

# **GURU NANAK COLLEGE (AUTONOMOUS)**

(Affiliated to University of Madras and Re-Accredited at 'A' Grade by NAAC)

Guru Nanak Salai, Velachery, Chennai – 600042.



## **M.A. Economics**

(SEMESTER PATTERN WITH CHOICE BASED CREDIT SYSTEM)

## **P.G. Syllabus**

(For the candidates admitted in the Academic year 2022 - 23 and thereafter)

## **PREAMBLE OF THE PROGRAMME**

Economics is the study of how individuals, groups, and nations manage and use resources. Economics can be divided into microeconomics, which examines individual decisions and macroeconomics, which is concerned with the economy as a whole. Both types of economics utilize historical trends and current conditions to inform business decision-making and make predictions of how markets will behave in the future. The study of Economics is important because students who choose to study economics not only gain the skills needed to understand complex markets but come away with strong analytical and problem-solving skills, as well as the business acumen necessary to succeed in the professional world. In fact, economics can be useful for professionals in all industries and aspects of daily life, not just in business.

Economics is one of the evergreen subjects because of its high utility and huge demand in the job markets. It is also an important discipline both for a career as well as a job point of view. Job opportunities are increased because of globalization and after the merging of the world economy. A well-trained economist has a high demand not only in India but also across the world. Because of the rapidly globalizing economic scenario. The big business organization is hired as financial analysts, researchers, and consultants.

On the whole, students will be able to evaluate macroeconomic policies including fiscal, monetary and international trade to maintain stability and analyse different environmental policies to reduce global warming, improve sustainable development and Green GDP. Also, analyse central and state budgets and plans to maintain strong and healthy fiscal federalism and pave the way to improve the economic growth and development of the country.

The main aim of the study will enable the students to

- Demonstrate knowledge of the major concepts, historical and theoretical perspectives, and empirical findings in microeconomics and macroeconomics.
- Demonstrate ability to apply economic principles and theories to a range of economic and social problems and issues.
- Understand and apply basic research methods in economics, including data analysis and reporting.
- Use critical and creative thinking skills and hone communication skills.

# **LEARNING OUTCOME BASED CURRICULUM FRAMEWORK**

From the Academic Year (2021- 22) and there after

## **VISION**

1. To uphold high standards of academic excellence in teaching and research.
2. To grow to gain wide-spread recognition for Post-Graduate and Ph.D. programmes.
3. To promote academic activities like research, internships, training, etc.
4. To organize International/National Seminar/Workshop programmes to facilitate interaction with academicians and experts.
5. To focus on a set of skills relevant to strengthening students' competency to gain employment.

## **MISSION**

1. To provide students with a strong theoretical foundation in Economics.
2. To train and equip students with the requisite skills to carry out Applied Economics Research.
3. To promote experiential learning through the application of knowledge to new challenges.
4. To provide the social capital necessary for establishing a healthy society by instilling values, ethics and confidence in young minds.
5. To provide students with a strong foundation in economic theory, strengthened by critical thinking and sharp analytical skills required for policy analysts.

## **PROGRAMME OUTCOMES**

### **M.A. ECONOMICS**

1. To analyse different economic and environmental problems and provide solutions to improve our Green Growth.
2. To critically analyse Classical, Keynesian and modern economic approach to solve all macroeconomic problems.
3. To develop employability and research skills identify more socio-economic problems and provide solutions through several research activities.
4. To find out different ways by which improve the contribution of women in economic development.
5. To maintain stability in exchange rate, and to improve the Balance of payment position, analyse different international trade policies and the contribution of International Organisation.

## **PROGRAMME SPECIFIC OUTCOME**

### **M.A. ECONOMICS**

1. To evaluate macroeconomic policies including fiscal, monetary and international trade to maintain stability and analyse different environmental policies to reduce global warming, improve sustainable development and Green GDP.
2. Analyse central and state budget and plans to maintain strong and healthy fiscal federalism and improve the contribution of women in India's economic development.

**M.A. ECONOMICS COURSE STRUCTURE - 2021 - 22 Batch**

Semester	Part	Course Component	Subject Name	Credits	Hours	Internal	External	Total
Semester - I	I	Core – I	Micro Economics – I	4	6	50	50	100
	I	Core – II	Indian Economic Development - I	4	6	50	50	100
	I	Core – III	Research Methodology	4	6	50	50	100
	II	Elective – I	Energy Economics	3	6	50	50	100
	II	Elective – II	Mathematics for Economists - I	3	6	50	50	100
	IV	Soft Skills – I	Personality Enrichment	2			100	100
<b>Total Credits -20, Total Hours/ week-30</b>								
Semester- II	I	Core – IV	Micro Economics - II	4	6	50	50	100
	I	Core – V	Indian Economic Development - II	4	6	50	50	100
	I	Core – VI	Statistics for Economists	4	6	50	50	100
	II	Elective – III	Mathematics for Economists - II	3	6	50	50	100
	III	Extra Disciplinary – I	Environmental Economics	3	6	50	50	100
	IV	Soft Skills – II	Work Place Communication Skills	2			100	100
<b>Total Credits -20, Total Hours/ week-30</b>								
Semester- III	I	Core – VII	Macro Economics - I	4	6	50	50	100
	I	Core – VIII	Public Economics – I	4	6	50	50	100
	I	Core – IX	International Economics - I	4	6	50	50	100
	II	Elective – IV	Economics of Development	4	6	50	50	100
	III	Extra Disciplinary – II	Gender Economics	3	6	50	50	100
	IV	Soft Skills – III	Soft Skills – III	2			100	100
	IV	Internship	Internship	2			100	100
<b>Total Credits -23, Total Hours/ week-30</b>								
Semester- IV	I	Core – X	Macro Economics – II	4	6	50	50	100
	I	Core – XI	Public Economics – II	4	6	50	50	100
	I	Core – XII	International Economics – II	4	6	50	50	100
	I	Core – XIII	Monetary Economics	4	6	50	50	100
	II	Core-XIV & XV	<b>Project Work</b>	6	2		100	100
	II	Elective – V	Computer Application for Economics	4	4	50	50	100
	II	Soft Skills – IV	Soft Skills – IV	2			100	100
<b>Total Credits -28, Total Hours/ week-30</b>								
<b>Grand Total Credits -91, Total Hours/ week-120</b>								

# **SEMESTER – I**

**CORE THEORY - I**  
**MICRO ECONOMICS – I**

<b>SUBJECT CODE:</b> <b>19PECO301</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: I</b>	<b>CREDITS: 4</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To understand and evaluate modern utility demand theories.*

**Course Outcome:**

On completion of the course the students will be able

1. To evaluate modern utility demand theories.
2. Critically analyse Cobb-Douglas production function and apply it in finding returns to scale.
3. Examine different traditional and modern theories of costs.
4. Critically analyse the equilibrium of perfect competition and monopoly market structures.
5. To Demonstrate and analyse monopolistic and oligopoly market structures.

