 - I - 0	6	50
	MIL-I	AECC-1(Core)	5 - I - 0	6	50
	Environmental Studies	AECC-1(Elective)	4 - 0 - 0	4	50
		SEMESTER	TOTAL:	22	200

B.A. PROGRAM IN ECONOMICS: 2ND SEMESTER

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Principles of Macroeconomics- I	C-3	5 - I - 0	6	50
	Discipline-2(Core 3)	C-4	5 - I - 0	6	50
	English-I	AECC-2(Core)	5 - I - 0	6	50
	English/MIL	AECC-2(Elective)	2 - 0 - 0	2	50
		SEMESTER	TOTAL:	20	200

B.A. PROGRAM IN ECONOMICS: 3RD SEMESTER

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Principles of Microeconomics–II	C-5	5 - I - 0	6	50
	Discipline-2(Core 5)	C-6	5 - I - 0	6	50
	Quantitative Aptitude for Competitive Examination -I	SEC- 1	2 - 0 - 0	2	50
	MIL-II	AECC-3(Core)	5 - I - 0	6	50
		SEMESTER	TOTAL:	20	200

B.A. PROGRAM IN ECONOMICS: 4TH SEMESTER

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Principles of Macroeconomic-II	C-7	5 - I - 0	6	50
	Discipline-2(Core 7)	C-8	5 - I - 0	6	50
	Quantitative Aptitude for Competitive Examination -II	SEC- 2	2 - 0 - 0	2	50
	English-II	AECC-4(Core)	5 - I - 0	6	50
		SEMESTER	TOTAL:	20	200

B.A. PROGRAM IN ECONOMICS: 5TH SEMESTER

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	DSE (Any one from Discipline 1 and any one from Discipline 2)	DSE- 1		6	50
		DSE- 2		6	50
	DSE Discipline 1 (Any one from Discipline 1)		5 - I - 0		
	Economic Development and Policy in India		5 - I - 0		
	Money and Banking		5 - I - 0		
	DSE Discipline 2				
	1.		5 - I - 0		
	2.		5 - I - 0		
	GE(Any One)	GE-1		6	50
	Choose from Pool of Generic Electives		5 - I - 0		
	Choose from Pool of Generic Electives		5 - I - 0		
	SEC			2	50
	Entrepreneurship and Small Business Development	SEC- 3	2 - 0 - 0		
		SEMESTER	TOTAL:	20	200

B.A. PROGRAM IN ECONOMICS: 6TH SEMESTER

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	DSE (Any one from Discipline 1 and any one from Discipline 2)	DSE- 3		6	50
		DSE- 4		6	50
	DSE Discipline 1 (Any one from Discipline 1)		5 - I - 0		
	Basic Statistics		5 - I - 0		
	Emerging Issues in Area of Economics		5 - I - 0		
	DSE Discipline 2		5 - I - 0		
	1.				
	2.				
	GE (Any one)		5 - I - 0	6	50
	Choose from Pool of Generic Electives	GE- 2			
	Choose from Pool of Generic Electives				
	SEC		2 - 0 - 0	2	50
	Competitive Aptitude in Economics	SEC-4	2 - 0 - 0		
		SEMESTER	TOTAL:	20	200
		GRAND	TOTAL:	122	1200

Generic Elective (GE) to be offered by Department of Economics (for Regular Course) – for others Department (Excluding Economics Regular Course)

5th Semester

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Indian Economy-I	GE-I	5 - I - 0	6	50

6th Semester

Course Code	Course Title	Course type	(L-T-P)	Credit	Marks
	Indian Economy-II	GE-II	5 - I - 0	6	50

Core Economics Course (C-1): MICROECONOMICS-I

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Introduction

Nature and scope-scarcity and choice

Module II: Demand & Supply

Concept of demand & supply functions, Price, Income & Cross elasticities of demand, Elasticity of Supply, Market demand functions, Concept of equilibrium, Impact of changes in demand & supply on equilibrium

Module III: Theory of Consumer Behaviour

Concept of cardinal and ordinal utility, Marshallian utility analysis, consumer's equilibrium, derivation of law of demand, consumer equilibrium in the more than one commodity, consumer's and producer's surplus.

a. Indifference Curve Analysis

Axioms of Preference, Ordinal Utility Function, Indifference curve & Properties, Budget line and shifting, MRS, Consumer's Equilibrium, Choice of Utility Index, Price, Income and Substitution Effects: Hicksian & Slutsky Approaches, Ordinary and Compensated Demand Curves, Compensating Variation & Equivalent Variation, Income, Price & Substitution Effects in case of Inferior and Giffen goods, Shapes of Indifference Curves in exceptional cases, Indirect Utility Function- Roy's Identity.

b. Revealed Preference Theory(RPT)

Concept of RPT, Weak and Strong Axioms, Derivation of the Law of Demand.

Module IV: Choice Under Uncertainty and Economic Information

Utility function and Expected utility, Consumers Preferences, Risk Aversion and Indifference Curve, demand and Risk Assets, Asymmetric Information.

Module V: The Theory of Production

Concept of Production function, Production with a single variable input, TP, AP & MP, Production with two variable inputs, Isoquant & economic region of production, MRTS, Optimal input combination, Constrained output maximisation, Cost minimisation, Elasticity of substitution, Scale elasticity of output, Wicksell - Jhonson Theorem, Cobb-Douglas and CES production function (basic properties only)

Module VI: Theory of Cost

Different concept of cost, Short-run and Long-run cost analysis, modern concept: Saucer-type SAVC curve J and L Shaped LAC curve.

Suggested readings:

1. Lipsey and Chrystal: *An Introduction to Positive Economics*, OUP
2. Stiglitz and Walsh: *Economics*, W.W. Norton & Company
3. Chakravarty, S: *Microeconomics*, Allied
4. Mankiw: *Principles of Economics*, Thomson
5. Grossman, Gregory: *Economic Systems*, Prentice Hall
6. Varian H.R: *Intermediate Microeconomics- A Modern Approach*, East-West Press
7. Salvatore, Dominick: *Microeconomics*, OUP
8. Varian H.R: *Microeconomic Analysis*, W.W. Norton
9. Gould and Ferguson: *Microeconomic Theory*, Richard D. Irwin, Inc.
10. Pindyck, Rubinfeld and Mehta: *Microeconomics*, Pearson Education Asia
11. Maddala and Miller: *Microeconomics- Theory and Applications*, McGraw Hill.
12. Salvatore, Dominick: *Microeconomics*, OUP
13. Varian H.R: *Microeconomic Analysis*, W.W. Norton

Core Economics Course (C-2): MATHEMATICAL METHODS FOR ECONOMICS –I

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Basic Algebra

Number system, Surds, Indices, Complex Number, Quadratic Equation, Permutation & Combination, Binomial Theory, AP & GP, basic Geometry, Co-ordinate Geometry

Module II: Sets and Functions

Concept of Sets. Basic Set operations, Real Numbers and real-valued functions, domain and range, Convex Sets and Functions

Module III: Differential & Integral Calculus

Limit and Continuity, Differentiation and Integration- Derivatives of Algebraic functions; Exponential, Logarithmic functions; Differentiation; Product and Quotient rules; Successive differentiation (up to second order); Partial Differentiation, Indefinite and Definite Integrals: Integration by Parts and Integration by Substitution.

Module IV: Matrix Algebra

Vectors, Matrices and Matrix Operations: Addition, Scalar Multiplication, Matrix Multiplication. Transpose matrix, Inverse of a Square Matrix, Rank of a matrix, Singularity and Invertibility, Adjoint Matrix and formula for the inverse. Matrix Methods of Solution of equations, Determinants, Properties, Minors and Cofactors, Solution to Equations by Cramer's Rule, Characteristic Roots and Vectors, Quadratic Forms

Module V: Economic Applications

Utility Analysis, Production Functions, Profit Maximization, Sales Maximization, Constrained Optimization in a Static Framework-The Lagrange Multiplier - Cost Minimization, Comparative and Static Analysis.

Suggested Readings:

1. Chiang and Wainwright : *Fundamental Methods of Mathematical Economics*, McGraw Hill book Co. New York.
2. Silberberg, E.: *The Structure of Economics - A mathematical Analysis* McGraw Hill Book Co., New York.
3. Mukherjee, B. and V. Pandit: *Mathematical Methods for Economic Analysis*, Allied Publishers Pvt. Ltd., New Delhi.
4. Baumol, W.J.: *Operations Research- An Introduction*, Prentice Hall, Englewood Cliffs, New jersey.
5. Taha, H.A.: *Operations Research- An Introduction*, Prentice Hall of India, New Delhi.
6. Sydsaeter & Hammond: *Mathematics for Economic Analysis*, Pearson Education.
7. Simon & Blume: *Mathematics for Economists*, Viva Books.

Core Economics Course (C-3): MACROECONOMICS- I

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I : Introduction to Macroeconomics

Introduction to macroeconomic variables, scope and nature, Microeconomic and macroeconomic approaches

Module II: National Income Accounting

Principles of national income accounting - Problems of measuring national Income –National Income as a measure- GDP, GNP, NDP, NNP and NI- Circular flow of income, Measurement of National Income and problems encountered- CPI, WPI and GDP deflator.

Module III: Simple Keynesian Theory of Income Determination

Components of Effective Demand in a closed economy without government and with government, and in an open economy, Determination of Equilibrium Income in a closed economy without government, closed economy with government, and in an open economy. Stability of equilibrium,–Multiplier- (Expenditure Multiplier, Balanced Budget Multiplier and Tax Rate Multiplier) and Dynamic Multiplier.

Module IV: The Classical view of Macroeconomics

Say's law & Walras law (Barter exchange Model), Restatement of Say's law (in money economy and in relation to quantity theory of money), The dichotomy between the real & monetary sectors, Determination of employment, output and prices, Wage-Price flexibility, Quantity theory of money, Aggregate demand & aggregate supply in the classical system, The Classical theory of interest rate, Policy implication of the classical equilibrium model (Fiscal & monetary policy)

Module V: The Keynesian System: Money, Interest and Income

Money in the Keynesian theory, Interest Rate Determination (Liquidity Preference Theory), Money Market, Bond market and Commodity Market , Derivation IS-LM Curves, Different Types of Multiplier in IS-LM Model, Effectiveness of Monetary and Fiscal policies in IS-LM Model, Transmission mechanism of and Crowding Out effect, Determination of equilibrium income and interest rate, Comparative Statics - Monetary policies and fiscal policies.

Module VI: Complete Keynesian Model

Derivation of the aggregate demand curve and the aggregate supply curve, determination of Equilibrium Price and Output, Involuntary unemployment- Pigou Effect and Keynes Effect- Role of Monetary and Fiscal Policies in the two System.

Suggested readings:

1. Samuelson and Nordhaus: *Economics*, McGraw Hill
2. Mankiw, *Economics : Principles and Applications*, Cengage Learning
3. Blanchard: *Macroeconomics*, Pearson Education
4. Mankiw: *Macroeconomics*, Worth Publishers
5. Dornbusch and Fischer: *Macroeconomics*, McGraw-Hill
6. Sikdar, Soumyen: *Principles of Macroeconomics*, O.U.P.
7. Froyen: *Macroeconomics - Theory and Policy*, Pearson Education
8. Ackley, G.: *Macroeconomics*, Macmillan, London.

