

**Courses of Studies**

**MA in Economics**



**SHAILABALA WOMEN'S AUTONOMOUS  
COLLEGE , CUTTACK**

## STRUCTURE OF POST GRADUATE SYLLABUS IN ECONOMICS

### SEMESTER-I

Sl No	Nature of Course	Course Code	Paper Title	Units	Credits	Marks		
						Mid-Sem	End-Sem	Total
1	Hard Core	HC-101	Micro Economics-I	5	5	30	70	100
2	Hard Core	HC-102	Macro Economics-I	5	5	30	70	100
3	Hard Core	HC-103	Statistical Methods in Economics	5	5	30	70	100
4	Hard Core	HC-104	Financial Institutions & Markets	5	5	30	70	100
5	Allied core Common to all Departments.	AC-101	Computer application course by E-learning center	3	3	Mid-sem 10 + Practical 10 = 20	30	50
<b>Total</b>					<b>23</b>	<b>135</b>	<b>315</b>	<b>450</b>

### SEMESTER-II

Sl No.	Nature of Course	Course Code	Paper Title	Units	Credits	Marks		
						Mid-Sem	End-Sem	Total
6	Hard Core	HC-201	Micro Economics-II	5	5	30	70	100
7	Hard Core	HC-202	Macro Economics-II	5	5	30	70	100
8	Hard Core	HC-203	Mathematical Methods in Economics	5	5	30	70	100
9	Hard Core	HC-204	Agricultural Economics	5	5	30	70	100
10	Core Elective	CE-201	Basic Econometrics Or Banking Theory and Practice	5	5	30	70	100
11	Open Elective	OE-201	Odisha Economic Problems & Policies	3	4	-	50	50
<b>Total</b>					<b>29</b>	<b>150</b>	<b>400</b>	<b>550</b>

<b>SEMESTER-III</b>								
Sl No.	Nature of Course	Course Code	Paper Title	Units	Credits	Marks		
						Mid-Sem	End-Sem	Total
12	Hard Core	HC-301	Research Methodology	5	5	30	70	100
13	Hard Core	HC-302	International Economics	5	5	30	70	100
14	Hard Core	HC-303	Public Finance Theory & Practice	5	5	30	70	100
15	Core Elective	CE-301	Mathematical Economics Or Indian Economic Problems & Policies	5	5	30	70	100
16	Core Elective	CE-302	Advanced Econometrics Or Economics of Gender Or Industrial Economics	5	5	30	70	100
17	Field Internship	OE-201	Field Internship	-	3	-	50	50
	<b>Total</b>				<b>28</b>	<b>150</b>	<b>400</b>	<b>550</b>

<b>SEMESTER-IV</b>								
Sl No.	Nature of Course	Course Code	Paper Title	Units	Credits	Marks		
						Mid-Sem	End-Sem	Total
18	Hard Core	HC-401	Development Economics	5	5	30	70	100
19	Hard Core	HC-402	Economics of Environment	5	5	30	70	100
20	Hard Core	HC-403	Dissertation	-	5	-	100	100
21	Core Elective	CE-401	International Finance Or Economics of Social Sector	5	5	30	70	100
22	Allied Core	AE-401	Theory “Women and Society”	3	3	15	35	50
	<b>Total</b>				<b>23</b>	<b>105</b>	<b>345</b>	<b>450</b>

## Summary

HC- Hard Core	14 x 100	1400
CE-Core Elective	4 x 100	400
OE- Open Elective	1 x 50	50
AC-Allied Core	2 x 50	100
FI- Field Internship	1 x 50	50
Total Marks		2000

## Summary

<b>Semester</b>	<b>Credits</b>	<b>Total Marks</b>
Sem-I	23	450
Sem-II	29	550
Sem-III	28	550
Sem-IV	23	450
Total	103	2000

## Programme Outcome

The Master of Arts Programme in Economics has been designed with the objective to develop in depth knowledge of students in frontier areas of economic theory and methods, so that they are able to use knowledge to study real world economic problems. The programme offers specialized optional courses, which allow student to pursue their studies in the area of interest.

### Programme Specific Outcome- PG Economics

After successful completion of TWO year Master degree programme in Economics a student should be able to:

**PSO1: Knowledge of Economic System:** To impart in depth knowledge to students about economic theory regarding utilization and allocation of resources including labour, natural resources and capital.

**PSO2: Developmental Prospective:** To give students in depth knowledge into special fields of choice like agricultural, industrial, financial market, development economics, international trade, urbanization etc.

**PSO2: Research Prospective:** Prepare Students to develop critical thinking to carry out investigation about various socio-economic issues objectively while bridging the gap between theory and practice.

**PSO3: Quantitative and Analytical Skills:** Equip the student with skills of collecting data, analyze problems, formulate hypothesis, evaluate and validate results through statistical and applied econometrics tools and draw reasonable conclusions thereof. So that they can make substantial contribution to the knowledge economy and enjoy a successful lives.

**PSO4: Employment Prospective:** Sensitizes the students about the various policies of the government from time to time like fiscal policy, monetary policy, taxation policy etc. The students get employment opportunities as economic advisors and consultants on economic affairs and others.

# **SEMESTER-I HARDCORE -101 MICRO ECONOMICS-I**

## **COURSE OUTCOME**

At the end of the course the student will be able to:

Course	Outcomes
CO1	Student develops the ability to explain core economic terms, concepts and theories.
CO2	Understand the basic concept and theories of consumer behavior under risk and uncertainty.
CO3	Student will develop an understanding of firm's decision on how much a commodity will be produced, how much it sells and how much raw material it employs.
CO4	Students will be able to address various forms of price discrimination, measurement degree of monopoly power and welfare aspects.
CO 5	Evaluate micro economic concepts, models, and its use in real life situations like collective bargaining, opportunity cost.

### **MODULE-I: Theory of Consumer's Behavior and Demand Analysis-I**

The Cardinal Utility and Indifference Curve Analysis of Demand; Slutsky's Theorem-Substitution and Income effect; Demand for Complementary and Substitutes Goods-Ordinary and Compensated Demand Functions, Revealed Preference Hypothesis: Strong Axiom and Weak Axiom; Consumer Surplus – Concept, Measurement and Economic Applications.

### **MODULE-II: Theory of Consumer's Behavior and Demand Analysis-II**

Modern Utility Analysis; The Bernoulli Hypothesis, The Friedman's Savage Hypothesis. Consumer behavior under risk and uncertainty- The Neumann Morgenstern Theorem, Asymmetric Information and Market Failure, Market for Lemons, Adverse Selection, Moral Hazards.

### **MODULE-III: Theory of Production**

Isoquants: Concept, Derivation, Properties of an Isoquant, Isocost line and its derivation, Producer's equilibrium. Returns to a Variable Factor ( Short run production function) and Two Variable Factors ( Long run production function). Linear Homogeneous Production Function, C-D and CES; Technical Progress and Production Function.

### **MODULE-IV: Theory of Costs and Revenue**

Cost Theories: Concept and types, U-Shaped SAC and LAC Curves, L-Shaped LAC Curve, The Learning Curve. Algebraic Forms of Cost Functions-Cubic, Quadratic, Linear Cost Functions; Derivation of Cost Functions from Production Functions. Revenue: Derivation of AR and MR from TR; Price Elasticity, AR, MR, TR and Demand.

### **MODULE-V: Price and Output Determination under Perfect Competition and Monopoly**

Market Structure: Perfect Competition– Characteristics, perfect competition vs pure competition, Short run and Long run equilibrium of the Firm and Industry.

Monopoly – Concept and Features, Short run and Long run Equilibrium, Price Discrimination and Dumping, Comparison between Perfect Competition and Monopoly. Bilateral Monopoly- Concept, Equilibrium under bilateral monopoly, a critical assessment.

### **READING LIST**

1. Bilas, R. A(1971) : Micro – Economic Theory (2<sup>nd</sup>edn), Mc Graw Hil, New York.
2. Boulding , K.E, & SPIVEY, W. A( 1960): Linear Programming and the Theory of the Firm, Macmillan. New York, .
3. Jehle Reny, Advanced Microeconomic Theory,Pearson Publication, India.
4. Koutsoyiannis, A.(1979); Modern Microeconomics, (2<sup>nd</sup>Edn) ,Macmillan Press, London.

5. Pindyek, R and D. Rubinfeld( 2009); Microeconomics, (7<sup>th</sup>Edn), Pearson Publications, New Delhi.
6. Nicholson W., Christopher M. Snyder, Microeconomic Theory: Basic Principles and Extensions, Cengage Learning, India.
7. Gravelle H.& Rees R. (2004), Micro Economics (3<sup>rd</sup> Edition), Pearson Publication, India.
8. Varian H R., Intermediate Microeconomics- A modern approach (8<sup>th</sup> Edition), ww Norton & company, NewYork
9. Varian H R., Microeconomic Analysis (3<sup>rd</sup> Edition), ww Norton & company, NewYork
10. Henderson J.M. and Quandt R. E., (2006) Micro Economic Theory – A Mathematical Approach (6th Edition), Tata McGrawhill Publication, India .



## **HARD CORE -102**

### **MACRO ECONOMICS-I**

At the end of course will be able to:

Course	Outcomes
CO1	Have a detailed understanding of the discipline of macro economics, including circular flow of income, national income accounting, social accounting, green accounting, methods of measurement and problems.
CO2	Have a detailed understanding of classical theory, Keynes's theory and concept of multiplier.
CO3	Demonstrate analytical and interpretation skills to analyze and apply to real life macroeconomic situations.
CO4	Demonstrate and examine the concept of Multiplier, consumption function, investment function etc.
CO5	Understand post-Keynesian approaches to demand for money, theories based on supply of money and rate of interest.