**UNIT I: Advances in Demand Theory**

**(18 Hrs.)**

Modern utility analysis of choices involving risk or uncertainty – Bernoulli, Neumann Morgenstern, Friedman Savage and Markowitz Hypotheses-Revealed preference theory and derivation of demand-indifference curve-Hick’s revision of demand theory-Logical ordering-Recent developments in demand theory.

**UNIT II: Theory of Production**

**(18 Hrs.)**

The production Function – Production Function – short and long run – Relation between returns to scale and returns to factor – Cobb-Douglas and CES Production Functions –Single and Multi-product Firms.

**UNIT III: Theory of Costs**

**(18 Hrs.)**

Total Revenue, Marginal Revenue. Cost Functions – The Traditional Theory of Cost: Short- Run Costs; Long-Run Costs-‘The Envelope Curve’ – Modern Theory of Costs: Short- Run Costs; Long-Run Costs-‘The L-Shaped’ Scale Curve – The Relevance of the Shape of Cost Curvesin Decision-making.

**UNIT IV: Theory of The Firm: Perfect Competition/ Monopoly**

**(18 Hrs.)**

Market Structure – Perfect Competition – Assumptions – Short-Run Equilibrium – Long-Run Equilibrium – Dynamic Changes and Industry Equilibrium. Definition – Demand and Revenue – Equilibrium of the Monopolists: Short-Run Equilibrium – Long-Run Equilibrium – Comparison of Pure Competition and Monopoly – the Multi-plant Firm – Bilateral Monopoly – Price Discrimination.

**UNIT V: Theory of The Firm: Monopolistic Competition and Oligopoly**

**(18 Hrs.)**

Monopolistic Competition – Equilibrium of the Firm – Excess Capacity – Selling Cost – Comparisonwith Pure Competition. Oligopoly: Non-Collusive Oligopoly – Cournot; The Kinked-Demand and Stackelberg Models. Collusive Oligopoly – Cartels – Price leadership.

**Recommended Text:**

1. Koutsoyiannis. A.: Modern Microeconomics 2<sup>nd</sup> edition, Macmillan
2. Hal. R. Varian: Intermediate Micro Economics- Modern Approach, 4<sup>th</sup>edn, W.W. Narton& Company.
3. Salvatore – Micro Economics, 4/e, Oxford University Press, New Delhi, 2002.
4. Dewett.K.K – Micro Economics.
5. Jhingan M.L. and C.Murthy Micro Economics, Vrindha Publication, New Delhi, 2016.
6. W.J.Baumol and Alan Blinder – Micro Economics, Newyork University.

**Reference Books:**

1. Jehle, G. and P. Reny (2001): Advanced Microeconomic Theory, Addison Wesley
2. Mas-Collel, A., M. Whinston and J. Green (1995): Microeconomic Theory, 2nd ed. Oxford University Press
3. Karl E. Case and Ray C. Fair, Principles of Economics, Pearson Education, Inc., 8th 4. edition, 2007.
4. 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.
5. Joseph E. Stiglitz and Carl E. Walsh, Economics, W.W. Norton & Company, Inc., New York, International Student Edition, 4th edition, 2007.

**Web References:**

1. <https://www.khanacademy.org/economics-finance-domain/ap-microeconomics/basic-economic-concepts>
2. <https://www.cliffsnotes.com/study-guides/economics/introduction/economic-policy>

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

<b>Sections</b>	<b>UNITs</b>	<b>No. of Questions</b>	
		<b>Theory</b>	<b>Problems</b>
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	



**CORE THEORY - II**  
**INDIAN ECONOMIC DEVELOPMENT AND POLICY – I**

<b>SUBJECT CODE:</b> <b>19PECO302</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: I</b>	<b>CREDITS: 4</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To understand economic development environmental degradation in India.*

**Course Outcome:**

On completion of the course the students will be able

1. To analyse economic development environmental degradation in India.
2. Differentiate centralized and decentralized planning.
3. To analyse different Indian plan models such as Mohalanobis, input and output and multi-sectoral models.
4. To measure National income and GDP by different methods and analyse Indian Trade policies.
5. To provide solutions to reduce poverty and unemployment in Indian economy.

**UNIT I: Resource Development in India**

**(18 Hrs.)**

Resource profile of India – Policies relating to the development of land, forest, water, fisheries and mineral resources – Economic development and Environmental degradation – Land degradation and Soil erosion – deforestation – faulty utilization of water resources

**UNIT II: Planning**

**(18 Hrs.)**

Plan Concepts-Indian Planning-concept of mixed economy, objectives of planning, perspective planning - Decentralised planning – indicative Planning – District Planning – Local Planning - Indian plan models: Mahalanobis, and Input – Output, Multi – sectoral models, minimum needs - evaluation and appraisal of five years plans

**UNIT III: National Income**

**(18 Hrs.)**

Concept and measurement of National Income-Trend in National Income - Sectoral contribution to GDP since Independence-Real Vs. Nominal-Measurement of Inflation-Inflationary Trend in India Concepts of Money supply-M1, M2, M3, and M4; L1,L2 and L3.