Core Economics Course (C-4): STATISTICAL METHODS FOR ECONOMICS-I

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Data Collection and Measures of Central Tendency and Dispersion

Basic concepts: population and sample, parameter and statistic; Data Collection: primary and secondary data, methods of collection of primary data; Presentation of Data: frequency distribution; cumulative frequency; graphic and diagrammatic representation of data; Measures of Central Tendency: mean, median, mode, geometric mean, harmonic mean, their relative merits and demerits; Measures of Dispersion: absolute and relative - range, mean deviation, standard deviation, coefficient of variation, quartile deviation, their merits and demerits; Measures of Skewness and Kurtosis, Interpolation and Extrapolation.

Module II: Correlation and Regression Analysis

Correlation: scatter diagram, sample correlation coefficient - Karl Pearson's correlation coefficient and its properties, probable error of correlation coefficient, Spearman's rank correlation coefficient, Two variable linear regression analysis - estimation of regression lines (Least square method) and regression coefficients - their interpretation and properties, standard error of estimate

Module III: Index Number

Index Numbers: Index number as weighted averages, Price and quantity index numbers, Problems in the Construction of Index Numbers, Tests for index Numbers, Chain based Index, Cost of Living Index Number, Wholesale Price Index and Cost of Living Index, Uses of Index Numbers, Index numbers as indices of well-being, Stock market indices.

Module IV: Population Statistics

Measurements of mortality: Crude Death Rate, Specific Death Rate, Standardised Death Rate, Mortality Index, Infant Mortality Rate, Measurements of Fertility: Crude Birth Rate, General Fertility Rate, Age-specific Fertility Rate, Total Fertility Rate, Gross Reproduction Rate, Net Reproduction Rate, Life Table: its uses.

Suggested readings:

1. Goon, A.M., M.K. Gupta and B. Dasgupta (1986): *Fundamentals of Statistics, Vols. 1 & 2*, The World Press Private Limited. Calcutta.
2. Nagar, A.L. and R.K.Das (1977): *Basic Statistics*, OUP, Delhi.
3. Hoel, P.G. (1984): *Introduction to Mathematical Statistics, 5th edition*, Wiley, New York.
4. Yule, G.U. and Kendall, M.G. (eds.) (1958): *Introduction to the Theory of Statistics*, Charles Griffin & Co. Ltd. London.
5. Kenney, and keeping (1974)- *Mathematics of Statistics - Part I*, Affiliated East West Press, New Delhi.
6. Das, N.G. (1977): *Statistical Methods (Part-I & II)* M. Das & Co., Calcutta.
7. Hogg, R.V. and A.T. Craig (1970): *Introduction to Mathematical Statistics (3rd edition)*, Macmillan Publishing Co. New York.
8. Bowen & Starr: *Basic Statistics for Business and Economics*, McGraw Hill

Core Economics Course (C-5): MICROECONOMICS II

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Market Structures

a. Perfect Competition

Short-run and long-run equilibrium of the firm and Industry, Short-run supply of the firm and market, Long-run industry supply with and without external economics and diseconomies.

b. Stability of equilibrium

Marshallian and Walrasian conditions of stability equilibrium, Cobweb Model.

c. Theory of a Monopoly Firm

Concept of imperfect competition; short run and long run price and output decisions of a monopoly firm; concept of a supply curve under monopoly; comparison of perfect competition and monopoly, Multi-Plant monopoly, Price Discrimination, Theoretical Indices of Monopoly Power.

d. Imperfect Competition

Monopolistic competition: Assumptions, SR & LR price and output determinations under monopolistic competition, Selling Cost, Ideal output and Excess capacity, Comparison with Perfect Competition.

e. Oligopoly

Characteristics, Conjectural variation and reaction pattern of oligopoly Models, Cournot, Sweezy, Stackelberg and Collusive Oligopoly, Price Leadership Model.

Module II: Factor Pricing

The demand for productive service(single variable input and two variable inputs) in perfect and imperfect markets, Firms demand industry demands input, Indifference curve analysis of labour supply, marginal productivity theory of input returns, Adding-up problems.

Determination in perfect and imperfect markets, Collective bargaining and exploitation, Perfectly competitive factor markets: Ricardian theory of rent, Economic rent and quasi-rent, Gross and Net Profits, Risk and Uncertainty theory of profit.

Module III: Welfare Economics

Conditions of Pareto optimality in pure exchange and with production, optimality of perfect competition, externalities and market failure.

Suggested readings:

1. Chakravarty, S: *Microeconomics*, Allied
2. Varian H.R: *Intermediate Microeconomics: A Modern Approach*, East West Press
3. Pindyck, Rubinfeld and Mehta: *Microeconomics*, Pearson Education Asia
4. Gould and Ferguson: *Microeconomic Theory*, Richard D. Irwin
5. Perloff, Jeffrey M. (2007): *Microeconomics - Theory and Application with Calculus*, Addison Wesley
6. Jehle, G. and Reny, P.: *Advanced Microeconomic Theory*, Addison Wesley
7. Sen, Anindya: *Microeconomics*, OUP
8. Mankiw and Taylor: *Microeconomics*, CENGAGE
9. Belleflamme, Paul and Peitz, Martin: *Industrial Organization –Markets and Strategies*, Cambridge University Press
10. Maddala and Miller: *Microeconomics- Theory Applications*, McGraw Hill
11. Cohen and Cyert: *Theory of the Firm*, Prentice Hall of India

Core Economics Course (C-6): INDIAN ECONOMIC HISTORY DURING BRITISH RULE

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Economic History- An introduction

Module II: Impact of British Rule with special reference to:

- a. De-industrialisation
- b. Commercialisation of agriculture-Agrarian Structure
- c. Economic Drain

Module III: Aspect of British Imperial Policy

- a. Land Policy
- b. Railways and Irrigation
- c. Policy of Discriminating protection
- d. Policy of Trade
- e. Foreign Capital

Module III: History of Money, Currency and Banking under British Rule

- a. Monetary and Currency developments before independence
- b. Evolution of Currency or Money
- c. Paper Standard during British Rule
- d. Commercial and Central banking development in the British period

Module III: Growth of Industrial Entrepreneurship under British Rule

- a. History of Handicrafts and small Scale Industries
- b. Pattern of Industrial development
- c. The Cotton Industry
- d. The Iron and Steel Industry

Suggested readings:

1. Lakshmi Subramanian: *History of India 1707-1857*, Orient Blackswan, 2010, Chapter 4.
2. Sumit Guha, 1991: "Mortality decline in Early 20th Century India", *Indian Economic and Social History Review (IESHR)*, pp. 371-74 and 385-87.
3. Tirthankar Roy: *The Economic History of India 1857-1947*, Oxford University Press, 3rd edition, 2011.
4. Irfan Habib: *Indian Economy 1858-1914: A People's History of India*, Vol.28, Tulika, 2006.
5. Ira Klein: "When Rains Fail: Famine Relief and Mortality in British India", *IESHR*,
6. Jean Dreze: "Famine Prevention in India" in Dreze and Sen (eds.) *Political Economy of Hunger*, Vol.2, OUP
7. Bhattacharya, Sabyasachi, *Ouponibeshik Bharater Arthanaitik Itihas*, Ananda
(সব্যসাচী ভট্টাচার্য্য:ঔপনিবেশিক ভারতের অর্থনৈতিক ইতিহাস (আনন্দ))
8. Bhattacharyya, Dhires: *A Concise History of the Indian Economy*, Progressive Publishers
9. Bagchi, A.K. (1972): *Private Investment in India, 1900-39*, Cambridge: Cambridge University Press.
10. Chandra B. (2010): *Rise and Growth of Economic Nationalism in India*, Har Anand Publications, 2010.
11. Gadgil, D.R. (1938): *The Industrial Evolution of India in recent times*
12. Kumar, D. ed. (1983): *Cambridge Economic History of India Vol. II*, Cambridge University Press.
13. Sen, N. (1992): *India in the International Economy 1858-1913*, Orient Longman Limited.

Core Economics Course (C-7): MATHEMATICAL METHODS FOR ECONOMICS II

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Dynamic Analysis

Discrete Time Framework- Linear first-order difference equations, linear second order difference equations
Examples like Cobweb Model, Multiplier-Accelerator model, Continuous Time Framework - Linear first order differential equations, linear second order differential equations. Examples like adjustments in partial market equilibrium model, Domar's public debt model.

Module II: Game Theory

Concept of static game and strategies – continuous and discrete strategies, pure and mixed strategies Two-person-constant-sum games with discrete pure strategies - normal form presentation, Basic Nash equilibrium – dominance principle. Use of mixed strategy in finding equilibrium, Two-person-non-constant-sum, graphical solution

Module III: Linear Programming

Mathematical Preliminaries, word Problem, Optimal solution simplex method. Duality Problem, Mathematical formulation, Shadow price

Module IV: Input-Output Analysis

Static Open Input-output model, Static Closed Input-output model

Module V: Application in Economics

Market Models, Stability analysis, Cobweb Model, Domar's Model, Domar's debt burden model, Multiplier-Accelerator interaction model, IS-LM Model.

Suggested Readings:

1. Chakravorty and Ghosh: *Linear Programming*, Moulik Library , Kolkata
2. Chiang & Wainwright: *Fundamental Methods of Mathematical economics*, McGraw Hill.
3. Dixit, Skeath, Reiley: *Games of Strategy*, W. W. Norton
4. M. J. Osborne: *An Introduction to Game Theory*
5. Gibbons, Robert: *Game Theory for Applied Economics*, Princeton University Press
6. Sydsaeter & Hammond: *Mathematics for Economic Analysis*, Pearson Education.
7. Simon & Blume: *Mathematics for Economists*, Viva Books.
8. Baumol, William: *Economic Theory and Operations Analysis*, Prentice Hall
9. Miller, Ronald E. and Blair, Peter D.: *Input-Output Analysis: Foundations and Extensions*, Prentice Hall

Core Economics Course (C-8): MACROECONOMICS- II

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Theories of Consumption and Investment functions

Theories of Consumption Function: Short run and Long Run Consumption Function, Consumption and present Value of Income, Life Cycle Hypothesis - Relative Income Hypothesis - Permanent Income Hypothesis, Investment Function -The Present Value Criterion for Investment, Relation between MEC and MEI- Acceleration Principle- Flexible accelerator model.

Module II: Inflation and Unemployment

Inflation: DPI and CPI - Inflationary gap- Bent Hansen's dynamic demand-pull inflation model
Philips curve (short run and long run) and the role of inflation - Natural rate of unemployment - Effects of inflation, Anti- inflationary policies — Ackley's mark- up inflation.