#### **MODULE-1: National Income and Accounting**

Circular flow of income two, three and four sector economy, National product and national welfare, different forms of national income accounting; methods of measurement and problems. Social accounting: Meaning, importance and features. Input-output Accounting and balance of payment accounting, flow of funds accounting, Matrix approach to social accounting. Green accounting; meaning and needs, SNA and SEEA Methods and problems.

#### **MODULE-2: Theory of Employment and Income Determination: Classical and Keynes**

Classical theory- Assumptions, Full employment Equilibrium model, Say's law, Determination of employment and output, Say's law without saving and investment, Keynes' criticism of classical theory.

Keynes' theory– Assumptions, under employment equilibrium model, Theory of income determination in simple two sector economy model.

Aggregate spending and aggregate spending function, Concept of multiplier, Shift in aggregate spending function, multiplier and determination of equilibrium.

### **MODULE-3: Consumption function and Theories**

An overview on Keynesian Consumption function, Keynes' psychological law of consumption, short run and long run consumption function, intertemporal choice model –effects of change in income, ROI and borrowing on consumption.

Income consumption relationship- Absolute Income Hypothesis, Relative Income Hypothesis, Permanent Income Hypothesis and Life Cycle Hypothesis.

Consumer behavior: A macro analysis, Cyclical and secular consumption-income relationship- A critical analysis.

### **MODULE-4: Investment Function.**

Meaning, Investment function, Shift in investment function, Concept of MEC and MEI, short run and long run.

Profit theory of investment, Accelerator- Concept of acceleration, Simple and flexible accelerator theories.

Theories on determinants of Business Fixed investment, residential and Inventory investment, an analysis of policy measures and investment.

### **MODULE-5: Demand for and Supply of Money**

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

Supply of money- Mechanistic and behavior model of money supply, High powered money and money multiplier, Components of money supply, Control of Money supply. Demand for and supply of money and ROI.

## **READING LIST**

1. Mankiw N G (2006), Macro Economics, McMillan Learning Publication.
2. Levacic R. and Rebmann A.(1982), “Macroeconomics”, McMillan
3. Dornbusch R., FischerS., Startz R. (1994) “Macroeconomics”,12<sup>th</sup> Edition McGrawhill Publication.
4. Froyen, R. T (10<sup>th</sup> Edition), “Macroeconomics”, 2003, Pearson Publication, India.
5. Dillard D., The Economics of J. M. Keynes, Crosby Lockwood & Son Ltd, London.
6. Levacic R. and Rebmann A. (2<sup>nd</sup> Edition) Macro Economics: An Introduction to Keynesian –Neo-Classical Controversy, Palgrave MacMillan
7. Kurihara, K.K. (2013), Monetary theory & Public Policy, Routledge.
8. Rana K.C. and Verma K.N. (2006), “Macro Economic Analysis”, Vishal Publishing Co.

## **HARD CORE -103**

### **STATISTICAL METHODS IN ECONOMICS**

At the end of the course will be able to:

Course	Outcomes
CO1	Understand the concept of a frequency distribution for sample data and able to summarize the distribution by diagrams and statistics.
CO2	Understand the application of fundamental concepts and tools for data summary and exploratory data analysis.
CO3	Gain knowledge to interpret examples of methods of summarizing data sets, including common graphical tools and summary statistics.
CO4	Understand the basic concepts of probability, random variables and sampling distribution of statistics.
CO5	Became familiar with the sources of vital statistics data, how to interpret it, how to perform basic test, which will help them in their doctoral research.

#### **MODULE-I: - Univariate Distribution**

Measures of Central Tendency- Mean, Median, Mode, Harmonic Mean, Geometric Mean, Measures of Dispersion- Range, Mean deviation, Standard Deviation, Quartile Deviation, , Coefficient of Variation, Lorenz Curve, Gini-Coefficient, Skewness, Moment and Kurtosis.

#### **MODULE -II: - Bivariate Distribution**

Correlation Coefficient and its properties, Karl Pearson's and Spearman's Rank Correlation Coefficient. Linear Regression Analysis- lines of regression and regression equations, concept of Ordinary Least Squares, Standard error of estimate, Correlation vs Regression analysis.

Methods of estimation of non-linear regression equations: parabolic, exponential, geometric, modified exponential, logistic relationships.

### **MODULE-III:- Probability Theory**

Elements of Probability Theory; Classical and Empirical Probability, Axiomatic Probability, Laws of Addition and Multiplication, Conditional Probability and Concept of independence and Interdependence, Bayes Theorem.

Random variable and Mathematical Expectation- Concept and Theorem, Variance of a random variable.

Sampling and Sampling distribution- Concept, Types of Sampling- Probability Sampling and Non-Probability Sampling methods.

### **MODULE-IV:- Theoretical Probability Distribution**

Normal Probability Distributions- Properties, Area under a normal curve, Standard normal variate and its applications.

Binomial Probability Distributions - Concept, Properties, Constants of Binomial distribution and applications.

Poisson distribution - Concept, Properties, Constants of Poisson distribution, a limiting case of Binomial distribution.

### **MODULE-V Estimation and Hypothesis Testing**

Concept of an estimator, desirable properties of an estimators; Interval estimation: Statistical hypothesis- Null and Alternative , Confidence intervals and Level of Significance, Type I and Type II errors.

Hypothesis testing based on t, Z- Concept, Properties, application with numerical examples.

Hypothesis testing based on Chi-square and F distribution- Concept, Properties, application with numerical examples.

### **READING LIST**

1. Gupta, S.C.(1993), “Fundamental Methods Of Applied Statistics” , S Chand & Sons.
2. Monga, G.S (1972), “Mathematical and Statistics for Economists, Vikash Publishing House, New Delhi.
3. Spiegel, M.R(1992), “Theory and Problems of Statistics” McGraw Hill Book Co.
4. W. Allen Webster (1997), Applied Statistics for Business & Economics, 3<sup>rd</sup> edition, McGraw – Hill Publications.
5. Karmel, P. H. & Polasek, M. (1978), Applied Statistics for Economists, 4<sup>th</sup> edition, Pitman international text.
6. Gupta S.C. & Kapoor V.K. (2002), Fundamentals of Mathematical Statistics, Sultan Chand & Sons, New Delhi.

## **HARD CORE-104**

### **FINANCIAL INSTITUTIONS AND MARKETS**

At the end of course the student will be able to:

Course	Outcomes
CO1	Understand the financial system: its structure, functions and equilibrium.
CO2	Understand the way the different rates of interests are determined.
CO3	Develop knowledge on theories of financial sector development, interest rate system practiced in India.
CO4	Understand the functioning and importance of different banking and non-banking financial institutions and their role in a developing economy.
CO5	Explain the role and structure of money and capital market and their role in economic growth.

#### **MODULE-I:- Financial Sector and Economic Development**

Financial System-Concept, Importance and Major Functions of the Financial System. Relationship between financial development and economic development.

Structure of the Financial System- Financial Institutions, Financial Markets, Financial Instruments and Services.

Indicators of Financial Development, Equilibrium in Financial Market- Determinants of Supply and Demand for Funds.

#### **MODULE-II:- Theories of Financial Sector Development**

Financial System and Economic Development. Theories of Effects of Financial System on Saving and Investment- Prior Saving Theory, Financial Regulation Theory and Financial Liberalization Theory.

Theories of the Level of Interest Rate Determination- Classical Theory, Loanable Fund Theory and Keynesian Theory. Interlinkage between Interest Rate and Price Level.

Interest Rate System in India- System of Administered interest rate regime: Reasons and Effects of Regulation, Deregulation of Interest Rate and its Implications. Appropriate Interest rate policy.

### **MODULE-III:- RBI and Monetary Policy**

Reserve Bank of India- Organization and Management. Role and Functions of RBI. Autonomy of the RBI- Advantages and Limitations.

Monetary policy of the RBI- The aims and objectives of Monetary Policy in developed and developing countries, Instruments of Monetary Policy.

Role of Commercial Bank in Money Market- Major services provided by Commercial Bank, Development Bank- Role and Function.

### **MODULE-IV:- SEBI and Insurance Sector in India**

Securities and Exchange Board of India (SEBI) -Genesis, Organisation, Objectives and Regulatory approach and Major Functions of SEBI.

Insurance Companies- Meaning, Types of Insurance and Principles of Insurance. IRDA- Objectives, its role and functions in financial market.

Pension Fund and Regulatory Development Authority (PFRDA)- Structure and Functions. National Pension Scheme (NPS).

### **MODULE-V:- Non-banking Financial Companies (NBFCs)**

Non-banking Financial Companies (NBFCs)- Nature of NBFC and how it is different from the Bank. Types and Importance of NBFCs.

Loan Companies, Investment Companies, Lease Finance- types of lease and growth of lease industry.



Non-Bank Statutory Financial Organizations (NBFOs)- Nature and Functions of NBFOs, Major NBFOs operating in India: EXIM Bank, NABARD, Industrial Financial Corporation in India (IFCI).

## **READING LIST**

1. Bhole, L M and Mahakud, J. (6<sup>th</sup> Edition)- Financial Institutions and Markets –Structure, Growth and Innovations. McGraw Hill Education (India) Pvt Limited.
2. Bhole, L M (2009), Financial Institutions and Markets, Tata McGraw Hill, New Delhi.
3. Khan, M Y (2013), Indian Financial System. Tata McGraw Hill, New Delhi.
4. Gordon E. and Natarajan K. (2018), Financial Market and Institutions, Himalaya Publishing House.
5. Gupta S B (2021) -Monetary Economics: Institutions, Theory & Policy, Sultan Chand & Sons, New Delhi.