**UNIT IV: Poverty and Unemployment (18 Hrs.)**

Poverty - Measurement of poverty Line –Poverty Trend in India Regional disparities in incidence of poverty-Planning for Poverty Eradication-Public Policies Relating to Income and Asset Distribution – Concept and measurement employment and unemployment; Rural Vs urban employment-nonfarm employment-migration issues

**UNIT V: Trade Policies**

**(18 Hrs.)**

Trade policies: import substitution and export promotion – Recent Policies Changes - Technology Transfer – Reforms in Exchange Rates - role of foreign capital – Foreign Direct Investment (FDI) and Its Implications on Indian Economy.

**Reference Books:**

1. Indian Economy: performance and policies – Uma Kapila
2. India Economy since Independence – Uma Kapila
3. Ruddar Dutt and KPM. Sundharam: Indian Economy

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

Sections	UNITs	No. of Questions	
		Theory	Problems
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT - 5	1	

**CORE THEORY - III  
RESEARCH METHODOLOGY**

<b>SUBJECT CODE: 19PECO303</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: I</b>	<b>CREDITS: 4</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To familiarize the students in nature and scope and methods in research.*

**Course Outcome:**

On completion of the course the students will be able

1. To demonstrate nature and scope of social research.
2. To identify the research problem and to formulate research hypotheses and research design.
3. To analyse different techniques of data collection.
4. To analyse data by applying different techniques.
5. To demonstrate research presentation with diagrams and references.

**UNIT I: Introduction to Research Methodology (18 Hrs.)**

**Meaning and Objectives of Research** - importance, applications and limitations of social science research - An overview of the different steps in research process - Selection of the topic and formulation of the research problem in Economics - Research Design: Pure, Applied, Action and Evaluation Research - Meaning of methodology.

**UNIT II: Research Method (18 Hrs.)**

**Sampling Design:** Probability and non-Probability Sampling - **Sources of Data:** Primary and Secondary Sources - Methods of Data Collection: Census and Sample Survey - Data Collection Instruments: Observation, Interview, Schedules and Questionnaires.

**UNIT III: Analysis of Data (18 Hrs.)**

**Analysis of data:** Meaning, elements and types of Analysis - Editing, Processing, Consolidation and Tabulation Application of Techniques – **Measurement Scales and Scaling Techniques:** Meaning, classification and importance of scaling technique

**UNIT IV: Testing of Hypothesis (18 Hrs.)**

**Testing of hypothesis** – Procedure for testing hypothesis - one tailed and two tailed tests – Basics of the important parametric and non-parametric tests (Z test, t-test, F-test, Chi Square Chi Square, ( $\chi^2$ ) test and ANOVA) - Basic awareness of SPSS.

**UNIT V: Interpretation and preparation of the report (18Hrs.)**

**Interpretation and Research presentation:** Objectives of presentation of report and Methods of Report Writing and Presentation of report - Essential of a Good Report – Problems – Guidelines - Style and Mechanics of Writing Research Reports – Types of Research Reports - Structure of Research Report – Appendices – Footnote - Bibliography.

**Recommended Text:**

1. Goode, W.J. (1952) and Hatt, P.K.: Method in social Research, McGraw-Hill.
2. Kothari. C.R. (2005) Research Methodology: Methods and Techniques, Wiley Eastern limited, New Delhi.
3. C. Murthy (2010): Research Methodology, Vrindha Publication, New Delhi

**Reference Books:**

1. Cochran W.G (1963): Sampling Techniques (Second Edition) JohnWiley & sons.
2. Donald R.Cooper : Business-Research Methods, Tata McGraw Hill New Delhi
3. Forces and Bircher (1973): Social Research Methods. Prentice Hall Inc.
4. Hicks, J.R. (1979): Casualty in Economics.
5. Basil Blackwell. Kiplinger: Foundations of Behavioral Research.
6. Kurien, C.T. (ed) (1973): A guide to Research in Economics, Sangam Publishing
7. Murthy, M.N (1967): Sampling Theory and Methods. Statistical Publishing Society.
8. Young, P (1966): Scientific Social Surveys and Research, Prentice Hall.

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

Sections	UNITs	No. of Questions	
		Theory	Problems
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT - 5	1	

**ELECTIVE – I**  
**ENERGY ECONOMICS**

<b>SUBJECT CODE:</b> <b>19PECO304</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: I</b>	<b>CREDITS: 3</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*This paper enables the students to understand the basics of energy economics and to solve the problems of energy and environmental issues.*

**Course Outcome:**

On completion of the course the students will be able

1. To analyse different energy resources and their role in Economic development.
2. To examine and compare the intensity and elasticity of energy in National and International level.
3. Critically analyse the problem of energy crisis and environmental degradation.
4. To apply different methods of energy conservation and energy management to promote
5. sustainable development.
6. To analyse India's energy profile and find solutions to the energy crises.

**UNIT – I: Introduction to Energy Economics (18 Hrs.)**

Natural Resources – classification – importance – Role of Natural Resources in Economic Development – Energy Resources – Types and classification – Properties of Energy – Forms of Energy – Emergence of Energy Economics – Its nature and scope – Energy indicators – Energy Economics relation with other branches.

**UNIT – II: Energy and Development (18 Hrs.)**

Role of Energy in Economic Development – Energy Intensity and Energy Elasticity – National and International comparison – Low-, Middle- and High-Income Economies – Role of International Institutions – OPEC, OAPEC, IEA, and World Bank.

**UNIT – III: Energy and Environment (18 Hrs.)**

Energy Crisis causes, consequences – Remedial measures – Environmental Crisis – causes, consequences, remedial measures – Impact of Energy Consumption and Production on Environment with illustrations – Role of Energy and Environmental Economists in solving Energy and Environmental Crisis.

**UNIT – IV: Energy Conservation and Energy Management (18 Hrs.)**

Energy Planning and Energy Conservation: Meaning, objectives and importance – Energy Management – Meaning, Objectives and Importance – Recent Developments – Energy Auditing – Energy Accounting – Energy Pricing and Taxes – Role of Economists in Promoting Sustainable Energy Management. M.A. Economics: Syllabus (CBCS).