Module III: Supply of Money

Definitions of money, Money creation by commercial banks, Money multiplier, Control of money supply by the central bank

Module IV: Central and Commercial Banking: Functions and Credit Control

Credit Control Methods, Theory of bank rate, Open market operation

Module V: Sources of Growth Models

Early Growth Theories: Adam Smith , David Ricardo and Marx, Keynesian Theory of Secular Stagnation, Harrod and Domar – Instability equilibrium, Neo-Classical growth model, The Solow model of Economic growth and technical progress

Module VI: Theories of Trade Cycle

Definition of Trade Cycle, features, phases, Trade Cycle Theories - Hawtrey, Hayek, Hicks – Samuelson, Control of Trade Cycles

Suggested readings:

1. Mankiw: *Macroeconomics*, Worth Publishers
2. Froyen: *Macroeconomics- Theory and Policy*, Pearson Education
3. Barro: *Macroeconomics*, PHI Learning Private Limited
4. Ackley, G.(1986): *Macroeconomics*, Macmillan, London.
5. Levacic, G. (1976): *Macroeconomics*, Macmillan, London.
6. Mueller, M.G. (ed.) (1978): *Readings in Macroeconomics*, Surjeet Publications, Delhi.
7. Sayers, R.S. (1960): *Modern Banking*, Clarendon Press, Oxford.
8. Shapiro, E. (1996): *Macroeconomic Analysis*, Galgotia Publications, New Delhi.
9. Surrey (ed): *Macroeconomic Themes*, Oxford University Press
10. Dornbusch and Fischer: *Macroeconomics (3rd edition)*, McGraw-Hill
11. Sikdar, S: *Macroeconomics*, Oxford University Press

Core Economics Course (C-9): OUTLINE OF INDIAN ECONOMY SINCE INDEPENDENCE

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Model I: Structural Changes in the Indian Economy

- a. Trends in National Income
- b. Sectoral distribution of income
- c. The pattern of Income distribution in India

Module II: Agricultural Sector

- a. Farm size and productivity
- b. Cropping Pattern in India
- c. Green revolution- Productivity, Employment, and Distribution aspects
- d. Land reforms with special reference to West Bengal
- e. Agricultural Credit
- f. Agricultural Marketing
- g. Trade Union Movement

Module III: Industrial Development

- a. Trends in industrial output and productivities in different plan periods
- b. Small Scale and Cottage Industries and its Economic Reforms
- c. Role of Public Sector in India and Critical review of its performance
- d. Industrial Policies of 1948, 1956, 1977 and 1991
- e. Industrial Licensing Policies – MRTP Act, FERA and FEMA

Module IV: Foreign Trade

Foreign Trade: role, composition and direction of India's foreign trade, trends of export and import in India, export promotion versus import substitution; Balance of Payments of India; India's Trade Policies; Foreign Capital – FDI, Aid, MNCs, and WTO.

Suggested readings:

1. U. Kapila (2016): Indian economy since Independence. Academic Foundation, New Delhi
2. S. K. Misra and V. K. Puri (Latest Year): Indian Economy — Its Development Experience, Himalaya Publishing House, Mumbai
3. S. Chakraborty : Development Planning: The Indian Experience. Clarendon Press.
4. R. Dutt and K. P. M, Sundharam (Latest Year): Indian Economy, S. Chand & Company Ltd., New Delhi.
5. A. Panagariya (2008): India: the Emerging Giant, Oxford University Press, New York
6. S. Acharya and R. Mohan (Eds.) (2010): India's Economy: Performance and Challenges, Oxford University Press, New Delhi.
7. I. J. Ahluwalia and I. M. D. Little (Eds.) (1998): India's Economic Reforms and Development: Essays for Manmohan Singh, Oxford University Press, New Delhi.

Core Economics Course (C-10): STATISTICAL METHODS FOR ECONOMICS-II

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Probability Theory

Elements of Probability Theory: Sample Space, Probability Space, Events, Classical Definition of Probability, The Addition Rule, The Multiplication Rule, Theorems of Total Probability, Conditional Probability and Statistical Independence, Limitations of the Classical definition, Frequency definition, Axiomatic Approach, Bayes' Rule

Module II: Random Variables and Probability Distributions

Definition of random variable: discrete and continuous random variable, probability mass function and probability density functions, Expectation and Variance of random variables, Joint Probability Distribution: Concept of Independence, Marginal and Conditional Distribution. Expectation of the product of two variates, Univariate Probability Distributions: Binomial, Poisson, Normal and Standard Normal Distribution - Mean, Variance, Skewness and Kurtosis, Moment Generating Functions, Limiting form of Binomial distribution (with proof), Limiting form of Poisson distribution (no proof), Importance of Normal Distribution in Statistics, Central Limit Theorem (statement only).

Module III: Sampling Theory

Population and Sample, Parameter and Statistic, Random Sampling: Methods of Drawing Random samples (with and without replacement). Basic Concepts of different methods of sampling –Stratified Sampling, clustered sampling, multistage sampling, purposive sampling, Sampling Distribution, Standard Error, Sampling Distributions associated with Normal Population, Expectation and Standard Error of Sample Mean (with and without replacement), Derived Distributions: Chi-Square Distribution, Student's t Distribution, F Distribution (definition and important properties), Fisher's t distribution, concept of degrees of freedom.

Module IV: Classical Statistical Inference

Basic concepts of estimation: Desirable properties of estimators (Unbiasedness, Minimum Variance, Consistency and Sufficiency), Methods of Point Estimation - Maximum Likelihood Estimators and their properties, Maximum Likelihood estimation of the parameters of Binomial, Poisson and Normal Distributions, Testing of Hypothesis: Confidence Intervals, p-values, Type-I and Type-II Errors, Simple applications of tests for the Mean and Variance of a Univariate Normal Population.

Module V: Analysis of Time Series

Nature and decomposition of a time series - Analysis of trend, Polynomial trend - Exponential trend
Non-linear growth curves - Moving average method - Seasonal component - Cyclical and random components – forecast and accuracy.

Suggested readings:

1. Cochran, W. G.: Sampling Techniques, 3rd ed., Willey Edition
2. Goon, Gupta, Dasgupta: Fundamentals of Statistics, Vol I, World Press Private Limited
3. Mood, A.M., F.A. Greybill and D.C. Boes: Introduction to the theory of statistics, McGraw Hill
4. Bowen & Starr: Basic Statistics for Business and Economics, McGraw Hill.
5. Mood, A.M., F.A. Greybill and D.C. Boes: Introduction to the theory of statistics, McGraw Hill
6. Hoel, Paul, G: Introduction to Mathematical Statistics, Wiley Series in probability and statistics
7. Mathai and Rathie: Probability and Statistics, The Macmillan Company of India Limited
8. Nagar and Das: Basic Statistics, OUP

Core Economics Course (C-11): DEVELOPMENT ECONOMICS

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Conceptions of Development

Economic development, Economic growth and development, Basic factors economic development, Obstacles to economic development, Indicators of economic development - National income, Per capita income; Basic needs approach, PQLI, HDI, GDI, Capital formation and economic development, inequality, Vicious circle of poverty, Absolute (Head Count Ratio, Poverty Gap) and Relative Poverty (Gini Coefficient, Lorenz Curve)

Module II: Population and Economic Development

Theory of optimum population, Theory of Demographic Transition, Two ways Relationship between Population growth and Economic Development.

Module III: Theories of Economic Development

The Classical Theory, Karl Marx's Theory, The Schumpeter's Theory, Rostow's Stages of Economic Growth, Keynesian Theory, Nelson's Low Level Equilibrium Trap, Leibenstein's Critical Minimum Effort, Balanced and Unbalanced Growth Theories, Big Push Theory, Dualistic Theories and Lewis Theory of Unlimited Supplies of Labour.

Module IV: Theories of Economic Growth

The Harrod-Domar Model, Kaldor Model of Income Distribution, Solow's Model, Steady State Growth, Todaro's Model of Rural Urban Migration and Unemployment and Two Gap Model.

Module V: Economic Planning and Technique

Why Planning needed; objectives, Classification of Planning, Use of Input-output technique in planning, capital output ratio & Plans models in Indian Plans

Suggested readings:

1. Y. Hayami: *Development Economics*, OUP
2. H. Mynt: *The economics of the developing countries*, B.I. Publications
3. Debraj Ray: *Development Economics*, OUP
4. K. Basu: *Analytical Development Economics*, OUP
5. Rune Skarstein: *Development Theory*, OUP
6. P.W. Preston: *Development Theory*, Oxford-Blackwell
7. Agarwala and Singh (eds.): *The Economics of Underdevelopment*, OUP
8. W.W.Rostow: *The Stages of Economic Growth*, Cambridge University Press
9. Y.S. Brenner: *Theories of Economic Development and Growth*, George Allen & Unwin
10. Irma Adelman: *Theories of Economic Growth and Development*, Stanford University Press

Core Economics Course (C-12): PUBLIC ECONOMICS

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Introduction to Public Finance

Public Finance: meaning and scope, distinction between public and private finance; public good versus private good; Principle of maximum social advantage; Market failure and role of government, Externalities,

Module II: Public Expenditure

Meaning, classification and principle of public expenditure canons and effects- Production Employment and Distribution, causes of growth of public expenditure, Wagner's Law, Role of public expenditure in developing economy. Theories of Public Expenditure, Principle of Maximum Social Advantage, Principle of Maximum Benefit.

Module III: Public Revenue and Receipts

Sources of Public Revenue; Taxation - meaning, Direct & Indirect Taxation- merit & demerit, Canons and Classification of taxes, impact and incidence of taxes, division of tax burden, the benefit and ability to pay approaches, taxable capacity, effects of taxation, characteristics of a good tax system, The Benefit Approach, Ability-to-pay Approach (horizontal and vertical equity), Major trends in tax revenue of central and state governments in India

Module IV: Public Budget and Public Debt

Public Budget: kinds of budget, economic and functional classification of the budget; Balanced and unbalanced budget; Balanced Budget Multiplier; Budget as an instrument of economic policy. Sources, effects, debt burden Fiscal Policies: Alternative and Supplementary.

Suggested readings:

1. Musgrave: The Theory of Public Finance, McGraw Hill
2. Stiglitz, J.: Economics of the Public Sector, W.W. Norton
3. Ghosh & Ghosh: Economics of the Public Sector, Prentice Hall.
4. Allan, C.M.: The Theory of Taxation, Penguin.
5. Atkinson, D. & Stiglitz, J.: Public Economics, McGraw Hill.
6. Bagchi, Amaresh (ed): Readings in Public Finance, OUP.
7. Houghton, R.W. (ed): Public Finance, Penguin.
8. Due, John F. and Ann F. Friedlander (1997): Government Finance- Economics of the Public Sector AITBS Publishers and Distributors, Delhi.
9. Dalton, Hugh (1954): Principles of Public Finance, 4th edition, Routledge and Kegan Paul, London.
10. Ganguly, Subrata (1975): Public Finance, Nababharat Publisher, Calcutta.

Core Economics Course (C-13): INTERNATIONAL ECONOMICS

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Introduction

What is international economics about? Distinction between Internal and International Trade, Gains from international trade, Arguments for and against Free Trade and Protection, Classical theory of International Trade: Adam Smith's Absolute Advantage Theory; Ricardo's Comparative Cost Theory; Heckscher - Ohlin Theory of International Trade(price and physical definition of factor abundance), Terms of trade, Secular Deterioration in Terms of Trade and Concept of Intra- Industry Trade.

Module II: Commodity and Factor Prices under Trade

Factor Price Equalization Theorem, Complete Specialisation & Rybcznsky Theorem.

Module III: Tariff under Optimal Market Conditions

Some partial aspects of the Theory of Tariffs and Income Distribution, The Stolper-Samuel Theorem, Optimum Tariff, Quotas and Quantitative Restrictions: Effects of Quotas- Quantitative restriction and the balance of Payment- Tariff vs. Quota.

Module IV: Balance of Trade and Balance of Payment

BOT, BOP, Current Account, Capital Account, Visible and Invisible, Causes for disequilibrium in Balance of Payments, Methods of correcting the disequilibrium. Devaluation of Currency, Convertibility of Currency Exchange Rate(Fixed & Flexible), Foreign Trade multiplier, Elasticity Approach & Absorption Approach, Functions of IMF, World Bank, GATT and WTO.