**SEMESTER-2**  
**HARD CORE – 201**

**MICRO ECONOMICS-II**

**Course Outcomes**

**At the end of course the student will be able to:**

Course	Outcomes
CO1	Deeper knowledge on decision making under different market imperfections like monopolistic competition, oligopoly.
CO2	Deeper knowledge on achieving group equilibrium under free entry and price competition.
CO3	Students will be able to understand the managerial and behavioral theories of the firm.
CO4	Students can acquaint the knowledge of General equilibrium, the Walrasian System. Graphical exposition of general equilibrium.
CO5	Gain knowledge on compensation principles of welfare economics, issues in attainment of optimum welfare etc.

**MODULE-I-Monopolistic Competition**

Monopolistic competition: Assumptions, Cost, revenue and product differentiation, Concept of industry and group.

Chamberlin's approach to ideal output and excess capacity, equilibrium of a firm under monopolistic competition with product differentiation and selling cost.

Group equilibrium under free entry and price competition, a critical analysis.

**MODULE-II-Oligopoly**

Non-collusive oligopoly: Characteristics, Homogeneous product- Cournot model, Bertrand model, Stackelberg's model

Non-homogeneous product- Concept of Kinked demand curve and Sweezy model, a critical analysis.

Collusive Oligopoly- Characteristics, equilibrium under Cartels and Price leadership,

### **MODULE-III- General Equilibrium**

Concept of partial and general equilibrium, the Walrasian system. Existence, uniqueness and stability of equilibrium, a graphical exposition to the path of general equilibrium.

Equilibrium of production, consumption and simultaneous equilibrium of production and consumption.

### **MODULE-IV- Welfare Economics I**

Criteria of social welfare and the concept of value judgment, Pigou's Approach to Welfare Economics.

Pareto's Optimality Conditions- Efficiency in consumption, production and distribution.

Concept of social welfare function- its properties, Bergson- Samuelson social welfare function and determination of the "point of bliss".

### **MODULE-V- Welfare Economics II**

Compensation Principle- Hicks, Kaldor, Scitovsky and Little.

Inability to obtain optimum welfare- Market imperfections, decreasing cost , information asymmetry and externality.

Theory of second best, Arrow's impossibility theorem, contemporary relevance and critical appraisal.

### **READING LIST**

1. Bilas, R. A(1971) : Micro – Economic Theory (2<sup>nd</sup>edn), Mc Graw Hill, New York.

2. Boulding , K.E, & SPIVEY, W. A( 1960): Linear Programming and the Theory of the Firm, Macmillan. New York .
3. Salvatore (5<sup>th</sup> edition), Principles of Microeconomics, , Oxford Publications
4. Reny J., Advanced Microeconomic Theory,Pearson India.
5. Koutsoyiannis, A.(1979); Modern Microeconomics, (2<sup>nd</sup>Edn) ,Macmillan Press, London.
6. Pindyek, R and D. Rubinfeld ( 2009); Microeconomics, (7<sup>th</sup>Edn), Pearson Publications, New Delhi.
7. Nicholson W., Christopher M. Snyder, Microeconomic Theory: Basic Principles and Extensions, Cengage Learning, India.
8. Gravelle H. & Rees R. (2004), Micro Economics (3<sup>rd</sup> Edition), Pearson Publication, India.
9. Varian H R., Intermediate Microeconomics- A modern approach (8<sup>th</sup> Edition), ww Norton & company, NewYork
10. Varian H R., Microeconomic Analysis (3<sup>rd</sup> Edition), ww Norton & company, NewYork
11. Henderson J.M. and Quandt R. E., (2006) Micro Economic Theory – A Mathematical Approach (6th Edition), Tata McGrawhill Publication, India .
12. IMD Little, A Critique of Welfare Economics, Oxford Publication
13. K.V. Kundu, Theory of Welfare Economics.

## HARD CORE - 202

### MACRO ECONOMICS- II

Course	Outcomes
CO1	Understand neo-classical & Keynesian views of interest, the IS/LM model, fiscal and monetary policies under fixed and flexible exchange rate.
CO2	Understand inflation, deflation, depression and stagflation
CO3	Understand theory of determination of income and employment, consumption-income relationship.
CO4	Students acquaint with macro economics in an open economy like the new classical critiques of micro foundations, policy implications and empirical evidences.
CO5	To acquaint students with the imperfect competition, general equilibrium and welfare economics.

#### **MODULE- I- Neo-classical, Keynes and ISLM approach**

Neo- classical & Keynesian views of interest, The IS-LM model, Extension of IS-LM model, Shift in ISLM and ISLM with Govt. sector.

Relative effectiveness of monetary and fiscal policies, Extension of ISLM model with labour market and flexible prices. Keynes' and Pigou's effects, crowding out hypothesis.

#### **MODULE-II- Inflation and Unemployment**

Classical, Keynesian and monetarist approach to inflation. Structuralist approach of inflation. Philips curve analysis- short run and long-run Philips curve.

Natural rate of unemployment hypothesis- Samuelson and Solow

Non-accelerating inflation rate of unemployment (NAIRU), Modified Phillip's curve- Tobin, Adaptive expectation and Rational expectation hypothesis, Policies to control inflation.

### **MODULE- III- Theories of Business cycle.**

Meaning and Characteristics of Business cycle, Major and Minor Business Cycles, Phases of Business Cycle.

Theories of business cycle-Schumpeter (innovation) theory, Kaldor, Samuelson, Hicks and Goodwin's model of trade cycle, Control of business cycle.

### **MODULE-IV- Macro Economics in an Open Economy**

Mundell- Fleming Model- asset market, expectations and exchange rates.

The new classical critique of micro foundations, the new classical approach, policy implications and empirical evidences.

### **MODULE-V- General Equilibrium and Supply side Economics**

Approaches to General equilibrium, features of General Equilibrium model, Merits and demerits of macro General Equilibrium model.

Supply side economics- Essentials of Supply side economics, the Laffer curve analysis, Policy recommendations of Supply side economics

The new Keynesian approaches and objections to supply side economics.

### **READING LIST**

1. Mankiw N G (2006), Macro Economics, McMillan Learning Publication.
2. Levacic R. and Rebmann A.(1982), "Macroeconomics", McMillan
3. Dornbusch R., Fischer S., Startz R. (1994) "Macroeconomics",12<sup>th</sup> Edition McGrawhill Publication.
4. Froyen, R. T (10<sup>th</sup> Edition), "Macroeconomics", 2003, Pearson Publication, India.
5. Dillard D., The Economics of J. M. Keynes, Crosby Lockwood & Son Ltd, London.
6. Levacic R. and Rebmann A. (2<sup>nd</sup> Edition) Macro Economics: An Introduction to Keynesian –Neo-Classical Controversy, Palgrave MacMillan
7. Kurihara, K.K. (2013), Monetary theory & Public Policy, Routledge.
8. Rana K.C. and Verma K.N. (2006), "Macro Economic Analysis", Vishal Publishing Co.

## **HARD CORE- 203**

### **MATHEMATICAL METHODS IN ECONOMICS**

At the end of course the student will be able to:

Course	Outcomes
CO1	Rules of differentiation. Application of differentials, partial derivative and total derivative, implicit function.
CO2	Understand constrained optimization, unconstrained optimization, concavity and convexity function.
CO3	Basic Concepts of Linear programming, slack and surplus variable, basic and feasible solutions.
CO4	Basic concepts and structure of Input-Output model. Closed and open input-output model.
CO5	Basic concepts and types of game, rules of game, maximin and minimax principle. Simple and mixed strategies.

#### **MODULE-I: - Function and Differentiation**

Function- Concept and types, properties and graphical representations.

Rules of differentiation, higher order derivatives, relative extrema, inflection points, increasing and decreasing functions. Partial and total derivative, total differentiation, differentiation of implicit function, economic applications.

#### **MODULE- II:- Classical Optimization**

Concavity and Convexity of a function, unconstrained optimization (two variable case), Hessian determinant (for more than two variable case), Jacobian and functional dependence.

Constrained Optimization- Bordered Hessian determinant, Langrangian Multiplier method.

Indefinite Integration: Concept and rules, Definite Integration: Concept and properties, economic applications.

### **MODULE-III: - Linear Programming (LPP)**

Introduction- the general LPP, Slack and surplus variables, basic and feasible solutions.

Solution of LPP- graphical method (both maximization and minimization)

Concept of Primal and dual, Duality theorem, economic interpretation of duality, limitations of LPP.

### **MODULE-IV: - Input-Output Model (I-O model)**

Introduction, assumptions, transaction matrix and technological coefficient matrix.

Closed and open I-O models with technological coefficients matrix

Static and dynamic I-O model, Hawkin- Simons Condition and the viability of the system, limitations of the I-O model.

### **MODULE-V: - Game theory**

Basic concepts and types of game, rules of the game, maximin and minimax principle, saddle point solution.

Simple and mixed strategies, solution of game with mixed strategies, dominance property, graphical solution of  $m \times 2$ ,  $2 \times n$  and  $m \times n$  games.

Concept of Nash equilibrium and prisoner's dilemma, Co-operative vs non-cooperative game, LPP and game theory.