**UNIT – V: India’s Energy Profile****(18 Hrs.)**

Indian Energy Sector – Organizational Structure – Energy Supply (Coal, Lignite, Oil, Gas and Powers – Hydro, Nuclear, Thermal) – Energy Demand (Agriculture, Industry, Transport, Domestic, etc) Renewable Energy Sources and Technology (Solar, Wind, Biogas, Biomass, Geothermal, OTEC, Tidal, Wave Hydrogen, Fuel Cell, Bio-diesel) – Renewable Energy Programs – Energy under Five Year plans – Energy issues and policy options for India.

**Recommended Text:**

1. Agarwal, M.C. and Monga, J.R. – Economic and Commercial Geography, (National Publishing House, New Delhi, 1992).
2. Agarwal, S.K. – Environment and Natural Resources Economics (Scott Foresman & Co., London, 1985).
3. Common, M. – Environmental and Resource Economics (Longman, London, 1996).
4. David Pearct et al – Sustainable Development – Economics and Environment in the Third World (Earths Can Publications, London, 1990).

**Reference Books:**

1. Charles D. Kolstad (2003), Environmental Economics, Oxford University Press, New York.
2. Nick Hanley, Jason F. Shogren and Ben White (1999), Environmental Economics: In Theory and Practice, Macmillan India Limited, New Delhi.
3. Barry C. Field (1997), Environmental Economics: An Introduction, McGraw-Hill Companies, Singapore.
4. UlaganathanSankar (2008), Environmental Economics, Oxford University Press, New Delhi.
5. Rabindra N. Bhattacharya (2005), Environmental Economics: An Indian Perspective, Oxford University Press, New Delhi.
6. Katar Singh and Anil Shishodia (2007), Environmental Economics: Theory and Applications, Sage Publications, New Delhi.
7. Subhashini Muthukrishnan (2010), Economics of Environment, PHI Learning Private Limited, New Delhi.
8. Jhingan, M.L. and Chandar K. Sharma (2007), Environmental Economics: Theory, Management and Policy, Vrinda Publications (P) Ltd., Delhi.
9. A. Jonathan Lesser, Daniel E. Dodds and Richard O. Zerbe Jr. (1997), Environmental Economics and Policy, Addison-Wesley Ltd., New York.
10. Anil Markandya and Julie Richardson (eds.) (1992), the Earthscan Reader in Environmental Economics, Earthscan Publications Ltd., London.
11. M.V. Joshi (2001), Theories and Approaches of Environmental Economics, Atlantic Publishers and Distributors, New Delhi.

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

<b>Sections</b>	<b>UNITs</b>	<b>No. of Questions</b>	
		<b>Theory</b>	<b>Problems</b>
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT - 5	1	

**ELECTIVE – II**  
**MATHEMATICS FOR ECONOMISTS – I**

<b>SUBJECT CODE:</b> <b>19PECO305</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: I</b>	<b>CREDITS: 3</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To familiarize the students in mathematical models with solved application.*

**Course Outcome:**

On completion of the course the students will be able

1. To apply set theory in economics.
2. To demonstrate the applicability of straight line, parabola and rectangular hyperbola.
3. To differentiate convex and concave functions, logarithmic and exponential functions.
4. To apply different techniques of differentiation.
5. To demonstrate the applicability of potential derivations-maxima and minima.

**UNIT I: Set Theory and Economics**

**(18 Hrs.)**

Set Theory: Concept of Sets and notation for Sets – Relations between Sets - Operation on sets and Laws of set Operations - The real-number system - Properties of real numbers - solutions of Quadratic equations - Solutions of Linear Equations in two variables.

**UNIT II: Relations and Functions**

**(18 Hrs.)**

Relations and Functions: Functions of one variable - straight line, parabola, rectangular hyperbola Exponential and logarithmic functions. Concave and Convex functions - Indifference, Iso-quant and Transformation Curves - Application in business Economics.

**UNIT III: Introduction to Simple Derivatives**

**(18 Hrs.)**

Derivatives and their interpretation - Concept of Limit - techniques of derivatives – Derivative and slope of a curve – Continuity and differentiability of a function - Relationships among Total, Average and Marginal Revenue and Cost - Elasticity of Functions - Conditions for Extremum of Functions of one variable and Functions of two variable.

**UNIT IV: Applications of differential calculus**

**(18 Hrs.)**

Applications of differential calculus - Rules of differentiation for a function of one variable – Differentiation involving two functions of the same variable and different variable - Partial differentiation: First and Second-order partial derivatives - Total differentials and total derivatives - Derivatives of implicit function and explicit functions

**UNIT V: Differentiation and its applications in Economics**

**(18 Hrs.)**

Unconstrained optimization: functions with two variables - Economic objectives of optimization – maxima and minima: identifying maxima and minima turning points – Maximum Total Revenue – Maximum Profit - Minimum Average Cost – Average and Marginal product of Labour - Properties of Homogenous Functions – Uses of Homogenous Functions in Economics.



**Recommended Text:**

1. Edward. T. Dowling: Mathematics for Economists, McGraw – Hill Book Company.
2. Mehta V.L. & Madnani: Mathematics for Economists, Sultan Chand and Sons.

**Reference Books:**

1. Allen R.G.D. :Mathematical Analysis for Economists, Macmillan and Company Limited, London.
2. Chiang A.C. : Fundamental Methods of Mathematical Economics, Mcgraw – Hill Book Company.
3. Stafford.L.W.T. :Mathematics for Economist, The English Language Book Society and Macdonald and Evans Limited, London.
4. Mabett. A.J. :Mathematics for Economists, Macmillan Master Series.
5. Weber : Mathematics for Economists.
6. K. Sydsaeter and P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi, 2002.
7. Monga, G.S. Mathematics and Statistics for Economists, Vikas Publishing House, New Delhi, 1972.