Suggested readings:

1. Krugman, Paul R. and Obstfeld, Maurice: International Economics (8th ed.), Pearson Education.
2. Caves, Frankel, Jones: World Trades and Payments (9th Ed.), Pearson Education.
3. Gandolfo, G.: International Trade Theory and Policy, Springer.
4. Heller, H R.: International Trade- Theory and Empirical Evidence, Prentice Hall.
5. Salvatore, Dominick: International Economics (8th Ed.), Wiley India.
6. Kenan, P.B. (1994): The International Economy, Cambridge University Press, London.
7. Kindlberger, C.P. (1983): International Economics, R.D. Irwin, Homewood.
8. Aggarwal, M.R. (1999): Regional Economic Cooperation in South Asia, S Chand & Co., New Delhi.
9. Bhagwati, J.(ed.) (1981): International Trade- Selected Readings, Cambridge University Press, Mass.

Core Economics Course (C-14): ENVIRONMENTAL ECONOMICS

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Economy and Environment

Origin, Definition and nature of Environmental Economics, Material Balance Model (BBM): Interlinkages between Economy and Environment, Choice Making and Welfare Economics

Module II: Environment and Public Good

Characteristics, Environmental quality as public goods, Externalities: negative & positive, Environmental damages as negative externalities, relation between public goods & Externalities, Carbon tax & Deforestation.

Module III: Sustainable Development

Conventional Development Model, Approaches to Sustainable Development, Indicators of Sustainable Development and Practices

Module IV: Optimal Exploitation of Natural Resources

Natural resource: Non-renewable resource: Hotelling's rule and discounting over time Principles of renewable resource management, Tragedy of Commons

Module V: Environmental Valuation and Technique

National Income and Environmental Accounting, Environmental Impact Assessment, Environmental valuation Techniques

Module VI: Indian Environmental Issues and Legislation

Natural Resources of India, Indian constitution and environment, Case study of Environmental Degradation in India

Suggested readings:

1. J. Harris and B. Roach (2013): *Environmental and Resource Economics—A contemporary approach*, 3/e, Routledge.
2. B. Field and M. Field (2013): *Environmental Economics*, 6/e, The McGraw-Hill.
3. D. Pearce, R.K. Turner and I. Bateman (1993): *Environmental Economics—An elementary introduction*, Johns Hopkins Press.
4. Smith, Stephen *A Very Short Introduction to Environmental Economics*, OUP
5. Kolstad C.D. (2011): *Intermediate Environmental Economics*, OUP
6. Stiglitz, Joseph E., Sen, Amartya, Fitoussi, Jean-Paul: *Mis-Measuring Our Lives*, The New Press
7. D. Kitchen: *Global Climate Change: Turning Knowledge Into Action*, Prentice Hall
8. Nicholas Stern: *The Economics of Climate Change: Stern review*
9. Intergovernmental Panel on Climate Change: *Assessment Reports*
10. Stockholm Resilience Centre (2009): *Ecology and society*
11. Subhashini, Mathukrishnan (2014): *Economics of Environment*, PHI
12. Sengupta, Ramprasad (ed.): *Ecological Limits and Economic Development*, OUP
13. Sengupta, Ramprasad: *Ecology and Economics*, OUP

For Honours Programme
Discipline Specific Electives (DSE):
Group-A
(Any two from List of Group A)

DSE (1-A): INTRODUCTORY ECONOMETRICS

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Nature and Scope of Econometrics

Definition, relationship between econometrics and economic theory, goals of econometrics, desirable properties of an econometric model.

Module II: Simple Linear Regression Model

Simple linear regression, omission of variables from the functions, errors measurement, basic assumptions of the linear stochastic regression model, Estimation of model by method of ordinary least squares; properties of estimators; goodness of fit; tests of hypotheses; scaling and units of measurement; confidence intervals; Gauss-Markov theorem; forecasting.

Module III: Multiple Regression Models

Assumptions, model with two explanatory variables, variable linear regression model, Least squares estimators, Properties, R^2 and Adjusted R^2

Module IV: Violations of Classical Assumptions

Multicollinearity: Sources, Consequences, Detection and Remedies; Heteroscedasticity- tests, consequences, detection and solution; Autocorrelation-sources, consequences, detection and remedial measures.

Suggested readings:

1. Gujarati D. N. Basic Econometrics. McGraw Hill, New Delhi.
2. Johnston J. Econometrics Methods, McGraw Hill
3. Kmenta J. Elements of Econometrics. University of Michigan Press
4. Maddala G. S. Econometrics Methods and Application. E. Elgar Pub
5. Richard J. Larsen and Morris L. Marx, An Introduction to Mathematical Statistics and its Applications, Prentice Hall, 2011.
6. D. N. Gujarati and D.C. Porter, Essentials of Econometrics, McGraw Hill, 4th edition, International Edition, 2009.

DSE (2-A): LABOUR ECONOMICS

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Labour Markets

Nature and characteristics of Labour Markets in developing countries like India, Demand for labour in relation to size and pattern of investment, Supply of Labor in relation to growth of Labour Force. Labour Market policies, Mobility of labour, methods of recruitment and placement; employment service organization in India.

Module II: Employment

Employment and development relationship; Unemployment-Concept, Types and Measurement, particularly in India, Impact of rationalization, public sector and employment in agricultural sector; Analysis of educated unemployment; Employment policy in Five Year Plans and its evaluation.

Module III: Wage Determination

Classical, Neo-classical and bargaining Theories of Wage Determination, Concepts of Minimum Wage, Living Wage and Fair Wage in theory and practice, Discrimination in Labour Markets; Wage Determination in various sectors-Rural, Urban, Productivity and wage relationship; National Wage Policy; Wages and Wage Boards in India; Bonus System and Profit Sharing.

Module IV: Industrial Relations

Growth, Pattern and Structure of Labour Unions in India, Achievement so Labour Unions; Causes of industrial disputes and their settlement and prevention mechanism, Role of tripartism; Current trends in collective bargaining; Labour Legislation in India.

Module V: State and Labour

State and Social Security of Labour –Concept of Social Security and its evolution; Social Assistance and Social Insurance- Labour Welfare in India; Special Problems of Labour; Child Labour; Female Labour; Second National Commission on Labour, ILO, Establishment of ILO, Aims and objectives of ILO, Impact of ILO on India.

Suggested readings:

1. Datt, G. (1996), *Bargaining Power Wages and Employment: An Analysis of Agricultural Labour Markets in India*, Sage Publications, New Delhi.
2. Hajela, P.D. (1998), *Labour Restructuring in India: A Critique of the New Economic Policies*, Common Wealth Publishers, New Delhi.
3. Lester, R.A. (1964), *Economics of Labour* 92nd Edition), Macmikllan, New York.
4. McConnell, C.R. and S.L.Brue (1986), *Contemporary Labour Economics*, McGraw hill, New York.
5. Papola, T.S., P.P.Ghosh and A.N.Sharma (Eds) (1993), *Labour Employment and Industrial Relations in India*, B.R Publishing Corporation., New Delhi.
6. Rosenberg M.R. (1988), *Labour Markets in Low Income Countires in chenery H.B.and T.N.srinivasan (Eds), The Handbook of Development Economics*, North Holland, New York.
7. Venkata Ratnam C.S. (2001), *Globalisation and Labour Management Relations; Dynamics of Change*, Sage Publications, Response Books, New Delhi.

DSE (3-A): DATA ANALYSIS AND COMPUTER APPLICATION IN ECONOMICS

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Basics of Computer

Computer fundamentals – Basic components and organization of a computer: History and generation of computer, Computer devices; Classification of Computers: Data representation, C. Representation, Computer Software-Disk Operating System (MS-DOS) and application software, Overview of Statistical Software/Package uses in Social Science.

Module II: Use of Computer for Office Automation

Text editor and word processor, Operative familiarization of MS WORD Concept & use of spread sheet, operation and use of MS – Excel Basic of Database, table records and fields, Data entry operating principle of MS-access; Document formation and presentation through MS-Power Point.

Module III: Data Analysis and Trend forecasting

Basic statistical functions and analysis – mean, median, mode standard deviation, correlation, regression methods & techniques, estimation linear trend and growth rate

Module-IV: Random variables and probability distributions

Binomial and Normal distributions. Estimation of population parameters from sample data, Unbiased estimators for population mean and variance. Basics of index numbers- Applications.

Suggested readings:

1. Kerny(1993) – Essential of Microsoft, Words Excel, Prentice Hall of India, New India
2. Rajaraman, V. (1996) – Fundamentals of Computers, Prentice Hall (India) New Delhi
3. Schied, F(1983)- Theory and Problems of Computer and Programming, Schaum's outline series, McGraw Hill, New Dehil
4. Ron Mansfield(1994) – Compact guide to Microsoft office, BPH publication, New Delhi
5. B. Ram(1994)- Computer Fundamentals, New Age international New Delhi
6. V.P.Jagi & S Jain (1996) – Computer for Beginners, Academic publisher, New Delhi
7. Suresh. K. Basandra (1993) - Computer to-day, Galgotia Books

For Honours Programme

Discipline Specific Elective (DSE):

Group-B

(Any two from List of Group B)

DSE (1-B): DISSERTATION/ PROJECT

[L-4 T-1 P-1 Total- 6 Credits]

Full Marks: 50

The students are required to work on a topic of their interest under the guidance of their faculty member and submit the same for evaluation at the university level. The work must be original and analytical. The teachers are required to teach the art of analyzing economic data and derive meaningful conclusions from the proposed work. Several Flagship schemes of the central and state government can be examined under this paper. The teachers must inform the students that all expenses related to data collection, tabulation, analysis, typing and binding will be borne by the candidate. The college/university is no way related to preparation of the dissertation and submission of the same to the institution.

DSE (2-B): RURAL ECONOMICS AND SOCIAL CHANGE

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Introduction

Nature and scope of rural Economy, Importance of Agriculture in economic Development of India, Rural Economic problems of India; Nature of land Problems-Evolution of Policy-Land Reforms.

Module II: Agriculture and Technological Change

Agricultural Holdings, Fragmentation and Sub-division of Holdings, cooperative Farming-Rural Labour Problems-nature of Rural Unemployment- Employment and Wage Policy-Sources of Technological change and Green Revolution.

Module III: Structure of Rural Society

Rural Society-its Structure and Change; Village and its Social Organization-Indian Village and its types, Rural-Urban Continuum and Rural-Urban relationships.

Module IV: Rural Social Institutions

Family, Property, caste, Class, Agrarian structure, indebtedness and Poverty, Jajmani System, Religion, Village, Local Self Government, Panchayat Raj and Community Development Programmes.

Module V: Modernization of Rural Society

Social Change in Rural India-Impact of Westernization, Secularization, Modernization of Indian Rural Society-Post Modernization and Globalization and Indian Villages.

Suggested readings:

1. Carver, The Principles of Rural Economics.
2. Desai, A., Rural Sociology in India.
3. Dube, S.C., India's changing villages.
4. Nanavati & Anjala, rural problems in India.
5. Ruddar Dutt & K.P.M.Sundaram, Indian Economy.
6. Sachdeva, D.A.& Vidya Bhushan, An Introduction to Sociology.