## **READING LIST**

1. Dowling, E.T. (2011), Introduction to Mathematical Economics, Schaum's Outlines, McGraw Hill Publication, India.
2. Sydsaeter K. and Hammond P., (1995) Mathematics for Economic Analysis, Pearson Publication, India.
3. Renshaw, J., (2016) Maths for Economics, 4<sup>th</sup> edition, Oxford Publishing House.
4. Baldani, J. (2005) Mathematical Economics, 2<sup>nd</sup> Edition, Thomson/South-Western
5. Allen R G D (2006), "Mathematical Analysis for Economists" Macmillan And Company Limited
6. Chiang A C (2017), "Fundamental Methods of Mathematical Economics", 4<sup>th</sup> edition, McGraw Hill Education.
7. Mehta and Madnani (2013), Mathematics for Economists, Sultan Chand & Sons
8. Swarup K., Gupta P K. and Manmohan (2010), Operation Research, Sultan Chand & Sons, New Delhi.

## **HARD CORE-204**

### **AGRICULTURAL ECONOMICS**

**At the end of course the student will be able to:**

Course	Outcomes
CO1	Role of Agriculture in Economic Development, Economic growth – sectoral changes and agriculture.
CO2	Mechanization of Indian Agriculture, Case for and against farm mechanization. Green revolution and trends of mechanization in India.
CO3	Understand theories of Agricultural development
CO4	Understand production function analysis in agriculture-Short run and long run Iso quant and Iso cost approach
CO5	Agricultural price policy for a developing economy – objectives and effectiveness of agricultural price policy, features of an ideal agricultural price policy.

#### **Module-I Agriculture and Economic Development**

Agriculture and Economic Development: Nature, scope and significance of Agricultural economics; Role of Agriculture in economic development;

Agriculture and its peculiarities, Interlinkage between Agriculture and Industry

Reforms in Agricultural sector: Land Reform Measures: Achievements and failures, Green Revolution and Need for second Green Revolution

#### **Module-II Theories of Agricultural development**

Theories of Agricultural development -Schultz's hypothesis on traditional agriculture- its criticisms, Von Thunen's Location Theory of Agriculture

Traditional Agriculture and its modernization: Approaches of Mellor and Boserup, Lewis model on unlimited supply of labour, Fei & Ranis Model on Importance of agriculture on Industrial growth

### **Module-III Agricultural production:**

Production function analysis in agriculture- Short run and long run Iso-quant and Iso cost Approach; C-D production function

Cost Functions and cost curves in agricultural production decisions

Supply Response in agriculture; Farm size and productivity. Mechanization of Indian Agriculture; Case for and against farm mechanization

### **Module-IV Agricultural Price policy, Marketing and Credit:**

Agricultural Price policy, Marketing and Credit: Feature, Objective and Effectiveness of the Agricultural Price Policy in a developing economy; Price instability- Concept and Cob-Web Model.

Agricultural marketing in India; measure to improve the marketing efficiency; Regulated market; Marketable and Marketed surplus.

Rural credit market in India; Institutional vs non institutional, source of credit; Role of NABARD for agricultural development.

### **Module-V Globalisation and Indian Agriculture**

Globalization and Indian Agriculture, Case for and against privatization of Agriculture.

Liberalization of trade and its impacts; WTO and Indian Agriculture.

International trade and Indian Agriculture- An Overview during post-globalisation , FDI and Role of MNCs.

**Learning outcome:** In completion of the course, students will be able to sensitize the issues, challenges and opportunities for the overall development of the agriculture sector. It will also substantiate the knowledge and understanding of the students about the multiple dimensions of the primary sector in our country.

**READING LIST:**

1. Soni R.N. (2013), Leading Issues in Agricultural Economics, Vishal Publishing,
2. Heady, E.O (1952) Economics of Agricultural Production and Resource Use, Prentice-Hall, New York.
3. Cohen, R. L. (2006), The Economics of Agriculture, Obscure Press.
4. Sadhu A.& Singh, A. N. (1999), Fundamentals of Agricultural Economics, Himalaya Publishing house.
5. Bhaduri. A. (1984). The Economic Structure of Backward Agriculture, Macmillan, Delhi.
6. Saini, G. R. (1979), Farm Size, Resource Use Efficiency and Income Distribution, Allied Publishers, New Delhi.
7. Ray D. (1998), Development Economics, Princeton University Press.
8. Memoria C.B.& Tripathi B.B. (2013) Agricultural Problems of India Kitab Mahal Publisher.

**CORE ELECTIVE- 201**  
**BASIC ECONOMETRICS**

**Course outcome**

**At the end of course the student will be able to:**

Course	Outcomes
CO1	Explain core concepts and techniques in econometrics, with a special focus on the classical linear regression model.
CO2	Understand the assumptions upon which different econometric methods are based and their implications.
CO3	Student will be able to estimate and interpret linear regression model and able to distinguish between economic and Statistical Importance.
CO4	Understand how to detect serial correlation, multicollinearity and Heteroscedasticity issues and their remedial measures.
CO5	Interpret and evaluate the structural stability of regression models.

**MODULE-I:-**Meaning and scope of econometrics; two variable linear regression model-Its assumptions, estimation of parameters

Properties of estimators, Gauss Markov Theorem, coefficient of determination

Analysis of variance of two variable LRM, Prediction in two-variable model.

**MODULE-II:-**K-Variable LRM: Assumptions, estimation of parameters.

Properties of estimators, Gauss Markov Theorem; Testing of significance of single co-efficient and subset of coefficients.

ANOVA; Adjusted coefficient of determination, prediction in K-variable model.

**MODULE-III:-**Multicollinearity-Nature and detection Consequences & remedy.

Specification Errors and measurement errors.

**MODULE-IV:-**Heteroscedasticity- Consequences, detection and remedy

Generalized Least squares and Weighted Least Square estimation.

Auto-correlation: Detection, consequences and remedy.

**MODULE-V:-**Dummy independent variable models: meaning, shift of the function, change in slope, seasonal analysis, dummy variable trap.

Testing the structural stability of regression models, measuring structural transformation.

Chow test, Interaction effects, piecewise linear regression, ANOVA vs ANCOVA.

### **READING LIST**

1. Johnston (1991), "Economic Methods", McGraw Hill Book Co.
2. Kmenta J. (1997), Elements of Econometrics (Reprint) University of Michigan Press, McMillan Publication
3. Wooldridge, j. (2019), Introductory Econometrics- A Modern Approach, South-Western College Publishing.
4. Koutsoyiannis, A (1992), "Introduction to Econometrics", University Press.
5. Greene, W.H. (2020), Econometric Analysis, 6<sup>th</sup> edition, Pearson Publication.
6. Gujarati D.N. (1995), Basic Econometrics (2<sup>nd</sup> edition), Mc Grawhill, New Delhi
7. Maddala G.S. (1993) Econometric Methods and Application, Aldershot

**OR**  
**CORE ELECTIVE- 201**  
**BANKING THEORY AND PRACTICE**  
**COURSE OUTCOMES:**

**At the end of course the student will be able to:**

Course	Outcomes
CO1	Acquire knowledge of working of Indian Banking System.
CO2	Understand legal and regulatory aspects of banking.
CO3	Understand customer relationship management.
CO4	Gather knowledge on credit worthiness and non-performing assets.
CO5	Understand the difference between paying bankers, collecting bankers and their duties.

**MODULE-I: - Origin of Banking Sector**

Introduction to Banking-Definition of banking, Origin& growth of Banking Sector in India.

Kind of Banking, Unit vs. Branch Banking, Banking regulation Act 1949

E-banking system, ATM Cards, Debit Cards, Personal Identification Number.

**MODULE-II: Reserve Bank of India and Monetary Policy**

RBI- Evolution & Definition of Reserve Bank of India, Organisation and management.

RBI- Role and Functions of Reserve Bank of India.

Monetary Policy- Meaning, Objectives and instruments of Monetary Policy in India.

### **MODULE-III: Commercial Banks**

Commercial Banks- Meaning, Objectives and Nationalisation of Commercial banks. Types of Commercial Banks, Functions Commercial Banks -Accepting deposits and lending of funds. Multiple credit creation by Commercial Banks and Balance sheet analysis of Commercial Banks.

### **MODULE IV: Customer Base-Services Provided by Banks**

Customer relationship management in Banks-meaning, objectives, and Importance in banking sector.

Strategies for expanding customer base-services to different categories of customers-retail, corporate, international and rural.

Banking Ombudsman Scheme-KYC norms, customer retention, handling customer grievances.

### **MODULE-V: Negotiable instruments and Principles of lending**

Negotiable instruments-Meaning, Characteristics and use of Negotiable instruments.

Types of negotiable instruments- Promissory Notes, Bills of Exchange, Cheque, and Draft

Principles of lending-Types of borrowings-precautions to be taken by a banker while advancing loans against Real Estate-Insurance policies.

**LEARNING OUTCOMES:** By studying this course, students will get exposure for banking operations and will have practical applications of banking aspects in real life situation.



## **READING LIST**

1. Sundaram and Varshney, (2003), “Banking Theory, Law & Practice” Sultan Chand Company, New Delhi.
2. Gordon E. and Natarajan K. (2016) “Banking Theory, Law & Practice” Himalaya Publishing House, New Delhi.
3. Sekhar, K.C., (2005), Banking Theory and Practice, Vikas Publishing House, New Delhi.
4. Handbook of Statistics on Indian Economy (2021), Annual publication of RBI.
5. Maheswari, S.N. (2014), Banking Law, Theory & Practice- Kalyani Publication.