**Journals:**

1. Journal of Applied Mathematics
2. Journal of Mathematical Economics

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

<b>Sections</b>	<b>UNIT</b>	<b>No. of Questions</b>	
		<b>Theory</b>	<b>Problems</b>
<b>Section A</b>	UNIT – 1	1	1
	UNIT – 2	2	1
	UNIT – 3	1	1
	UNIT – 4	2	1
	UNIT – 5	1	1
<b>Section B</b>	UNIT – 1	1	
	UNIT – 2	1	1
	UNIT – 3	1	1
	UNIT – 4	1	1
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	0	
	UNIT – 2	0	1
	UNIT – 3	1	1
	UNIT – 4	0	1
	UNIT – 5	1	1

# **SEMESTER - II**

**CORE THEORY – IV**  
**MICRO ECONOMICS – II**

<b>SUBJECT CODE:</b> <b>19PECO306</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: II</b>	<b>CREDITS: 4</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To understand the students to analyze different modern theories of firm.*

**Course Outcome:**

On completion of the course the students will be able

1. To analyse different modern theories of firm.
2. To Critically analyse different distribution theories such as Ricardo, Carl Marx, Kaldor, marginal
3. productivity theory etc,
4. To examine economics of information and finding solutions for asymmetric information.
5. To evaluate two sector model of general equilibrium theory.
6. To analyse Kaldor-Hicks-Compensation criterion and Bengon Criterion.

**UNIT I: Modern Theories of the Firm**

**(18 Hrs.)**

Baumol's Theory of Sales Revenue Maximisation – Marris 's Model of the Managerial Enterprise – O. Williamsons's Model of Managerial Discretion – the Behavioural model of Cyert and March.

**UNIT II: Distribution Theories**

**(18 Hrs.)**

Macro theories of distribution – Ricardian, Marxian, Kalecki and Kaldor's – Marginal productivity theory – Product Exhaustion theorem – Elasticity of Technical Substitution – Theory of distribution in imperfect product and factors markets – Determination of wages, interest and profit

**UNIT III: Economics of Information**

**(18 Hrs.)**

Economics of Information- Moral hazard problem, adverse selection, principal agent problem, implications of asymmetric information, market signaling, hidden information modeling, efficiency wage model, information and insurance.

**UNIT IV: General Equilibrium Theory**

**(18 Hrs.)**

Two Sector Model of General Equilibrium: Assumptions – Static Properties of a General Equilibrium State – General Equilibrium and the Allocation of Resources and Money.

**UNIT V: Welfare Economics**

**(18 Hrs.)**

Criteria of Social Welfare: The Pareto-Optimality Criterion – The Kaldor-Hicks 'Compensation Criterion' – the Bergson Criterion 'Social Welfare Function' – Maximisation of Social Welfare.

**Recommended Text:**

1. Koutsoyiannis. A. : Modern Microeconomics 2<sup>nd</sup> edition, Macmillan
2. Hal. R. Varian : Intermediate Micro Economics- Modern Approach, 4<sup>th</sup> edn, W.W. Narton & Company.
3. Dwivedi : Micro Economic theory and applications, Pearson.

**Reference Books:**

1. Baumol.W.J., (1978), Economic Theory and Operations Analysis, Prentice Hall of India.
2. Cohen. K.J. and Cyert. R.M. (1976), Theory of the Firm, Prentice Hall of India.
3. Ferguson, C.E., (1968), Micro Economic Theory, Cambridge, University Press, London.
4. Green, H.A.J (1974), Consumer Theory, 2nd Edition, Macmillan.
5. Jack Hirschleifer (1980): Price Theory and Applications, 2nd Edition, Macmillan
6. Richard, H. Leftwich: The Price System and Resource Allocation.

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

Sections	UNITs	No. of Questions	
		Theory	Problems
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT - 5	1	

**CORE THEORY - V**  
**INDIAN ECONOMIC DEVELOPMENT AND POLICY - II**

<b>SUBJECT CODE:</b> <b>19PECO307</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: II</b>	<b>CREDITS: 4</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To familiarize the students in agricultural price policy, agricultural credit, food security and PDS.*

**Course Outcome:**

On completion of the course the students will be able

1. To analyse agricultural price policy, agricultural credit, food security and PDS.
2. To Examine the Industrial growth at National and State Level.
3. To evaluate agricultural growth at National and State Level.
4. To analyse all human development indicators in India and demonstrate the role of infrastructure
5. in economic development.
6. To analyse Indian fiscal federation and give solution for development.

**UNIT I: Agriculture**

**(18 Hrs.)**

Agriculture growth at National and State levels – Institutional and technological policy – green revolution – agricultural price policy, agricultural credit – Food Security – Public Distribution System (PDS) – Agricultural Finance – Agricultural Marketing – inter-sectoral terms of trade – WTO and its implications.

**UNIT II: Industry**

**(18 Hrs.)**

Industry growth at National and State levels – Over view of earlier Industrial policies (1948 - 1990) - Industrial policy since 1990 – pattern of industrial growth – productivity trends, modernization, small Vs large industry – Special Economic Zones – Industrial Finance.

**UNIT III: Population and Human Development**

**(18 Hrs.)**

Population and Development – National Population Policy (2000) – Demographic Dividend - Human development indicators: review of change since early fifties –wide regional variations – demographic trend in India and dividend –health services, Health policy; Education Policy; Financing of Health and Education.

**UNIT IV: Infrastructure Development in India**

**(18 Hrs.)**

Infrastructure and economic development – Economic Infrastructure – Energy, Power, Transport, Communication, Science and Technology – Policies pertaining to Economic Infrastructure development – Financing of Infrastructure development – PPP Model – Financing institutions – International collaborations.

**UNIT V: Indian Public Finance:**

**(18 Hrs.)**

Finances of Central and State governments – an overview of Central budgets – trends – public debt of India – deficit financing in India – Fiscal reforms – Fiscal Responsibility Act – recommendations of tax and expenditure commissions – Centre – State financial relations – Constitutional provisions relating to fiscal and financial powers of the states – financial aspects of Sarkaria Commission – The Finance Commission awards – Centre- State conflict of finance.

**Recommended Text:**

1. Dutt and Sundaram (2007): Indian Economy, S. Chand & Company
2. Dhingra. I.C. (2006): Indian Economy, S. Chand & Company.
3. Chakravarty, S. (1987): Development Planning: The Indian Experience, OUP, NewDelhi.

**Reference Books:**

1. J. Bhagwati and S. Chakravarty: Indian Economic Analysis: A. Survey.
2. A. K. Das Gupta: Planning and Economic Growth.
3. Bhagwati and Desai: Planning for Industrialization.