DSE (3-B): FINANCIAL ECONOMICS

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module-I: Credit and Financial System

Concept of Credit, Kind of credit, Financial system, Financial Intermediaries, Functions and Importance of the Financial System

Module-II: Financial Market

Structure, Money and Capital Markets, Call Money Market, Commercial Bill Market, Stock market, Working of Capital market and SEBI.

Module-III: Non –Bank Financial Intermediaries

Role of NBFIs in Economic Development, Growth of NBFIs in India

Module-IV: The Reserve Bank of India and its Functions

Review of Monetary Policy in India with special reference to Inflation and Interest Rate Policy, Instrument of Control.

Module-V: Commercial Banks

Classification, Liabilities and assets, credit Creation, Sectoral allocation of credit.

Module-VI: Elements of International Finance

The foreign exchange market, participants, characteristics and operations, The Spot market organization of the interbank spot market, direct, indirect and cross rates, Introduction to currency derivative - brief description of forward, futures and options market operations, Multinational corporations – origin, growth and operations.

Suggested readings:

1. David G. Luenberger, *Investment Science*, Oxford University Press, USA, 1997.
2. Richard A. Brealey and Stewart C. Myers, *Principles of Corporate Finance*, McGraw- Hill, 7th edition, 2002.
3. Burton G. Malkiel, *A Random Walk Down Wall Street*, W.W. Norton & Company, 2003.
4. Simon Benninga, *Financial Modeling*, MIT Press, USA, 1997.
5. Bhole L.M. and Mahakud, J. (2009), *Financial Institutions and Markets: Structure, Growth and Innovations*, Tata McGraw Hill

(For Honours Programme)- 3rd Semester

**Skill Enhancement Courses (SEC) to be offered by Department of Economics
(Choose Any One)**

SEC-1: FOUNDATION COURSE IN MATHEMATICS I

[L-2 T-0 Total- 2 Credits]

Full Marks: 50

Module-I: Ratio, Proportion and Variation

Ratio, Proportion, Variation- Direct, Inverse & Joint, Worked Examples, Exercise

Module-II: Equation, Laws of Indices, Surds, Logarithm

Elementary Ideas, Quadratic Equation, Homogenous, Worked Examples, Exercise

Module-III: Permutations & Combinations, Binomial Theorem

Introduction- Permutations & Combinations, Binomial Theorem (Positive Integral Index), Worked Examples, Exercise

Module-IV: Plane Analytical Geometry

Straight Line- Length of a Line Segment, Gradient, Circle, Conics, Hyperbola, Worked Examples, Exercise

Module-V: Progression

A.P, A.M, G.P & H.M Relation between G.M, A.M & H.M, Worked Examples, Exercise

Module-VI: Matrix and Determinant

Formation, Various Types, Properties, Cramer's Rule, Algebraic Operations, Minors & Cofactors, Inverse of Matrix, Solution to System of Linear Equations, Worked Examples, Exercise

Module-VII: Interest, Annuities and Discount

Simple Interest, Compound Interest, Important Formulae, Sinking Fund, Amortisation, Discount, Worked Examples, Exercise

Suggested readings:

1. S.P. Rajagopalan & R. Sattanathan, Business Mathematics, Tata McGraw-Hill Publishing Company Ltd. New Delhi
2. N.K. Nag , Business Mathematics, kalyani Publications, New Delhi.
3. Focus in High School Mathematics: Reasoning and Sense Making. National Council of Teachers of Mathematics. Reston,VA: NCTM
4. Advanced High-School Mathematics. by David B. Surowski - Kansas State University , 2011

SEC-2: FOUNDATION COURSE IN STATISTICS -I

[L-2 T-0 Total- 2 Credits]

Full Marks: 50

Module-I: Outline of Collection and Presentation of Data and Descriptive Statistics

Methods of collecting primary data, Sources of secondary data, Characteristics of classification, Tabulation, Frequency distribution, Diagram, Types of Graphical representation, Technique of construction of graphs, Various methods of central tendency, Methods of measuring dispersion, Properties of absolute and relative measures of dispersion, Range, Q.D, S.D, Mean Deviation about Mean, Mode & Median, Coefficient of variation.

Module-II: Outline of Correlation and Regression

Correlation: scatter diagram, sample correlation coefficient - Karl Pearson's correlation coefficient and its properties, probable error of correlation coefficient, Spearman's rank correlation coefficient, Two variable linear regression analysis - estimation of regression lines (Least square method) and regression coefficients - their interpretation.

Module-III: Basics of Time Series Analysis

Nature and decomposition of a time series - Analysis of linear trend and non-linear growth curves - Moving average method - Seasonal component - Cyclical and random components.

Module-IV: Basic Statistical Methods for Psychology and Education

Scaling procedures; Test theory; Reliability and Validity; Intelligence test and IQ.

Suggested readings:

1. Goon, A.M., M.K. Gupta and B. Dasgupta (1986): *Fundamentals of Statistics, Vols. 1 & 2*, The World Press Private Limited. Calcutta.
2. Nagar, A.L. and R.K.Das (1977): *Basic Statistics*, OUP, Delhi.
3. Hoel, P.G. (1984): *Introduction to Mathematical Statistics, 5th edition*, Wiley, New York.
4. Yule, G.U. and Kendall, M.G. (eds.) (1958): *Introduction to the Theory of Statistics*, Charles Griffin & Co. Ltd. London.
5. Kenney, and keeping (1974)- *Mathematics of Statistics - Part I*, Affiliated East West Press, New Delhi.
6. Das, N.G. (1977): *Statistical Methods (Part-I & II)* M. Das & Co., Calcutta.
7. Hogg, R.V. and A.T. Craig (1970): *Introduction to Mathematical Statistics (3rd edition)*, Macmillan Publishing Co. New York.
8. Bowen & Starr: *Basic Statistics for Business and Economics*, McGraw Hill

SEC-3: FOUNDATION COURSE IN ECONOMIC THEORY

[L-2 T-0 Total- 2 Credits]

Full Marks: 50

Module-I: Introduction

Scarcity, Economic problems, Meaning of Economics, Positive and Normative Economics, Central Problems of an Economy, Opportunity cost

Module-II: Consumer's Equilibrium and Demand

Introduction, Cardinal utility approach, Concept of utility, Law of diminishing utility, Consumer's equilibrium, Ordinal utility approach, Budget line, Indifference curve analysis, Demand curve, Law of demand, Movement and shift in the demand curve, Elasticity of demand, Types of elasticity.

Module-III: Production, Revenue and Cost

Introduction, Production function, Short-run and Long-run production functions, Law of variable proportions, Law of diminishing returns, meaning of cost, Various cost concepts, shapes of TC, AC, MC- Short-run and Long-run, Meaning of revenue, relationship between revenue concepts, Break-even and Shut-down points, Supply function, Law of supply, Price elasticity of supply.

Module-IV: Market Structures

Classification of Markets, Characteristics and equilibrium under Perfect Competition, Monopoly and Monopolistic Competition.

Module-V: National Income Accounting

Concept, Basic issues studied in macroeconomics, National Income-Concept, Definition, Simple Income determination, Measurement of National Income, Circular Flow of Income, Concept of Consumption Function, Multiplier

Module-VI: Money and Banking

Introduction, Barter system, Functions of money, Money supply, Commercial Bank- Functions and credit Creation, Central Bank- Functions, Central bank vs. Central bank.

Suggested readings:

1. Karl E. Case and Ray C. Fair, *Principles of Economics*, Pearson Education Inc., 8th Edition, 2007.
2. N. Gregory Mankiw, *Economics: Principles and Applications*, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.
3. Joseph E. Stiglitz and Carl E. Walsh, *Economics*, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.

(For Honours Programme)- 4TH Semester

**Skill Enhancement Courses (SEC) to be offered by Department of Economics
(Choose Any One)**

SEC-4: FOUNDATION COURSE IN MATHEMATICS- II

[L-2 T-0 Total- 2 Credits]

Full Marks: 50

Module-I: Set Theory

Basic, Different types of sets, Venn diagram, Set Operations, Worked Examples, and Exercise

Module-II: Functions, Limit and Discontinuity

Various functions, Relations, Set of Numbers, different types of limit operations, illustrate different types of discontinuity, Worked Examples, Exercise

Module-III: Differential Calculus

Definition, Rules of Differentiation, higher Order Differentiation, illustrate the Chain Rule of differentiation, illustrate implicit differentiation, Maximum & Minimum values of a function, Point of Inflexion, solve problems (including logarithmic, and inverse functions) using implicit differentiation

Module-IV: Integral Calculus

Anti-derivatives, sums and sigma notation, area under a curve, definite integrals, the First and Second Fundamental Theorems of Calculus, and integration by u-substitution , Area between curves, arc length and surface area, and applications of integration to Economics, Integration by parts, trigonometric substitution, partial fractions, Worked Examples, Exercise

Module-V: Differential Equations

Modelling (growth and decay problems, compound interest), separable differential equations, direction fields and Euler's Method and Second order Differential Equations in algebraic functions.

Suggested readings:

1. S.P. Rajagopalan & R. Sattanathan, Business Mathematics, Tata McGraw-Hill Publishing Company Ltd. New Delhi
2. N.K. Nag , Business Mathematics, kalyani Publications, New Delhi.
3. Focus in High School Mathematics: Reasoning and Sense Making. National Council of Teachers of Mathematics. Reston,VA: NCTM
4. Advanced High-School Mathematics. by David B. Surowski - Kansas State University , 2011

SEC-5: FOUNDATION COURSE IN STATISTICS -II

[L-2 T-0 Total- 2 Credits]

Full Marks: 50

Module-I: Interpolation and Extrapolation

Introduction, Definition, Uses, Methods of Interpolation and Extrapolation and Examples

Module-II: Theory of Probability

Introduction, Terminology, Set theory, Classical Probability, Axioms of Probability, Addition Theorem, Compound Probability, Bayes's Rule and Examples

Module-III: Sampling Theory and Design of Sample Survey

Introduction, Universe or Population, Sampling, Parameters and Statistic, Principles of sampling, Theoretical Basis of Sampling, sampling and Non –sampling Errors and Examples

Module-IV: Theory of Estimation and Testing Hypothesis

Introduction, Estimation Theory, point Estimation, Unbiasedness, Consistency, Efficiency, Sufficiency, Methods of Point Estimation, Null and Alternative Hypothesis, Test of Significance, Chi-square, t, F and z distributions and Examples.

Suggested readings:

1. Goon, A.M., M.K. Gupta and B. Dasgupta (1986): *Fundamentals of Statistics, Vols. 1 & 2*, The World Press Private Limited. Calcutta.
2. Nagar, A.L. and R.K.Das (1977): *Basic Statistics*, OUP, Delhi.
3. Hoel, P.G. (1984): *Introduction to Mathematical Statistics, 5th edition*, Wiley, New York.
4. Yule, G.U. and Kendall, M.G. (eds.) (1958): *Introduction to the Theory of Statistics*, Charles Griffin & Co. Ltd. London.
5. Kenney, and keeping (1974)- *Mathematics of Statistics - Part I*, Affiliated East West Press, New Delhi.
6. Das, N.G. (1977): *Statistical Methods (Part-I & II)* M. Das & Co., Calcutta.
7. Hogg, R.V. and A.T. Craig (1970): *Introduction to Mathematical Statistics (3rd edition)*, Macmillan Publishing Co. New York.
8. Bowen & Starr: *Basic Statistics for Business and Economics*, McGraw Hill

SEC-6: FOUNDATION COURSE IN INDIAN ECONOMY

[L-2 T-0 Total- 2 Credits]

Full Marks: 50

Module I: Basic Issues of Indian Economy

Features of Indian Economy as a Developing Economy, Sectoral Changes in India's income, Problems of Poverty, Poverty Alleviation Programmes and Measures.