## OPEN ELECTIVE-201

### ODISHA ECONOMIC PROBLEMS & POLICIES

#### COURSE OUTCOMES

**At the end of course the student will be able to:**

Course	Outcomes
CO1	Gather knowledge on a macro glance of Odisha Economy: demographic features of Odisha, population policy of Odisha government.
CO2	Access knowledge on Agriculture Sector Development in Odisha, Agriculture: land ownership and land tenure, agricultural wages etc.
CO3	Industry: Investment, industrial policy, and the growth of large industries, mining and quarrying.
CO4	Construction; tertiary sector: tourism, transport and power; Water Resources, Forest Resources.
CO5	Social Sector in Odisha, Poverty: income poverty and inequality; health sector: outcomes, infrastructure, finance, public health, NRHM.

#### **MODULE-I: -Basic Characteristics and Demographic Indicators of Odisha Economy**

Basic characteristics of the economy of Odisha, Major problems in Economic Development of Odisha.

Demographic features of Odisha population-Birth rate, death rate, density of population, sex ratio, literacy rate, rural-urban composition, life expectancy and demographic dividend.

Population Explosion- Meaning, causes of rapid growth of population, adverse impact on Odisha economy, Population Policy.

## **MODULE-II:-Agricultural Development in Odisha**

Agriculture in Odisha- Concept, importance of agriculture in Odisha, Causes of low Productivity in Odisha.

Reforms in Agricultural Sector: Land Reforms- Meaning and Objectives, Measures of Land Reforms in Odisha; Green Revolution- Meaning, Objectives, Positive impact and its limitation. Agricultural credit-Institutional and non-institutional sources, System of Agricultural Marketing.

## **MODULE-III:-Industrial Development in Odisha**

Industrial sector- Importance of Industrialization in Economics Growth. Types of Industries- Large scale and small scale, growth of large-scale industries and their problems; growth of small-scale industries and their problems.

Industrial policies- Meaning and Objectives. Industrial Policy 1991, Odisha Industrial Policy Resolution.

### **READING LIST:**

1. Odisha Economic Survey 2020-21.
2. Odisha Reference Year Book 2015, BK Publications.
3. Patnaik N.R. (1997), Economic History of Odisha, Indus Publications.
4. Nayak, P. Panda, S. & Patnaik P. (2016), The Economy of Odisha- A Profile, Oxford University Press.

### **SEMESTER-III**

### **HARD CORE-301**

## RESEARCH METHODOLOGY

### Course Outcomes:

#### At the end of course the student will be able to:

Co1	Students will be able to demonstrate the ability to choose methods appropriate to research aims and objectives.
Co2	Students gain knowledge on how to select the area of study, how they collect data, which sampling technique is to be followed.
Co3	Students able to develop skills in qualitative and quantitative data analysis and presentation. Also learn general procedure of hypothesis testing.
Co4	Students will understand the Scaling of Data- Classification, Tabulation, Graph and Diagrams, Statistical methods, Covariance and Correlation, Analysis of Variance (ANOVA)
Co5	Students will gain knowledge of how to develop and write a complete research paper.

**MODULE-I:-**Introduction to scientific social research– meaning, scope, importance, significance, types, objective, nature and motivation.

Research design- meaning and need for research design, Features of good research design, concepts relating to research design, limitations in designing research.

Social Science Research- scope and importance, steps in social science research.

**MODULE-II:-** Collection of data–primary and secondary data –Methods of collecting primary data –Interviews, questionnaire, observation , schedule, Secondary data –sources, limitations of secondary data.

Sampling and sample design. Basic features in sampling, Types of sampling, Ideal sampling, main steps in sampling.

Sampling and non sampling errors, Case study method.

**MODULE -III:** Scaling of Data – Classification, Tabulation, Graph & Diagrams.

Statistical methods – Averages, Standard Deviation.

Covariance & Correlation, Analysis of Variance (ANOVA) .

**MODULE-IV:-** Hypothesis- meaning, definition, sources of hypothesis, qualities of workable hypothesis, importance of hypothesis, problems in formulating hypothesis.

Basic concepts of testing hypothesis- null and alternative hypothesis, level of significance, tests of hypothesis, type I and type II error, one- tailed and two- tailed tests. Hypothesis testing process- Z, Chi- square-test, t-test, F-test.

**MODULE-V:-** Academic writing skill: writing a research report, requirements, significance of report writing, types of report.

Outline of a research report, guidelines for effective report writing, mechanics of report writing.

Writing of bibliography & references, appendix, review of literature, various methods of presentation of research reports.

### **READING LIST**

1. Kothari C. R (1990)–Research Methodology, Methods & Techniques, Wiley Easter Limited , New Delhi
2. Sadhu & Singh (2021), Research Methodology in Social Sciences, Himalaya Publishing House, New Delhi.
3. Thakur D. (1993), Research Methodology in Social Sciences, Deep & Deep Publication.
4. Kumar, R. (2011) Research Methodology: A Step-by-Step Guide for Beginners. 3rd Edition. Sage, New Delhi
5. Gupta S.P (2014), Statistical Methods, Sultan Chand & Sons.
6. Kothari C. R & Garg G. (2019)–Research Methodology: Methods & Techniques, New Age International Publishers, New Delhi.

### **HARD CORE-302**

### **INTERNATIONAL ECONOMICS**

### **COURSE OUTCOMES:**

At the end of course the student will be able to:

Co1	Acquainted with economic concepts and models of international trade.
Co2	Understand the basic concept of Gains from Trade and new trade theories of international trade.
Co3	Students will understand the concept of Tariffs and Types of Tariffs, Tariffs analysis in Partial and General Equilibrium, Non-Tariff trade barriers.
Co4	Knowledge on Concept of Balance of Payments, Features and Components, Equilibrium, Disequilibrium in Balance of Payments and policies to control.
Co5	Understand the various concepts of Exchange Rate, Fixed and Flexible Exchange Rate, Theories of Exchange Rate Determination and Foreign Trade Multiplier.

### **MODULE-1:-Pure theories of International Trade**

Introduction to the International Economics, International Trade-Concept, Rationale of International Trade, Interregional Trade Vs International Trade.

Classical theory of International Trade- Trade Theories based on Absolute Advantage, Comparative Advantage and Opportunity Cost.

Modern Theory of International Trade- Heckscher-Ohlin Theory of Trade, Stolper-Samuelson Theory.

### **MODULE-2:- Gains from Trade and New Theories of International Trade**

Terms of Trade- Concepts, Importance of Terms of Trade, Types of Terms of Trade (ToT)- Net Barter ToT, Gross barter ToT, Income ToT, Single ToT, Double ToT, Real Cost ToT and Utility ToT.

Gains from Trade- Concept, Factors affecting Gains from Trade, Trade Theories- Classical Theory (J.S. Mill) and Modern Theory (Samuelson and Harberler), Trade as an engine of economic growth.

New Theories of International Trade- Kravis Theory of Availability, Linder's theory, Vernon's Product Cycle Theory.

### **MODULE-3:-The Theory of Interventions**

Tariffs- Concept and Objective, Types of Tariffs, Tariffs analysis in Partial and General Equilibrium Framework, Optimum Tariff-their measurement, impact and welfare implications.

Non-tariff trade barriers: Import Quotas-Concept and Objective, Types of Quotas, effects of Quota, Comparison between Tariff and Quota.

Other Non-tariff trade barriers- Custom Union, Dumping, Export Subsidies, Economic integration, Tariff vs. Non-tariff barriers.

### **MODULE-4:-Balance of Payments**

Balance of Payments: Meaning, significance, features and components of balance of payments, Difference between Balance of Trade and Balance of Payments.

Equilibrium in the balance of payments, Disequilibrium in the balance of payments- Types and Causes; Impact of adverse Balance of payment on Economy.

Adjustment Mechanism of disequilibrium in the balance of payments- the process of automatic adjustment; Expenditure-reducing and expenditure-switching policies and direct controls for adjustment.

### **MODULE -5:-Theories on Exchange rates Determination**

Exchange Rate- Meaning and its determinants, Types Exchange Rate-Fixed Exchange Rate (Argument for and against) and Flexible Exchange Rate (Argument for and against).

Theories of Exchange rate Determination- Mint Par Theory, Purchasing Power Parity Theory and Balance of Payment Theory.

Foreign Trade Multiplier with and without foreign repercussions and determination of national income and output.

### **READING LIST**

1. Salvatore, D. (1997). International Economics, Prentice Hall.
2. Sodersten, B O (1991). International Economics, The Macmillan Press.
3. Roy, P.N. (1986). International Trade: Theory and Practice, Wiley Eastern.
4. Chacholiades, M. (1990), The Pure Theory of International Trade, McGraw Hill.
5. Krugman P. R., Obstfeld M and Melitz (2015). International Economics, Pearson Education
6. Batra, Raveendra N. (1975), The Pure Theory of International Trade under Uncertainty, The Macmillan Press.
7. Bhagwati, J. (Ed.) (1981), International Trade: Selected Readings, Cambridge University Press.
8. Dana, M.S. (2000), International Economics: Study, Guide and Work Book, Routledge Publishers.
9. Dunn, R.M. and J.H.Mutti (2000), International Economics, Routledge Publishers, London.
10. Sodersten B O, & Reed G.(1994), International Economics, 3<sup>rd</sup> edition, International Edition.
11. Dwivedi D. N. (2018) , International Economics Theory and Practice, Vikas Publishing House.