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

Sections	UNITs	No. of Questions	
		Theory	Problems
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT - 5	1	

**CORE THEORY - VI**  
**STATISTICS FOR ECONOMISTS**

<b>SUBJECT CODE:</b> <b>19PECO308</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: II</b>	<b>CREDITS: 4</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To understand the students how to apply probability theory in economics.*

**Course Outcome:**

On completion of the course the students will be able

1. To apply probability theory in economics.
2. To demonstrate the applicability of Binomial, Poisson and Normal distribution in research.
3. To analyse the different types of sampling techniques.
4. To demonstrate hypothesis testing such as Null and alternative hypothesis and Type I and Type II error.
5. To apply F-test, T-test and ANOVA to find out the significance of different variables in research.

**UNIT I: Introduction to Probability Distribution**

**(18 Hrs.)**

Meaning and definitions of **probability** (sample space-events) - Laws of addition and multiplication - Conditional probability - Bay's theorem (statement) - Binomial, Poisson and Normal distribution;

**UNIT II: Sampling Technique**

**(18 Hrs.)**

Basic concepts of **Sampling**, Different types of sampling-Sampling and Non- sampling errors - Sampling Distributions-Standard error - point estimation - properties of estimators (Unbiasedness, consistency and efficiency)

**UNIT III: Hypothesis Testing and Data Analysis**

**(18Hrs.)**

**Hypothesis testing** - Null and alternative hypothesis - type I and type II errors-level of Significance - p-value - concept of confidence intervals (CI) – Hypothesis Testing procedure based on Z test (large sample test), - t test and F-test (Small sample tests) - test for independence of attributes ( $\chi^2$ test) and one-way ANOVA.

**UNIT IV: Bi-variate Analysis**

**(18 Hrs.)**

**Correlation and regression:** simple correlation, Pearson, spearman's correlation coefficients, multiple and partial correlation analysis, specification of a simple linear regression model, least square estimation of linear regression coefficients, interpretation of correlation and regression coefficients and their properties.

**UNIT V: Multi-variate Analysis Techniques**

**(18 Hrs.)**

Multivariate analysis of Variance (ANOVA) and Covariance – Multiple correlation and regression – Conjoint Analysis - Factor analysis – Cluster analysis - test of multinomial experiment – Multidimensional Scaling.



**Recommended Text:**

1. Gupta .S.P. Statistical Methods, Sultan Chand and Sons, New Delhi, 2005
2. Sancheti. DC and Kapoor. VK Statistical Theory-Method and Application, Sultan Chand and Sons, New Delhi, 2005.
3. Shukla .MC & Gulshan S. S, Statistical Theory and Practice. Sultan Chand and Sons, New Delhi, 2002.
4. S.P. Gupta (1983): Statistical Methods, 19<sup>th</sup> ed. Sultan Chand and sons, New Delhi.

**Reference Books:**

1. D.N. Elhance (2004): Practical problems in statistics, Kit Mahal, Allahabad.
2. J. Devore: Probability and Statistics for Engineers, 8th ed., Cengage Learning (2012).

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

Sections	UNITs	No. of Questions	
		Theory	Problems
<b>Section A</b>	UNIT – 1	1	1
	UNIT – 2	2	1
	UNIT – 3	1	1
	UNIT – 4	2	1
	UNIT – 5	1	1
<b>Section B</b>	UNIT – 1	1	
	UNIT – 2	1	1
	UNIT – 3	1	1
	UNIT – 4	1	1
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	0	
	UNIT – 2	0	1
	UNIT – 3	1	1
	UNIT – 4	0	1
	UNIT - 5	1	1

**ELECTIVE – III**  
**MATHEMATICS FOR ECONOMISTS – II**

<b>SUBJECT CODE:</b> <b>19PECO309</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: II</b>	<b>CREDITS: 3</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To understand the students to analyse Lagrange multiplier method in utility, cost and profit maximization.*

**Course Outcome:**

On completion of the course the students will be able

1. To analyse Lagrange multiplier method in utility, cost and profit maximization.
2. To apply Matrices in economics.
3. To demonstrate and apply Input-Output analysis.
4. To analyse Linear Programming methods.
5. Differentiate Indefinite integrals and definite integrals.

**UNIT I: Calculus of multivariable functions** **(18 Hrs.)**

Calculus of multivariable functions, higher order derivatives, constrained optimization with upto two variable - equality constraints - Constrained Maxima and Minima – Use of Lagrange Multiplier Method – Application to Utility Maximisation: consumer demand – Micro (two goods, one period) and consumer demand - Macro (one goods, two periods).

**UNIT II: Matrix** **(18 Hrs.)**

Matrices – Properties and types of matrices Matrix operations – Commutative Associative and Distributive Laws – Determinants – Rank of a matrix – Matrix Inverse – Solutions for simultaneous equations upto 3 equations - Cramer’s Rule.

**UNIT III: Input - Output Analysis and Linear programming** **(18 Hrs.)**

**Input - Output Analysis:** Static open model – Closed model - Economic implications - Transport and Assignment model - Leontieff Model - **Linear programming:** Basic concept, Nature of feasible, basic and optimal solution; Solution of linear programming problem through graphical and simplex method - Primal and Dual.

**UNIT IV: Game Theory** **(18 Hrs.)**

Basic Concept of a game theory – Classification and Description of Games - Two-person Zero sum game - value of a game; strategies - simple and mixed - Dominance rule - Solution of a game by linear programming.

**UNIT V: Integration Techniques** **(18 Hrs.)**

Definition of integration – Basics rules of Integration Techniques – Indefinite Integrals – methods of indefinite integrals - Definite Integrals – Economic Applications of Integrals – Consumer’s Surplus – Producer’s Surplus.

**Recommended Text:**

1. Edward. T. Dowling: Mathematics for Economists, McGraw – Hill Book Company.
2. Mehta V.L. & Madnani: Mathematics for Economists, Sultan Chand and Sons.