Module II: Indian Agriculture

Problems of Indian agriculture, Strategies for agriculture development, Green Revaluation, Land Reform measures

Module III: Industry

Industrial policy, Role of public sector undertakings in a mixed economy, Industrial sickness, Social Security measures, Sources of Industrial Finance, Foreign Capital in India

Module IV: Indian Demography

Population Problem, Population growth in India, Population Policies in India, Sex composition of population in India.

Module V: Public Finance in India

Features of Indian tax system, Major Direct and Indirect Taxes, Public debt in India, Centre-State financial relations.

Module VI: India's Monetary System

Issues of Currency in India, Money supply and its components, Functions of RBI, Monetary policy of RBI, Bank Nationalization in India: Objectives and Performances

Suggested readings:

1. Shankar Acharya, 2010, -Macroeconomic Performance and Policies 2000-8, in Shankar Acharya and Rakesh Mohan, editors, *India's Economy: Performances and Challenges: Development and Participation*, Oxford University Press.
2. Rakesh Mohan, 2010, -India's Financial Sector and Monetary Policy Reforms, in Shankar Acharya and Rakesh Mohan, editors, *India's Economy: Performances and Challenges: Development and Participation*, Oxford University Press.
3. Pulapre Balakrishnan, Ramesh Golait and Pankaj Kumar, 2008, -Agricultural Growth in India Since 1991, *RBI DEAP Study no. 27*.
4. Kunal Sen, 2010, -Trade, Foreign Direct Investment and Industrial Transformation in India, in Premachandra Athukorala, editor, *The Rise of Asia*, Routledge.
5. Ahsan, C. Pages and T. Roy, 2008, -Legislation, Enforcement and Adjudication in Indian Labour Markets: Origins, Consequences and the Way Forward, in D. Mazumdar and S. Sarkar, editors, *Globalization, Labour Markets and Inequality in India*, Routledge.
6. Dipak Mazumdar and Sandeep Sarkar, 2009, -The Employment Problem in India and the Phenomenon of the Missing Middle, *Indian Journal of Labour Economics*.

Syllabus for B.A. (Honours in Economics) –offering Generic Elective Courses for other Departments.

Semester I	Semester II
Generic Elective in Economics I: Introductory Microeconomics	Generic Elective in Economics II: Introductory Macroeconomics
Semester III	Semester IV
Generic Elective in Economics III: Indian Economy-I	Generic Elective in Economics IV: Indian Economy-II

Generic Elective in Economics (Honours Programme)

Generic Elective in Economics (GE-I): Introductory Microeconomics

Module I: Introduction

Economic terms and basic concept, Scope and method of Microeconomics, the economic problem: scarcity and choice, Working of Price mechanism.

Module II: Consumer Behaviour

Basics concepts of utility, Law of diminishing marginal utility, Consumer's surplus, Concept of indifference curve, Budget line, Equilibrium of the consumer.

Module III: Theory of Demand

Law of demand, Elasticity of demand, Price, Income and Cross elasticities, Average revenue, Marginal revenue, Determinants of elasticity of demand.

Module IV: Theories of Production and Cost

Production function, Total product, Average product and marginal product, Law of variable proportion, Long-run & Short-run cost curves.

Module V: Theory of Markets

Classification of Markets, Characteristics and equilibrium under Perfect Competition, Monopoly and Monopolistic Competition.

Suggested readings:

4. Karl E. Case and Ray C. Fair, *Principles of Economics*, Pearson Education Inc., 8th Edition, 2007.
5. N. Gregory Mankiw, *Economics: Principles and Applications*, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.
6. Joseph E. Stiglitz and Carl E. Walsh, *Economics*, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.

Generic Elective in Economics (Honours Programme)

Generic Elective in Economics (GE-II): Introductory Macroeconomics

Module I: National Income Accounting

Concept, Basic issues studied in macroeconomics, National Income-Concept, Definition, Simple Income determination, Measurement of National Income, Circular Flow of Income, Concept of Consumption Function, Multiplier.

Module II: Money and the Value of Money

Introduction, Definition and Functions of Money, Quantity Theory of Money, Price Level, Determination of Money Supply

Module III: Inflation and Deflation

Meaning, Keynesian View, Causes of Inflation, Types of Inflation, Control of inflation- monetary and Fiscal Policies, effects of Inflation, deflation Concept, Effects of deflation.

Module IV: Basis of International Trade

Definitions, Comparison between internal and international trade, Comparative advantage theory, Balance of Trade and Balance of Payments, Free Trade versus Protection.

Suggested readings:

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009.
4. Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2nd edition, 2005.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition,
6. Errol D'Souza, *Macroeconomics*, Pearson Education, 2009.
7. Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9th edition, 2012.

Generic Elective in Economics (Honours Programme)

Generic Elective in Economics (GE-III): Indian Economy-I

Module I: Basic Issues of Indian Economy

Features of Indian Economy as a Developing Economy, Sectoral Changes in India's income, Problems of Poverty, Poverty Alleviation Programmes and Measures.

Module II: Indian Agriculture

Problems of Indian agriculture, Strategies for agriculture development, Green Revaluation, Land Reform measures

Module III: Industry

Industrial policy, Role of public sector undertakings in a mixed economy, Industrial sickness, Social Security measures, Sources of Industrial Finance, Foreign Capital in India

Module IV: Planning

Rationale and objective of planning in India, Achievements and Failures of the planning exercise, A general discussion.

Suggested readings:

1. Jean Dreze and Amartya Sen, 2013. *An Uncertain Glory: India and its Contradictions*, Princeton University Press.
2. Pulapre Balakrishnan, 2007, *The Recovery of India: Economic Growth in the Nehru Era*, Economic and Political Weekly, November.
3. Rakesh Mohan, 2008, *-Growth Record of Indian Economy: 1950-2008. A Story of Sustained Savings and Investment*, Economic and Political Weekly, May.
4. S.L. Shetty, 2007, *-India's Savings Performance since the Advent of Planning*, in K.L. Krishna and A. Vaidyanathan, editors, *Institutions and Markets in India*

Generic Elective in Economics (Honours Programme)

Generic Elective in Economics (GE- IV): Indian Economy-II

Module I: Indian Demography

Population Problem, Population growth in India, Population Policies in India, Sex composition of population in India.

Module II: Public Finance in India

Features of Indian tax system, Major Direct and Indirect Taxes, Public debt in India, Centre-State financial relations.

Module III: International Environment

Trend in world trade and the problems of developing countries, Foreign trade and Economic development, International Economic Institutions- GATT, WTO, World Bank, IMF

Module IV: India's Monetary System

Issues of Currency in India, Money supply and its components, Functions of RBI, Monetary policy of RBI, Bank Nationalization in India: Objectives and Performances

Suggested readings:

1. Shankar Acharya, 2010, -Macroeconomic Performance and Policies 2000-8, in Shankar Acharya and Rakesh Mohan, editors, *India's Economy: Performances and Challenges: Development and Participation*, Oxford University Press.
2. Rakesh Mohan, 2010, -India's Financial Sector and Monetary Policy Reforms, in Shankar Acharya and Rakesh Mohan, editors, *India's Economy: Performances and Challenges: Development and Participation*, Oxford University Press.
3. Pulapre Balakrishnan, Ramesh Golait and Pankaj Kumar, 2008, -Agricultural Growth in India Since 1991, *RBI DEAP Study no. 27*.
4. Kunal Sen, 2010, -Trade, Foreign Direct Investment and Industrial Transformation in India, in Premachandra Athukorala, editor, *The Rise of Asia*, Routledge.
5. Ahsan, C. Pages and T. Roy, 2008, -Legislation, Enforcement and Adjudication in Indian Labour Markets: Origins, Consequences and the Way Forward, in D. Mazumdar and S. Sarkar, editors, *Globalization, Labour Markets and Inequality in India*, Routledge.
6. Dipak Mazumdar and Sandeep Sarkar, 2009, -The Employment Problem in India and the Phenomenon of the Missing Middle, *Indian Journal of Labour Economics*.

Syllabus for B.A.(Regular)

Core and Discipline Specific Elective (DSE) Courses in Economics

Semester I	Semester II
Core Economics I: Principles of Microeconomics–I	Core Economics II: Principles of Microeconomics–II
Semester III	Semester IV
Core Economics III: Principles of Macroeconomics–I	Core Economics IV: Principles of Macroeconomics–II
Semester V	Semester VI
Discipline Specific Elective I One of the following: DSE 1(A): Economic Development and Policy in India DSE 2(A): Money and Banking	Discipline Specific Elective II One of the following: DSE 1(B): Basic Statistics DSE 2(B) : Emerging Areas in Economic Studies

Core Economics I: Principles of Microeconomics-I

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Introduction

Problem of scarcity and choice: scarcity, choice and opportunity cost, production possibility frontier, Demand and supply: law of demand, determinants of demand, shifts of demand versus movements along a demand curve, market demand, law of supply, determinants of supply, shifts of supply versus movements along a supply curve, market supply, market equilibrium, Applications of demand and supply: price rationing, price floors, consumer surplus, producer surplus, Elasticity: price, income & cross elasticities of demand, calculating elasticity, determinants of price elasticity.

Module II: Theory of Consumer Behavior

Concept of utility, diminishing marginal utility, Diamond-water paradox, income and substitution effects; consumer choice: indifference curves, derivation of demand curve from indifference curve and budget constraint, consumer's equilibrium.

Module III: Production and Costs

Production: short-run & long-run, production process, production functions, law of variable proportions, iso-quant and iso-cost lines, cost minimizing equilibrium condition

Costs: costs in the short run, costs in the long run, shapes of various cost curve, revenue and profit maximizations, minimizing losses, short run industry supply curve, economies and diseconomies of scale, long run adjustments.

Module IV: Perfect Competition

Assumptions: theory of a firm under perfect competition, demand and revenue; equilibrium of the firm in the short run and long run; long run industry supply curve: increasing, decreasing and constant cost industries.

Suggested readings:

1. Lipsey and Chrystal: *An Introduction to Positive Economics*, OUP
2. Stiglitz and Walsh: *Economics*, W.W. Norton & Company
3. Chakravarty, S: *Microeconomics*, Allied
4. Mankiw: *Principles of Economics*, Thomson
5. Grossman, Gregory: *Economic Systems*, Prentice Hall
6. Varian H.R: *Intermediate Microeconomics- A Modern Approach*, East-West Press
7. Green, John: *Consumer Theory*, The Macmillan Press Ltd.
8. R.G. Lipsey and K.A.Chrystal - "Economics", Oxford University Press, 10/e, 2004.
9. P.A.Samuelson & W.D. Nordhaus-"Economics", Tata Mc.Graw Hill, 18/e, 2005.
10. N.Gregory Mankiw-"Principles of Economics", Thompson 2015 .
11. H.L.Ahuja-"Advanced Economic Theory" S.Chand.
12. M.L.Seth-"Micro Economics", Laxmi Narayana Agarwal, 2015.
13. Bilas, A.-"Micro Economic Theory", International Student Edition, Mc.Graw Hill, 1971.
14. D.M. Mithani & G.K. Murty - Business Economics, Himalaya Publishing, 2015.