### **HARD CORE-303**

### **PUBLIC FINANCE THEORY AND PRACTICE**



## Course Outcomes:

At the end of course the student will be able to:

Course	Outcomes
CO1	Develop comprehensive understanding of principle of taxation and their application.
CO2	Develop comprehensive understanding of theories of public expenditure and their application.
CO3	Thoroughly comprehend concepts and theories related to sources of borrowing and theories related to public policy and rational choice.
CO4	Identify difference in processes, revenue sources and budgetary challenges that exist between different levels of government.
CO5	Develop understanding on issues in Indian public finance, principle of federal finance, fiscal federalism practiced in India

### **MODULE-I:- Role of Government**

The role of Govt. in a changing perspective, provision of Private Goods, Public Goods, Merit Goods and Mixed Goods. Market failure- Free rider problem, imperfections, decreasing production cost and externalities. Pigouvian taxation, Coase theorem and its critical appraisal.

### **MODULE-II PRINCIPLES OF TAXATION**

Benefit principle, Bowen & Lindahl's model, principle of equity, Ability to pay principle, excess burden doctrine. Principle of fiscal neutrality, administrative efficiency, application of taxation principles in developing countries. Taxable capacity-meaning, types & measurement; impact & incidence of tax, shifting of tax incidence under different market conditions.

### **MODULE-III PUBLIC EXPENDITURE**

Wagner's law of increasing state activities, peacock-Wiseman hypothesis, Coli-Clark's critical limit hypothesis. Public sector pricing policy-average cost & marginal cost, criteria for public investment-social cost benefit analysis. Effects of public expenditure on production, distribution & other economic activities.

### **MODULE-IV PUBLIC DEBT & BUDGET**

Sources of public debt, effects of public debt, tax vs. debt. Burden of public debt, shifting of debt burden, debt redemption & management, intergeneration equity.

Budget-Balanced vs. unbalanced budget deficits & their limitation, budget as an instrument of economic policy, zero based budgeting, PPBS.

### **MODULE-V Fiscal federalism**

Principles of federal finance, fiscal federalism in India. Centre-state financial relation, financial autonomy of states. Shrinking size of development finance through budgets, an assessment.

### **READING LIST**

1. Musgrave R.A&Musgrave P (1976), Public Finance Theory& Practice, McGraw Hill.
2. Mishra B. Economics of Public Finance
3. Herber B.P. (1979), Modern Public Finance, Homewood Publishing House.
4. R.K. Lekhi (2015), Public Economics, Kalyani Publishers.
5. Ganguly S. (1964), Public Finance –A Normative Approach, Naba Bharat Publication, India.

6. Due J. F& Friedlander, (1977), Government Finance: Economics of the Public Sector, The Irwin Series Publication, 6<sup>th</sup> Edition.
7. JhaR. (1997) Modern Public Finance, Routledge Publication, London.
8. Radhakrishnan N. (2019) Public Finance Theory & Practice, Vindra Publication
9. R.A. Musgrave (1975) Public Finance Theory& Practice, McGraw Hill.

**CORE ELECTIVE-301**

**MATHEMATICAL ECONOMICS**

## **COURSE OUTCOMES:**

**After the end of course the student will be able to:**

Course	Outcomes
CO1	Deep and clear understanding of the assumptions, the methods and the applicability of mathematical models in economics.
CO2	Recognize standard models of economics and the contexts in which they are applicable.
CO3	Demonstrate an understanding of the assumptions of the results obtained and extend these models to conduct comparative statistics with relevant variables.
CO4	Understand how to attain SingleMarket Equilibrium- Marshallian and Walrasian equilibrium conditions, existence, Stability and Uniqueness of equilibrium.
CO5	Estimate Linear Programming; Primal & Dual problems, Simplex method and Revised Simplex Method. Dynamic programming, transportation problem. Non-linear programming problems.

**MODULE-I:** - Consumer Behavior Theory- Utility Function-Direct and Indirect, Slutsky equation, Ordinary and Compensated Demand Functions, Income, Substitution and Price effects.

Separable and additive utility functions, homogeneous & homothetic utility functions.

Concept of Elasticities- generalisation to n variable case, linear expenditure systems.

**MODULE-II:** -Production function- CES & VES production functions and their properties.

Derivation of short run & long run cost function, constrained optimization of a produce, input demand function.

Technical progress through production function, empirical uses of production function.

**MODULE-III:** Single Market Equilibrium- Marshallian and Walrasian equilibrium conditions, existence, Stability and Uniqueness of equilibrium.

Static and dynamic stability, continuous and lagged adjustments. Dynamic equilibrium with lagged adjustments.

**MODULE-IV:-** Multi Market equilibrium- Two -commodity exchange and Edgeworth box. Multi Market equilibrium- Production and exchange.

Existence, stability and uniqueness of equilibrium in multi- market analysis.

**MODULE-V:** - Linear Programming; Primal & Dual problems, Simplex method and Revised Simplex Method. Dynamic programming, transportation problem.

Non-linear programming- graphical method, Kuhn-Tucker conditions in non-negative constraints.

### **READING LIST**

1. Allen R G D (1968), “Mathematical Analysis for Economists”, McGraw Hill Publication, New York.
2. Chiang A. C. &Wainwright K. (2005), “Fundamental Methods of Mathematical Economics”, 4<sup>th</sup> Edition, McGraw Hill Publication.
3. Silberberg. E & Suen W. (2000), The Structure of Economics: A Mathematical Analysis, 3<sup>rd</sup> edition, Irwin McGraw Hill Publication, New York.
4. Henderson J.M. and Quandt R. E., (2006) Micro Economic Theory – A Mathematical Approach (6th Edition), Tata McGrawhill Publication, India .
5. Yamane T. (2012) Mathematics for Economists: An Elementary Survey, Literary Licensing.

6. Madnani G.M.K. & Mehata B.C. (2008), Mathematics for Economists, Sultan Chand & Sons.

**Or**

**CORE ELECTIVE-301**

**INDIAN ECONOMIC PROBLEMS & POLICIES**

**Course Outcomes**

Course	Outcomes
CO1	Knowledge on Indian economic problems relating to Poverty, unemployment, economic growth and development.
CO2	Knowledge on demographic features and indicators of Indian population. Develop awareness on causes of population explosion, its impact and suggestion to control.
CO3	Understand the process of Indian agriculture and its productivity issues. Enhance knowledge on how to facilitate optimum agricultural produce with healthy economic practices
CO4	Enhance knowledge on industrial policies, availability of industrialization process in terms of types, finance and interlinkage with agriculture in realizing economic growth.
CO5	Students will have the knowledge on Planning in India, NITI Aayog , Economic Reforms , New Economic Policy 1991 and Foreign Capital.

**MODULE-I Economic Growth and Development**

Economic growth and Development- Meaning, Factors affecting economic development in India

Poverty- Meaning, Types, Causes, Adverse Impact of Poverty and Various poverty alleviation programs in India.

Unemployment-Meaning, Types, Causes, Adverse Impact of unemployment and various employment generation programs in India.

## **MODULE-II Demographic features of Indian Population**

Broad Demographic indicators of Indian population- Birth Rate, Death Rate, Demographic Dividend, Literacy Rate, Sex Ratio, Life Expectancy and Density of Population.

Demographic Features of Indian Population, Theory of Demographic transition and its applicability in Indian context,

Population Explosion- Meaning, Causes, adverse impact and Suggestions to control.

## **MODULE-III Agricultural Development in India**

Indian Agriculture- Concept, Importance of Agriculture, Causes of low agricultural productivity in India.

Land Reforms- Meaning and Objectives, Measures of Land Reforms- Abolition of Intermediaries, Tenancy Reform, Ceiling on Land Holdings, Consolidation of land holdings, Co-operative Society.

Green Revolution- Meaning, Objectives, Positive impact and its limitation.

## **MODULE-IV Industrial Development in India**

Industrial sector- Importance of Industrialization in Economic Growth, Interlinkage between Agriculture and Industry. Industrial policies- Meaning and Objectives. Various Industrial Policies- 1948, 1956, 1977

and 1991. Types of Industries- Large Scale and Small Scale, Problems of Small Scale Industries, Industrial Finance.

### **MODULE-V Economic Planning and External Sector Reforms**

Planning in India- Objectives of planning, Achievements and Failures, NITI Aayog. Economic Reforms- Rationale for reforms. New Economic Policy 1991- Liberalization, Privatization and Globalization. Foreign Capital- Need and Importance of Foreign Capital, Types- Foreign Aid and Foreign Direct Investment (FDI).

### **READING LIST**

1. Misra S.K. & Puri V.K. (2020). Indian Economy. Himalaya Publishing House.
2. Datta & Sundharam. (2020). Indian Economy (73<sup>rd</sup> Edition). S. Chand Publishing House.
3. Dhar P.K. (2004) Indian Economy, Kalyani Publishers.
4. Dhingra I. C. (2018) Indian Economy, Environment & Policy, Sultan Chand & Sons.
5. Jalan B. (2000), The Indian Economy, Penguin Books Ltd.
6. Kapila U. (2005), Understanding the problems of Indian Economy, 6<sup>th</sup> edition, Academic Foundation.
7. Rangarajan C. (2000), Perspectives on Indian economy, USB Publishers Distributors Ltd.
8. Dalt, R (Ed) (2001) Second generation economic reforms in India, Deep & deep publication, New Delhi.
9. Bhagwati, J N and Srinivasan T N (1975), Foreign Trade Regimes and Economic development: India, Bureau of Economic Research.



10. Panagariya, Arvind (2008): India: the Emerging Giant, Oxford University Press, New York.
11. Swaminathan, M. (2010): The New Poverty Line: A Methodology Deeply Flawed, Indian Journal of Human Development, 4(1): 121-125.