**Reference Books:**

1. Allen R.G.D. :Mathematical Analysis for Economists, Macmillan andCompany Limited, London.
2. Chiang A.C. : Fundamental Methods of Mathematical Economics, Mcgraw – Hill Book Company.
3. Stafford.L.W.T. :Mathematics for Economist, The English Language Book Society and Macdonald and Evans Limited, London.
4. Mabett. A.J. :Mathematics for Economists, Macmillan Master Series.
5. Weber : Mathematics for Economists.
6. K. Sydsaeter and P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi, 2002
7. Monga, G.S. Mathematics and Statistics for Economists, Vikas Publishing House, New Delhi, 1972.

**Journals:**

1. Journal of Applied Mathematics
2. Journal of Mathematical Economics

**Question Paper Pattern:**

<b>Section</b>	<b>Question Component</b>	<b>Numbers</b>	<b>Marks</b>	<b>Total</b>
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

<b>Sections</b>	<b>UNITs</b>	<b>No. of Questions</b>	
		<b>Theory</b>	<b>Problems</b>
<b>Section A</b>	UNIT – 1	1	1
	UNIT – 2	2	1
	UNIT – 3	1	1
	UNIT – 4	2	1
	UNIT – 5	1	1
<b>Section B</b>	UNIT – 1	1	
	UNIT – 2	1	1
	UNIT – 3	1	1
	UNIT – 4	1	1
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	0	
	UNIT – 2	0	1
	UNIT – 3	1	1
	UNIT – 4	0	1
	UNIT – 5	1	1

**EXTRA DISCIPLINARY – I**  
**ENVIRONMENTAL ECONOMICS**

<b>SUBJECT CODE:</b> <b>19PECO310</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: II</b>	<b>CREDITS: 3</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To know the impact of Economics on the Environment. To understand the use of Economic Tools in the analysis of environmental issues and policy making.*

**Course Outcome:**

On completion of the course the students will be able

1. To analyse the market failure and externality and Pareto optimality.
2. To demonstrate natural resources exploitation and finding solution for it.
3. Distinguish environmental cost of economic growth and sustainable development.
4. To apply cost benefit analysis to reduce environmental degradation.
5. To analyse different pollution control measures.

**UNIT I: Definition and Scope of Environmental Economics (18 Hrs.)**

Introduction – Economics and Environment – Definition of Environmental Economics – Scope and Significance of Environmental Economics: Environment Inter-linkages – Market failure and Externality – Accounting for the Environment – Pareto Optimality – Individual Choice Vs Social Choice.

**UNIT II: Resource Economics (18 Hrs.)**

Natural Resources: Types and Classification – Economics of Natural Resources Exploitation – Market Structure and the exploitation of Non-Renewable Resources – Conservation of Resources: Definition and Meaning– Methods of Conservation – Material Substitution – Product Life Extension – Recycling – Optimum Recycling – Waste Management.

**UNIT III: Environment and Sustainable Development (18 Hrs.)**

The Environmental Costs of Economic Growth – Limits to Growth – Sustainable Development – Brundtland Commission - Sustainable Industrialization – Pollution abatement and Control.

**UNIT IV: Cost Benefit Analysis (18 Hrs.)**

Cost Benefit Analysis: Definition – Advantages & Limitations of Cost Benefit Analysis – Methods for Valuing Environmental Costs and Benefits: Environmental Impact Assessment: Meaning & Measurement.

**UNIT V: Policy Measures (18 Hrs.)**

Basic Approach to Environmental Policy – Problem of Pollution Control – Moral suasion – Direct Control – Regulation – Prohibition – Fiscal techniques – Effluent Charges and Subsidies – Common Effluent Treatment Plant.

**Reference Books:**

1. Charles D. Kolstad (2003), Environmental Economics, Oxford University Press, New York.
2. Nick Hanley, Jason F. Shogren and Ben White (1999), Environmental Economics: In Theory and Practice, Macmillan India Limited, New Delhi.
3. Barry C. Field (1997), Environmental Economics: An Introduction, McGraw-Hill Companies, Singapore.

4. Ulaganathan Sankar (2008), Environmental Economics, Oxford University Press, New Delhi.
5. Rabindra N. Bhattacharya (2005), Environmental Economics: An Indian Perspective, Oxford University Press, New Delhi.
6. Katar Singh and Anil Shishodia (2007), Environmental Economics: Theory and Applications, Sage Publications, New Delhi.
7. Subhashini Muthu krishnan (2010), Economics of Environment, PHI Learning Private Limited, New Delhi.
8. Jhingan, M.L. and Chandar K. Sharma (2007), Environmental Economics: Theory, Management and Policy, Vrinda Publications (P) Ltd., Delhi.
9. A. Jonathan Lesser, Daniel E. Dodds and Richard O. Zerbe Jr. (1997), Environmental Economics and Policy, Addison-Wesley Ltd., New York.
10. Anil Markandya and Julie Richardson (eds.) (1992), the Earthscan Reader in Environmental Economics, Earthscan Publications Ltd., London.
11. M.V. Joshi (2001), Theories and Approaches of Environmental Economics, Atlantic Publishers and Distributors, New Delhi.

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

Sections	UNITs	No. of Questions	
		Theory	Problems
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT - 5	1	

# **SEMESTER – III**

**CORE THEORY -VII**  
**MACRO ECONOMICS – I**

<b>SUBJECT CODE:</b> <b>19PECO311</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: III</b>	<b>CREDITS: 4</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To provide an analytical skill on the theories of consumption function, income and employment, understand the students on how the money is being circulated in an economy. Demand and supply of money.*

**Course Outcome:**

On completion of the course the students will be able

1. To analyse the circular flow of money in an economy and measure the cost of living by using CPI & WPI.
2. To calculate GDP by using different methods and able to estimate each and every method properly and apply all the theories of consumption and Investment function in the real economy.
3. To evaluate the concepts of multiplier and Accelerator to improve the growth rate of an economy.
4. To differentiate the income and employment generation from classical school to modern school
5. of economics, and find out a solution for economic stability.
6. To understand the role of RBI in money supply and how to apply monetary and fiscal policies to maintain stability in an economy.

**UNIT I: Key Macro Economic Variables**

**(18 Hrs.)**

Aggregate Income- Expenditure and circular flow- computation of GDP – Real Vs – Nominal GDP – Measurement of Cost of Living (CPI and WPI) – Measurement of Unemployment rate.