Core Economics II: Principles of Macroeconomics-I

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Introduction and National Income Accounting

Emergence & concept of Macroeconomics, Circular flow of Income in Two, Three and Four Sector Economy, Calculating National income, Macroeconomic Identities, Goods & Prices, GDP and Welfare.

Module II: The Consumption Function

Concept of Effective demand, Consumption function, factors affecting Consumption function, APC, MPC, Relation between consumption and savings, Multiplier effect.

Module III: Theory of Employment

Types of Unemployment, Concept of Full employment, Classical theory of employment, Say's Law of Market, Keynesian assumptions, Monetary policy & Full Employment, Fiscal Policy & Full Employment.

Module IV: The Theory of Money

Concept of money in a modern economy, Monetary aggregates, Demand for money, Quantity theory of money; Liquidity preference and rate of interest, money supply, process of credit creation, monetary policy.

Suggested readings:

1. Samuelson and Nordhaus: *Economics*, McGraw Hill
2. Mankiw, Economics : *Principles and Applications*, Cengage Learning
3. Blanchard: *Macroeconomics*, Pearson Education
4. Mankiw: *Macroeconomics*, Worth Publishers
5. Dornbusch and Fischer: *Macroeconomics*, McGraw-Hill
6. Sikdar, Soumyen: *Principles of Macroeconomics*, O.U.P.
7. Froyen: *Macroeconomics - Theory and Policy*, Pearson Education
8. Ackley, G.: *Macroeconomics*, Macmillan, London.
9. G.Ackley - "Macro Economics Theory and Policy", Collier Macmillan, 1978.
10. E.Shapiro - "Macro Economic Analysis", Galgotia Publications, 1999.
11. R.Dornbush, s.Fisher and R.Startz - "Macro Economics", Tata Mc.Graw Hill, 9/e, 2004.
12. M.L.Seth-"Macro Economics", Lakshmi Narayana Agarwal, 2015.
13. K.P.M. Sundaram - "Money, banking & International Trade", Sultan Chand, 2010.
14. Dillard, D - "The Economics of John Maynard Keynes", Crossby Lockwood & Sons.
15. M.N.Mishra & S.B.Mishra - "Insurance Principles & Practice" S.Chand 2012.
16. Bharati V.Pathak "The Indian Financial System Markets. Institutions & Services".Pearson 2008.

Core Economics III: Principles of Microeconomics–II

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Theory of a Monopoly Firm

Concept of imperfect competition; short run and long run price and output decisions of a monopoly firm; concept of a supply curve under monopoly; comparison of perfect competition and monopoly, social cost of monopoly, price discrimination; remedies for monopoly: Antitrust laws, natural monopoly.

Module II: Imperfect Competition

Monopolistic competition: Assumptions, SR & LR price and output determinations under monopolistic competition, economic efficiency and resource allocation; oligopoly: assumptions, oligopoly models, game theory, contestable markets, role of government.

Module III: Factor Pricing

- a. Concepts of MPP, VMP and MRP – factor price determination – marginal productivity theory of distribution.
- b. Rent: Concept of economic rent – Ricardian theory – Modern theory and Quasi Rent
- c. Wage: Money wage and real wage– factors determining real wage – differences in wage rates – role of collective bargaining in wage determination
- d. Interest: Gross and net interests –real and money interest
- e. Profit: Gross profit and net profit – elements of profit – differences between profit and other factor incomes – risk and uncertainty

Suggested readings:

1. Lipsey and Chrystal: *An Introduction to Positive Economics*, OUP
2. Stiglitz and Walsh: *Economics*, W.W. Norton & Company
3. Chakravarty, S: *Microeconomics*, Allied
4. Mankiw: *Principles of Economics*, Thomson
5. Grossman, Gregory: *Economic Systems*, Prentice Hall
6. Varian H.R: *Intermediate Microeconomics- A Modern Approach*, East–West Press
7. Green, John: *Consumer Theory*, The Macmillan Press Ltd.
8. R.G. Lipsey and K.A.Chrystal - "Economics", Oxford University Press, 10/e, 2004.
9. P.A.Samuelson & W.D. Nordhaus-"Economics", Tata Mc.Graw Hill, 18/e, 2005.
10. N.Gregory Mankiw-"Principles of Economics", Thompson 2015 .
11. H.L.Ahuja-"Advanced Economic Theory"" S.Chand.
12. M.L.Seth-"Micro Economics", Laxmi Narayana Agarwal, 2015.
13. Bilas, A.-"Micro Economic Theory", International Student Edition, Mc.Graw Hill, 1971.
14. D.M. Mithani & G.K. Murty - Business Economics, Himalaya Publishing, 2015.

Core Economics IV: Principles of Macroeconomics–II

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Theories of Interest

Classical theory -Neoclassical theory – Loanable fund - Liquidity preference theory

Module II: Inflation

Concept of inflation, deflation and stagflation: Concept of inflationary gap – distinction between demand pull and cost push inflation, anti-inflationary measures, and various effects of inflation

Module III: Government Budget and the Economy

Introduction, Meaning of government budget, Objectives, Components, Budget Receipts, Revenue Receipts- Direct and Indirect taxes- merits, demerits and sources, Developmental and non-developmental expenditures.

Module IV: International Trade

Basis of trade, Distinction between internal and external trade, Gains from trade, Terms of trade, Absolute and Comparative Advantage - arguments for free trade and protection, balance of trade and balance of payments: concept.

Suggested readings:

1. Samuelson and Nordhaus: *Economics*, McGraw Hill
2. Mankiw, Economics : *Principles and Applications*, Cengage Learning
3. Blanchard: *Macroeconomics*, Pearson Education
4. Mankiw: *Macroeconomics*, Worth Publishers
5. Dornbusch and Fischer: *Macroeconomics*, McGraw-Hill
6. Sikdar, Soumyen: *Principles of Macroeconomics*, O.U.P.
7. Froyen: *Macroeconomics - Theory and Policy*, Pearson Education
8. Ackley, G.: *Macroeconomics*, Macmillan, London.

For Regular Course
Discipline Specific Electives (DSE):
Group-A
(Any ONE from List of Group A)- 5TH SEMESTER

DSE 1(A): ECONOMIC DEVELOPMENT AND POLICY IN INDIA

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Issues in Growth, Development and Sustainability

Module II: Factors in Development

Capital formation (Physical and Human); technology; institutions.

Module III: Population and Economic Development; Employment

Demographic trends, Urbanization, Occupational structure in the organized and the unorganized sectors, Under and disguised unemployment (rural and urban), Employment schemes and their impact.

Module IV: Indian Development Experience

Critical evaluation of growth, Inequality, Poverty and competitiveness, pre and post reforms era, Savings and investment, Mobilization of internal and external finance; monetary and fiscal policies; centre-state financial relations.

Suggested readings:

1. Michael P Todaro and Stephen Smith. *Economic Development*, Pearson, 11th edition (2011).
2. Uma Kapila, *Indian Economy since Independence*, Academic Foundation, 19th edition (2009).
3. United Nations Development Programme, *Human Development Report 2010*, Palgrave Macmillan (2010).
4. Government of India, *Economic Survey* (latest)
5. Government of India, *Five Year Plan* (latest)
6. Government of India, *Finance Commission Report* (latest)

DSE 2(A): MONEY AND BANKING

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Money

Concept, functions, measurement; theories of money supply determination.

Module II: Financial Institutions, Markets, Instruments and Financial Innovations; Interest Rates

Role of financial markets and institutions; problem of asymmetric information – adverse selection and moral hazard; financial crises. Money and capital markets: organization, structure and reforms in India; role of financial derivatives and other innovations .Determination; sources of interest rate differentials; theories of term structure of interest rates; interest rates in India.

Module III: Banking System

Balance sheet and portfolio management, Indian banking system: Changing role and structure; Banking sector reforms.

Module IV: Central Banking and Monetary Policy

Functions, Balance sheet, Goals, Targets, Indicators and instruments of monetary control, Monetary management in an open economy; Current monetary policy of India.

Suggested readings:

1. F. S. Mishkin and S. G. Eakins, Financial Markets and Institutions, Pearson Education, 6th edition, 2009.
2. F. J. Fabozzi, F. Modigliani, F. J. Jones, M. G. Ferri, Foundations of Financial Markets and Institutions, Pearson Education, 3rd edition, 2009.
3. L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill, 5th edition, 2011.
4. M. Y. Khan, Indian Financial System, Tata McGraw Hill, 7th edition, 2011.
5. Various latest issues of R.B.I. Bulletins, Annual Reports, Reports on Currency and Finance and Reports of the Working Group, IMF Staff Papers.

For Regular Course
Discipline Specific Electives (DSE):
Group-B
(Any ONE from List of Group A)- 6TH SEMESTER

DSE 1(B): BASIC STATISTICS

[L-5 T-1 Total- 6 Credits]

Full Marks: 50

Module I: Classification of Data

Nature, Significance and Limitations of Statistics - Collection of data - Primary and Secondary Data - Methods of collecting Primary Data - Classification and Tabulation of Data.

Module II: Graphical Representation

Diagrammatic and graphical representation of data - Bar diagrams - One dimensional and Two dimensional diagrams, Pictograms and Cartograms, Frequency Distribution - Univariate and Bivariate Frequency Distributions, Histogram, Frequency Curve, Ogive Curves.

Module III: Central Tendency Measures

Measures of Central Tendency - Mean, Median and Mode - their Merits and Demerits.

Module IV: Measures of Dispersion

Measures of Dispersion - Range, Mean deviation, Quartile Deviation, Standard Deviation and Lorenz Curve; Skewness - Karl Pearson's and Bowley's Coefficient of Skewness - Kurtosis.

Module V: Concept of Correlation

Simple Correlation - Karl Pearson's coefficient of correlation, Spearman's Rank Correlation-Simple cases

Suggested readings:

1. Goon, A.M., M.K. Gupta and B. Dasgupta (1986): *Fundamentals of Statistics, Vols. 1 & 2*, The World Press Private Limited. Calcutta.
2. Nagar, A.L. and R.K.Das (1977): *Basic Statistics*, OUP, Delhi.
3. Hoel, P.G. (1984): *Introduction to Mathematical Statistics, 5th edition*, Wiley, New York.
4. Yule, G.U. and Kendall, M.G. (eds.) (1958): *Introduction to the Theory of Statistics*, Charles Griffin & Co. Ltd. London.
5. Kenney, and keeping (1974)- *Mathematics of Statistics - Part I*, Affiliated East West Press, New Delhi.
6. Das, N.G. (1977): *Statistical Methods (Part-I & II)* M. Das & Co., Calcutta.

DSE 2(B): Emerging Areas in Economic Studies

[L-2 T-0 Total- 2 Credits]

Full Marks: 50

Module-I: Health Economics

Definition and Importance of Health Economics, Demand and Supply of Health Care, Delivery and pricing of Health care (public and private), WHO, National Health Policy – NRHM and Millennium Development Goals (MDGs).

Module-II: Gender Economics

Economic Role of Women in India, Contribution of Women in GNP, Valuation of Household Economy, Five Year Plans and women's development and economic empowerment, Concept of Gender Budgeting, Factors affecting decision making by women - Access to and control over economic resources.