**CORE ELECTIVE-302**

**ADVANCED ECONOMETRICS**

**COURSE OUTCOMES:**

At the end of course the student will be able to:

CO 1	Students will have the knowledge on Dummy variable models, Estimate LPM, Logit, Probit and Tobit models.
CO 2	Understand the Autoregressive and distributed lag models- Koyek's model, Adaptive expectation model, Instrumental Variables and Almon's approach to distributed lag models.
CO 3	Understand the basic concepts and methods of estimation of Simultaneous equations model, rules of Identification and its conditions.
CO 4	Understand various concepts of principal component analysis, factor analysis, model specification test like fixed effect model, random effect model etc.
CO 5	Understand application of econometric principles for cross sectional, panel and time series data sets.

### **Module I**

Dummy dependent variable models: Estimation using LPM, Logit.

Probit and Tobit models

Multivariate normal Probability distribution – its properties; Hotelling T distribution.

### **Module II**

Autoregressive and distributed lag models – Koyek's model, Partial Adjustment model.

Adaptive expectation model; Instrumental Variables.

Almon's approach to distributed lag models; Causality test – Granger test, Sim test.

**Module III** Simultaneous equations models – Introduction and examples; the simultaneous equation bias and inconsistency of OLS estimators. The Identification problem – Rules of identification – Order and rank conditions.

Methods of estimation of Simultaneous equation model – Recursive method, ILS, 2SLS. System method of estimation of Simultaneous equation models – 3SLS.

**Module IV** Discriminant Analysis, Principal Component Analysis. Factor Analysis, Cluster analysis, Panel data techniques – Fixed effect model, Random effect model, Random Coefficient model.

**Module V** Time Series Econometrics – Stationarity, Tests of Stationarity, Unit root, Spurious regression and co-integration. Dickey Fuller test, Augmented Dickey-Fuller test, Engle – Granger test, Random walk model. Forecasting with ARIMA model, Box- Jenkins methodology, Vector auto regression, Problems with VAR modeling – Applications.

**READING LIST:**

1. Johnston (1991), "Economic methods", McGraw Hill Book Co.
2. Kmenta J. (1997), Elements of Econometrics (Reprint) (1986), University of Michigan Press, McMillan Publication
3. Wooldridge, J. (2019), Introductory Econometrics- A Modern Approach, South-Western College Publishing.
4. Koutsoyiannis, A (1992), "Introduction to Econometrics", University Press.
5. Gujarati D.N. (1995), Basic Econometrics (2<sup>nd</sup> edition), Mc Grawhill, New Delhi
6. Maddala G.S.(Ed) (1993) Econometric Methods and Application (2vols) Aldershot
7. Greene, W.H. (2020), Econometric Analysis, 6<sup>th</sup> edition, Pearson Publication.

**Or**

**CORE ELECTIVE-302**

**ECONOMICS OF GENDER**

## Course Outcome

**At the end of course the student will be able to:**

CO 1	Understand mainstream of Gender in Economics -WAD, WID, GAD; Approaches to women empowerment; Gender needs and strategies-Approach of GDI and GEM.
CO 2	Knowledge on Land and property rights of women, process of feminization of agriculture, key gender issues influencing trends and practices.
CO 3	Work participation of women in developing countries with special reference to India.
CO 4	Access to Education &Health; Issues and challenges. opportunities and challenges of migration and its impact on Women empowerment
CO 5	Climate risk and women; gender dimensions of management of natural resources, Gender budgeting; Concept and approach, An assessment of Gender Budgeting with reference to India

### **Module-I Gender and Development:**

Concept and characteristics-patriarchy, caste and Kinship, impact on gender development, Gender in mainstream economics -WAD, WID, GAD; Approaches to women empowerment; Gender needs and strategies-Approach of GDI and GEM.

### **Module-II Demography, property rights and Gender Issues in Agriculture:**

Demographic components-Agestructure, sexratio, mortality and fertility rate.

Land and property rights of women; land reforms and concurrent provisions.

Feminization of agriculture, key gender issues influencing trends and practices of agricultural activities, livelihood opportunities and challenges in agriculture

### **Module-III Women and Employment:**

Participation of women in agricultural and non-agricultural activities; productive and unproductive, paid and unpaid.

Supply and demand for female labour in formal and informal sector; wage differential and wage discrimination-causes and implication.

Work participation of women in developing countries with special reference to India.

### **Module-IV Women and socio-economic status:**

Inclusive growth and economic development of women; Gender inequalities in income; Access to Education Health; Issues and challenges, ownership and access to technology and other financial services

Women empowerment: Role of Micro finance & SHGs; opportunities and challenges, Migration and its impact on women.

### **Module-V Environment and women:**

WED and eco feminism; climate change and women; Women and sustainable Economic development.

Climate risk and women; gender dimensions of management of natural resources

Gender budgeting; Concept and approach, An assessment of Gender Budgeting with reference to India.

### **READING LIST:**

1. Boserup, E. (1970): Women's role in Economic Development, George Allen and Unwin, London.
2. Seth, M. (2000): Women and Development: The Indian Experience, Sage Publications, New Delhi.
3. Jhabwala, R. and R. K. Subramanya (Eds) (2000): The Unorganized Sector: Work Security and Social protection, Sage Publications, New Delhi.
4. Venkateshwara, S. (1995): Environment, Development and Gender Gap, Sage Publications, New Delhi.
5. Mies, M. (1998): Patriarchy and Accumulation on a World Scale: Women in the International Division of labour, Zed Book, London.
6. Agarwal, B. (1994): A Field of One's Own: Gender and land right South Asia, Cambridge University Press.
7. ILO (1998): Women's Participation in the Economic Activity of Asian Countries, Geneva.
8. Ahmed, I. (Ed.) (1985): Technology and Rural Women: Conceptual and Empirical Issues, George Allen and Unwin, London.
9. Narasimhan, S. (1999): Empowering Women: An Alternative Strategy from Rural India, Sage Publications, New Delhi.
10. Chopra, Kanchan (2001): Women and Migration, Sage Publications, New Delhi.

**SEMESTER-IV**

**HARD CORE-401**

## **DEVELOPMENT ECONOMICS**

**Course outcome:**

**At the end of course the student will be able to:**

CO 1	Understand core values of development PQLI, HDI,HPI-1, HPI-2,GDI
CO 2	Understand the growth differentials among nations from classical to neo-classical and endogenous model.
CO 3	Understand growth models on Harrod-Domar, Solow, Kaldor, and Pasinetti etc. and golden rule of accumulation.
CO 4	Understand theoretical dissatisfaction with neo-classical approach to economic growth, models of Endogenous Growth, One sector growth model and two sector growth model etc.
CO 5	Understand growth accounting approach and its problems. Growth Accounting vs Sources of economic growth.

### **MODULE I: MEASURING ECONOMIC DEVELOPMENT**

Economic Growth and Economic Development, Concept and Measurement of development and development gap- GDP, Per-capita Income, Gini-Coefficient.

Human Development Indices-HDI, HPI-1, HPI-2, A critical analysis of the Human Development Index (HDI). Gender Development Index (GDI) and gender Empowerment Measure (GEM)

### **MODULE II: THEORIES OF DEVELOPMENT**

Classical theory of development- Contributions of Adam Smith, Ricardo, Malthus, Karl Marx. Development of capitalism and Marxian theory- Theory of social change, surplus value and profit. Crisis in capitalism- Schumpeter's theory of Innovation- Role of credit, profit and degeneration of capitalism

### **MODULE III: GROWTH MODELS- I**

Harrod-Domar model and the concept of knife-edge equilibrium, Neo-classical growth models- Meade, Joan Robinson, and Solow Cambridge criticism of neo-classical analysis of growth, capital controversy Kaldor and. Pasinetti, Golden Rule of Capital Accumulation.

#### **MODULE IV: GROWTH MODELS-II**

Theoretical dissatisfaction with neo-classical approach to economic growth, models of Endogenous Growth, One sector growth model- The AK model.

Learning by doing and knowledge spill-over, Romer's model of technical change.

Two sector growth model of Ujawa-Lucas.

#### **MODULE V: Growth Accounting**

Standard primal Growth Accounting, Dual approach to Growth Accounting and Problems with Growth Accounting. Total factor Productivity (TFP) growth, Growth Accounting vs Sources of economic growth. Factors affecting economic growth- Capital, labour and technology.

#### **READING LIST**

1. Barro R. J. and Xavier Sala-i-Martin (1992), Economic Growth, 2<sup>nd</sup> edition, the MIT Press.
2. Thirwal, A.P.(2007), Growth and Development, Palgrave Macmillan.
3. Todaro, M.P & Smith, S.C. (2015), Economic Development, 12<sup>th</sup> edition, Pearson Publication.
4. Taneja M.L. & Meir R. M., Economics of Development & Planning, Vishal Publishing Co.
5. Todaro, M P. (2017), Economic Development. Pearson Publication, India
6. Johns,C. I. (2013), Introduction to Economic Growth, W.W Norton
7. Meier, G.M & Baldwin, R.E. (1976), Development: Theory, History, Policy, R.E.Krieger Publishing Company.



8. Lekhi, R.K. & Singh, J.(2018), The economics of Development & Planning, Kalyani Publisher
9. H.G. Jones (1976), An Introduction to Modern theories of Economic Growth, McGrawhill Publication, NewYork
- 10.Higgins B. (1968), Economic Development, W.W Norton & Co.