Module-III: Environment

Environmentalism and Economics, Sustainable Development Cost of economic growth and development, Climate Change and Global warming, Global Initiatives.

Module-IV: Energy Economics

Sources of Energy, Role of Energy in Economic Development. Demand – Supply Gap, Environment Energy Crisis: causes - Consequences and Remedial Measures. Carbon Credit and Trading, Clean Development Mechanism (CDM), Economic Importance of Non-Renewable Energy.

Suggested Readings:

1. Meier, G.M. and J.E. Rauch (2007), *Leading Issues in Economic Development*, Oxford University Press, New Delhi.
2. National Institute of public Finance and policy (NIPFP); *Gender Budgeting in India*, www.nipfp.org.in.
3. UNDP - Human Development Reports.
4. Lourdes Beneria and Savithri Biswanath; *Gender and Development: Theoretical, Empirical and practical Approaches*.
5. Lekha Chakraborti; *Invisibility of Women's Work in Budgeting*.
6. Katar Singh and Shishodia (2007), *Environmental Economics – Theory and Application*, Sage Publication, New Delhi.

**Skill Enhancement Courses (SEC) to be offered by Department of Economics
(For Regular Students)- 3rd Semester**

SEC-1: Quantitative Aptitude for Competitive Examination-I

[L-2 T-0 Total- 2 Credits]

Full Marks: 50

In every public, private or government sector exams Quantitative aptitude is the most important and time consuming section.

The following topics are:

1. Number Series
2. Fractions
3. Ratio & Proportion (Problems on Partnership, Ages)
4. Simple & Compound Interest
5. Work & Time
6. Speed, Time & Distance
7. H.C.F. & L.C.M. of Numbers
8. Decimal Fractions
9. Simplification
10. Average
11. Problems on Numbers
12. Problems on Ages
13. Percentage
14. Profit & Loss
15. Ratio & Proportion
16. Series - Odd Man Out
17. Series - Find Missing Number

Study Procedure:

Examples: Fractions

A fraction is an expression that indicates the quotient of two quantities.

Examples of fractions: $\frac{12}{12}$, $\frac{13}{13}$, $\frac{5757}{-85}$ etc.

A fraction has two parts, Numerator and Denominator. Numerator is the number at the top of the fraction and denominator is the number at the bottom of the fraction.

For example, in the fraction $\frac{14}{44}$, 14 is numerator and 44 is denominator.

The denominator of a fraction cannot be zero.

Fractions can be denoted by using horizontal lines or diagonal lines. For example, $\frac{14}{44}$ and $\frac{14}{44}$ represents the same.

Suggested readings:

1. Quantitative aptitude by R.S Agarwal
2. How To Prepare For Quantitative Aptitude For The CAT by Arun Sharma
3. Quantitative Aptitude For Competitive Examinations by Abhijit Guha
4. Quantitative Aptitude by Kiran Prakashan

**Skill Enhancement Courses (SEC) to be offered by Department of Economics
(For Regular Students)- 4th Semester**

SEC-2: Quantitative Aptitude for Competitive Examination-II

[L-2 T-0 Total- 2 Credits]

Full Marks: 50

The following topics are:

1. Mixture & Allegations
2. Data Interpretation
3. Permutation & Combination
4. Surds & Indices
5. Square Roots & Cube Roots
6. Pipes and Cistern
7. Calendar
8. Profit and Loss
9. Time & work
10. Time & Distance
11. Problems on Trains
12. Boats & Streams
13. Simple Interest
14. Quadratic Equation
15. Trigonometry
16. Geometry
17. Mensuration
18. Stocks and Shares

Study Procedure:

Examples: Calendar

1. **Odd Days:** Number of days more than the complete weeks are called odd days in a given period.
2. **Leap Year:** A leap year has 366 days. In a leap year, the month of February has 29 days. Every year divisible by 4 is a leap year, if it is not a century. Examples:
1952, 2008, 1680 etc. are leap years.
1991, 2003 etc. are not leap years

Every 4th century is a leap year and no other century is a leap year. Examples:
400, 800, 1200 etc. are leap years.
100, 200, 1900 etc. are not leap years

3. **Ordinary Year:** The year which is not a leap year is an ordinary year. An ordinary year has 365 days

Suggested readings:

1. Quantitative aptitude by R.S Agarwal
2. How To Prepare For Quantitative Aptitude For The CAT by Arun Sharma
3. Quantitative Aptitude For Competitive Examinations by Abhijit Guha
4. Quantitative Aptitude by Kiran Prakashan

**Skill Enhancement Courses (SEC) to be offered by Department of Economics
(For Regular Students)- 5th Semester**

SEC-3: Entrepreneurship and Small Business Development

[L-2 T-0 Total- 2 Credits]

Full Marks: 50

Module I: Introduction

Entrepreneurship meaning, nature and Characteristics of entrepreneurship, Barriers to entrepreneurship

Module II: Establishing a Small Enterprise

The startup process, project identification, selection of the product -selection of site/location and legal considerations

Module III: Small Enterprises and Enterprise Launching Formalities

Definition of Small Scale; Rationale; Objective; Scope; SSI; Registration; NOC from Pollution Board; Machinery and Equipment Selection

Module IV: Role of Support Institutions and Management of Small Business

Director of Industries; DIC; SIDO; SIDBI; Small Industries Development Corporation (SIDC); SISI; NSIC; NISBUD; State Financial Corporation SIC.

Suggested readings:

1. Desai, Vasant (2003). Small-Scale Industries and Entrepreneurship. Himalaya Publishing House, Delhi.
2. Kaulgud, Aruna (2003). Entrepreneurship Management. Vikas Publishing House, Delhi. 38
3. Cynthia, L. Greene (2004). Entrepreneurship Ideas in Action. Thomson Asia Pvt. Ltd., Singapore.

**Skill Enhancement Courses (SEC) to be offered by Department of Economics
(For Regular Students)- 6th Semester**

SEC-3: Competitive Aptitude in Economics

[L-2 T-0 Total- 2 Credits]

Full Marks: 50

The following topics are:

i. Division of Labour and Specialization	x. Aggregate Supply	xix. Roles of Government
ii. Economic Institutions	xi. Budget Deficits and Public Debt	xx. Balance of Trade and Balance of Payments
iii. Economic Systems	xii. Economic Growth	xxi. Economic Development
iv. Money	Employment and Unemployment	xxii. Foreign Currency Markets/Exchange Rates
v. Productive Resources	xiii. Fiscal Policy	xxiii. Financial Markets
vi. Property Rights	xiv. GDP	xxiv. Money Management/Budgeting
vii. Scarcity	xv. Inflation	xxv. Indian Economy
viii. Trade, Exchange and Interdependence	xvi. Monetary Policy and the Federal Reserve	
ix. Aggregate Demand	xvii. Real vs. Nominal	
	xviii. Income Distribution	

Sample Multiple Choice Questions(MCQ)

1. The father of modern scientific economics

a) David Ricardo b) Adam Smith c) J.M. Keynes d) Alfred Marshall

2. The book Principles of Economics was published in the year

a) 1776 b) 1932 c) 1890 d) 1936

3. Supply creates its own demand. Whose statement is this:

a) J.S Mill b) T.R Malthus c) Walras d) J.B. Say.

4. Growth definition is developed by

a) Alfred Marshall b) P. A. Samuelson c) J.M Keynes d) Milton Friedman

5. The book “Nature and Significance of Economic Science” is written by

a) Lionel Robbins b) Amartya Sen c) Karl Marx d) None of these

6. Scarcity definition is given by

a) A.C. Pigou b) J.M. Keynes c) Gossen d) Lionel Robbins

7. The book “Wealth of Nations” published in the year

a) 1776 b) 1780 c) 1906 d) 1890

8. In which definition of economics alternative use of resources is the main content

a) Wealth definition b) Welfare definition c) Scarcity definition d) Growth definition

Generic Elective Papers for Regular Programme- 5th Semester

Generic Elective in Economics (GE- I): Indian Economy-I

Module I: Background and National Income

Features and Causes of Underdevelopment of the Indian Economy, Liberalization, Privatization and Globalization: An Appraisal, Basic Definitions of GDP, GNP, NNP, Per-capita Income, GNP Deflator, Trend, Estimation and distribution of National Income.

Module- II: Agriculture

Problems of Indian Agriculture, Land reforms, Green Revolution, Causes of Low Productivity, Problems of Agricultural Finance.

Module- III: Industry

Role of Cottage, Small Scale and Large Scale Industries, Major obstacles of industrial progress, Industrial Sickness, Overall progress of industrialization since 1951.

Module- IV: Economic Planning

Meaning of Economic Planning. Important features of Indian Plans, Planning process in India, Objectives of economic planning, Targets and Achievement of Indian Plans

Suggested readings:

1. U. Kapila (2010): *Indian economy since Independence*. Academic Foundation, New Delhi
2. S. K. Misra and V. K. Puri (Latest Year): *Indian Economy — Its Development Experience*, Himalaya Publishing House, Mumbai
3. S. Chakraborty (): *Development Planning: The Indian Experience*. Clarendon Press.
4. R. Dutt and K. P. M, Sundharam (Latest Year): *Indian Economy*, S. Chand & Company Ltd., New Delhi.
5. A. Panagariya (2008): *India: the Emerging Giant*, Oxford University Press, New York
6. S. Acharya and R. Mohan (Eds.) (2010): *India's Economy: Performance and Challenges*, Oxford University Press, New Delhi.
7. I. J. Ahluwalia and I. M. D. Little (Eds.) (1998): *India's Economic Reforms and Development: Essays for Manmohan Singh*, Oxford University Press, New Delhi.

Generic Elective Papers for Regular Programme- 6th Semester

Generic Elective in Economics (GE- II): Indian Economy-II

Module- I: Demography & Poverty

Demographic Features of the Indian Economy: Meaning of population explosion, size and growth of Indian population, Problem of over population, Poverty: Causes, Unemployment: Types & Pattern and Inequality.

Module- II: Public Finance

Revenue and Expenditures of the Central and State Governments, Centre- State Financial relations, Features of Indian Tax Structure, Some Important taxes, Problems of Public Debt, and Deficit Financing.

Module- III: Banking

Structure of Indian Money Market, Banking Structure, Role and Functions of RBI and Commercial Banks, Credit Control Policy and Monetary Policy.

Module- IV: Foreign Trade

Composition, Volume and Direction in the post liberalization period, Balance of Payment, Recent Trade Policies and Currency Devaluation and its effects.

Suggested readings:

1. U. Kapila (2010): Indian economy since Independence. Academic Foundation, New Delhi
2. S. K. Misra and V. K. Puri (Latest Year): Indian Economy — Its Development Experience, Himalaya Publishing House, Mumbai
3. S. Chakraborty : Development Planning: The Indian Experience. Clarendon Press.
4. R. Dutt and K. P. M, Sundharam (Latest Year): Indian Economy, S. Chand & Company Ltd., New Delhi.
5. A. Panagariya (2008): India: the Emerging Giant, Oxford University Press, New York
6. S. Acharya and R. Mohan (Eds.) (2010): India's Economy: Performance and Challenges, Oxford University Press, New Delhi.
7. I. J. Ahluwalia and I. M. D. Little (Eds.) (1998): India's Economic Reforms and Development: Essays for Manmohan Singh, Oxford University Press, New Delhi.