**HARD CORE-402**

**ECONOMICS OF ENVIRONMENT  
COURSE OUTCOMES**

**At the end of course the student will be able to:**

CO 1	Understand the inter linkage between environment and economy, cost of pollution, measurement of environmental values and Government policy on environmental protection.
CO 2	Gets a comprehensive introduction to the economic analysis of issues arising from the interactions between the natural environment and the human economy.
Co3	Understand and evaluate the environmental values and government policy on environmental protection.
CO 4	Enhance knowledge on management of common property resources.
CO 5	Acquire values and attitudes towards environmental challenges and protective mechanisms.

**MODULE-I Economy and Environment:**

The historical perspectives of environmental economics - Early economic paradigms and the environment, Post war economics and the rise of environmentalism. Environmental Economics: Definition and Development of the subject as a separate branch of study; Resource Economics vs. Environmental Economics, Economy and Environment inter linkages. Sustainable Development-concept, Sustainable economic growth and development, and the laws other dynamics.

**MODULE-II -Basic Environmental Issues:**

Concept of market failure - Environment Degradation as Market Failure; Environmental Quality as Public Goods.

The optimal level of pollution, Pollution as externality, alternative definitions of pollution, The market achievement and optimal pollution.

Externality: Environmental damage as negative externality, Solution of Market Failure: Pigouvian taxes and subsidies, Coase's bargaining solution and collective action.

### **MODULE-III Measurement of Environmental Values:**

Meaning of environmental valuation, the uses of economic value, Total economic value, Option value, Existence value.

Use Value- Present use value and future use value, Non-use values- bequest value and existence value, Total economic value and decision-making.

Direct and Indirect Valuation of Environmental Goods: The hedonic price approach, Contingent valuation methods, Travel cost approach, Willingness to pay vs. Willingness to accept.

### **MODULE-IV Economics of Natural Resources:**

Natural Resources- Meaning, Types- Renewable Resources and Non-Renewable Resources (examples), Environmental Kuznet Curve and its limitations.

Renewable Resources: Optimal management, Common Property and Open Access—Tragedy of Commons. Non-renewable Resources - Economic Issues relating to use of Non-renewable Resources.

Renewable Resources: Management of common property resources -People's participation in the management of common and forest lands ; The institutions of joint forest management and the joint protected area management; Social forestry – rationale and benefits.

### **MODULE-V Environmental Challenges and its Protection Mechanism**

Climate Change-Meaning and causes of Climate Change, adverse impact of climate change on economic growth and development; Sources and types of pollution, Policy instruments for controlling water and air pollution.

Evolution of Environmental Policy in India: Air act, Water act, Pollution Control Policy; Threats to Bio-diversity- Conservation policy of Bhitarkanika National park, Similipal National Park.

Environmental Issues in the Global Context: Green House Gases(GHG)and Ozone depletion, Montreal protocol, GATT &Environment.

### **REFERENCE BOOKS**

1. Kolstad, Charles D.(2010) 'Environmental Economics', 2nd Edition. Oxford University Press
2. Bhattacharya, R.(2001) 'Environmental Economics: An Indian Perspective', Oxford University Press
3. Shankar, U, "Environmental Economics", Oxford University Press.
4. Baumol W.J. and Oates W.E. (1988), The Theory of Environmental Policy (2<sup>nd</sup> Edition) Cambridge University Press, Cambridge.
5. Bromley, D.W.(Ed) (1995), Handbook of Environmental Economics, Blackwell,
6. Ostrom Elinor (1997) 'Governing the Commons; The Evolution of Institutions for Collective Action, Cambridge University, Cambridge.
7. Hussen A.M. (1999) Principles of Environmental Economics, Routledge, London.
8. Fisher, A. C. (1981). Resource and Environmental Economics, Cambridge University press Cambridge.
9. Pearce D.W. and. Turner R. (1991), Economics of Natural Resource Use and Environment, John Hopkins University Press, Baltimore.

10. Perman, R. Ma, Y. et al. (1996) Natural Resources and Environmental Economics, Longman, London.
11. Tietenberg, T. (1994). Environmental Economics and Policy, HarperCollins New York.

**HARD CORE-403**

**DISSERTATION**

**Course Outcome:**

CO 1	Plan and engage in an independent and sustained critical investigation and evaluation of a chosen research topic relevant to environment and society.
CO 2	Engage in systematic discovery and critical review of appropriate and relevant information sources.
CO 3	Understand and apply ethical standards of conduct in the collection of data process.
CO 4	Appropriately apply qualitative and/or quantitative evaluation process to original data.
CO 5	Communicate research concepts and contexts clearly and effectively in both writing and orally.

**CORE ELECTIVE-401**

## **ECONOMICS OF SOCIAL SECTOR**

### **Course Objectives:**

CO 1	Enhance knowledge on significance and performance of social sectors in India.
CO 2	Knowledge on concepts and determinants of Educational sector, its progress and influences.
CO 3	Enhance knowledge on Health services and its facilities.
CO 4	Enhance awareness on availability of health hospitalities and its beneficiary.
CO 5	Understand about environment, economic development and social sector dimensions.

### **MODULE-1: Introduction to Economics of Education**

Education as an instrument for economic growth, Human Capital vs Physical Capital, Components of Human capital.

Economics of Education: definition, methods, evidence and policy, Private demand and social demand for education.

Classical Economist and Education; Human Capital: historic root, uses, sources, values, investment in human capital.

### **MODULE-2: Investment in Education**

Education-Determinants of demand for education, Cost of education- direct and indirect expenditure on education, Private costs and social costs, wastage and stagnation. Benefits of education – Direct and indirect benefits, Private and social benefits, Returns to education: meaning, type, estimation. Education production function: concept, estimation, role in policy analysis.

### **MODULE-3: Demand for Health and Health Care Services**

Demand for Health and Healthcare: concept and determinants of Demand for Health and Healthcare services. Non-Economic determinants of the demand for medical care, Market demand for health care and Fuzzy Demand Curve. Investment in health as a form of human capital, Grossman's investment Model of Health and its critic.

### **MODULE-4: Supply for Health and Health Care Services**

Supply for Health and Healthcare: concept and determinants of supply for Health and Healthcare services. Hospital as a supplier of medical care, Hospitals and patients-a model of equilibrium quality and price. Health Production: Concept and Estimation; Health and Development: Theory and Evidences.

### **MODULE-5: Overview of India's Health sector**

India's Health sector-history, structure, programmes, infrastructure and health information system. Healthcare system in India: Public health in India, Features of Indian Health sector. Health sector reform in India.

### **READING LIST**

1. Elchanan C. (1972): The Economics of Education, Lexington Books, D.C. Health and company, Lexington.
2. Blaug, M. (1970): An Introduction to the Economics of Education, Allen Lane The Penguin Press, London.
3. Zweifel, P., Breyer, F. and Kifmann, M. (2009): Health Economics, Springer-Verlag Berlin Heidelberg.
4. Folland, S., Goodman, A.C., Stano, M. (2017), The Economics of Health and Health Care, 8th edition, Routledge Publication.

5. Johnson, S., Lans(2006), A Health Economics Primer: Addison Wesley series in Economics, Person publication.
6. Santerre, R.E. &Neun, S.P.(2010), Health Economics-Theories, Insights and Industry Studies; 5th edition, South-Western Cengage Learning.
7. Crones R., Sandler, T. (1996), The theories of Externalities, Public Goods, and Club Goods, Cambridge University Press.
8. Vaizey, J. (1962), TheEconomics of Education, Faber and Faber Publication, London.
9. Wood hall, M.(2004), Cost-Benefit Analysis in Educational Planning, UNESCO –IIEP.

**ALLIED CORE-401**

**“WOMEN AND SOCIETY”**

**Mark-50(15=35), Credit-3, Time- 1 hour 30 mts.**

**Course Outcomes**



At the end of course the student will be able to:

Course	Outcomes
CO1	Understand the social construction of gender in Indian society, Gender roles and gender stereotyping.
CO2	Understand women and religion and religious conceptualisation of women.
CO3	Acquire knowledge on issues and provisions undertaken for upliftment of status of women.

### **UNIT I**

Social Construction of Gender: Sex and Gender- Nature versus Culture, Equality versus Differences- Gender Roles, Gender stereotyping.

Women and Religion: womens as repositories of cultural practices and traditions- Sexual division of labour-, Public- Private Dichotomy- Religious conceptualization of women.

### **UNIT-II**

Social Structures: Kinship- Forms of Family and Household- Institutions of Marriage and Divorce, Politics of reproduction, Dowry, Property Rights- Class/Caste: hierarchy, difference and mobility;

Contemporary Debates: Indian women: IdentityCo1 and Illusion- Representation and Issues of marginalized women- Violence, victimhood and agency Empowerment.

### **UNIT-III**

Changing Status of Women in India: Women in Ancient and Pre Colonial India- Women in Colonial in India- Women in colonial period: Women's participation in

the freedom movement and women's organization- Women in Post-Colonial India: Towards Equality Report, Sharamshakti Report.

### **Reading List**

1. Altekar, A.S. (2005). The Position of Women in Hindu Civilization, from Prehistoric Times to the Present Day.
2. Barnett, Ola, Miller-Perrin, Cindy,L. Perrin, Robbin D. (2005). Family Violence across the Life Span; An Introduction. Second edition. New Delhi: Sage Publication.
3. Baruah, S.L. (Ed.) (1992). Status of women in Assam: with special reference to Non-tribal societies. New Delhi:Omsons Publications.
4. Beteille,Andre.(1996) Caste, class and power: Changing patterns of satisfaction in a Tanjore Village. Delhi: Oxford University Press.