**UNIT II: Theories of Consumption and Investment**

**(18 Hrs.)**

The Consumption function and its determinants – Hypotheses of Absolute, Relative and Permanent Incomes and Life Cycle. The Investment function and its determinants. The Saving function and Marginal Efficiency of Capital. Investment Function – Marginal Efficiency of Investment, Multiplier Analysis, Accelerator and Investment behavior concepts of super multiplier.

**UNIT III: Theory of Income and Employment**

**(18 Hrs.)**

Basic assumptions of the classists, Says Law of Market, Classical theory of Employment saving and Investment theory wage and price flexibility criticisms of classical theory- Keynesian theory of employment and income, The concept of under employment – Aggregate demand – Effective Demand

**UNIT IV: Theory of Demand for money**

**(18 Hrs.)**

Theory of Money: Quantity theory money Fischer's and Cambridge equation, Keynesian theory of money – Modern Quantity theory of money – Milton Friedman – Patinkin's Real Balance Effect – Tobin's Portfolio analysis, Crisis in Keynesian economics and the revival of monetarism.



**UNIT V: Theory of Supply of Money****(18 Hrs.)**

Supply of Money - A Behavioural Model of Money Supply Determination, RBI Approach to money supply, High powered money and money multiplier, Money Supply in open economy, Control of money supply.

**Recommended Text:**

1. Branson, W.A. (1989): Macroeconomic Theory and Policy,(3<sup>rd</sup> Edition), Harper and Row, New York.
2. Shapiro, E. (1996): Macroeconomic Analysis, Galgotia Publications, New Delhi.
3. M. L. Jhingan and C. Murthy (2017): Macro Economics, Vrindha Publications, New Delhi
4. R.and A. Salansi (2000) - Macroeconomics and the Real World (2 Vols.) Oxford University Press, London.
5. Dornbusch, R.and F. Stanley (1997) - Macroeconomics, McGraw Hill, Inc., New York.
6. Heijdra, B.J. and V.P. Fredericck (2001) - Foundations of Modern Macroeconomics, Oxford University Press, New Delhi.

**Reference Books:**

1. Ackley, G. (1978): Macroeconomics: Theory and Policy, Macmillan, New York.
2. Blackhouse, R.and A. Salansi (2000) Macroeconomics and the Real World (2 Vols.) Oxford University Press, London.
3. Dornbusch, R. and F. Stanley 1997): Macroeconomics, McGraw Hill,Inc., New York.

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

<b>Sections</b>	<b>UNITs</b>	<b>No. of Questions</b>	
		<b>Theory</b>	<b>Problems</b>
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT - 5	1	

**CORE THEORY - VIII**  
**PUBLIC ECONOMICS -I**

<b>SUBJECT CODE:</b> <b>19PECO312</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: III</b>	<b>CREDITS: 4</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To understand the role of public enterprises in India and analyse different pricing policies followed in public enterprises.*

**Course Outcome:**

On completion of the course the students will be able

1. To demonstrate the role of public enterprises in India and analyse different pricing policies followed in public enterprises.
2. To evaluate the Pareto Optimality, market failure and theory of second best.
3. Differentiate public goods, private goods and analyse different theories of taxation.
4. Examine the practical problems of deficit financing and giving solutions for burden of public debt.
5. To analyse different theories of Budget and find out the applicability of balanced budget and zero-based budget.

**UNIT I: Public Finance: Introduction (15 Hrs.)**

Meaning and Definition of Public finance- Scope of Public Finance - Similarities and dissimilarities of Public and private finance- Market failure-imperfection - indivisibility- spill over benefit and spill over cost –Externalities - Role of government in Economic Activity

**UNIT II: Inter- sector al Allocation and Public Choices (15 Hrs.)**

Private & public mechanism for allocating resources; types of goods and their characteristics -Private, Public and Merit goods – Principle of maximum social advantage - Public choice- Unanimity-Relative Unanimity-the medium voter theorem-Arrow’s impossibility theorem.

**UNIT III: Theories of public expenditure: (15 Hrs.)**

Meaning of Public Expenditure- Classification of Public - Expenditure-Causes of Increase in Public Expenditure- Importance of Public Expenditure – Canons of Public Expenditure-Effects of Public Expenditure-Wagner’s law of Public Expenditure-Wiseman - Peacock Hypothesis on Public Expenditure-Prof. Samuelson’s Pure Theory of Public Expenditure -Trends of Public Expenditure in India

**UNIT IV: Public Revenue and Theories of taxation (15 Hrs.)**

Meaning and Definition of Public Revenue- Sources of Public Revenue-classification of Public Revenue - Meaning and definition of Tax-Characteristics of Tax-Objectives of tax- canons of Taxation- Classification of Taxes- Direct and Indirect Tax, its meaning and merits and demerits of direct and indirect tax – Laffer Curve- Characteristics of Good tax system- Tax Incidence- effects of Taxes. Theories of Taxation – Erik Lindhall’s Theory of Voluntary Exchange-Howard Bowen’s Theory

**UNIT V: Public Debt****(15 Hrs.)**

Meaning and Definition Public debt- Objectives of Public debt- Difference between Public debt and private debt -Classification of Public debt –Sources of Public debt – Redemption of Public debt –Effects of Public debt - Principles of Public debt - Burden of Public debt – Trends of Public debt in India.

**Reference Books:**

1. Atkinson, A.B. and J.E. Siglitz (1980): Lectures on Public Economics, Tata McGraw Hill, New York.
2. Auerbach, A.J. and M. Feldstern (Eds.) (1985): Handbook of Public Economics, Vol. I North Holland, Amsterdam.
3. Buchanan, J.M. (1970): The Public Finances, Richard D. Irwin, Homewood.
4. Goode, R. (1986) Government Finance in Developing Countries, Tata McGraw Hill, New Delhi.

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

Sections	UNITs	No. of Questions	
		Theory	Problems
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT - 5	1	

**CORE THEORY - IX**  
**INTERNATIONAL ECONOMICS – I**

<b>SUBJECT CODE:</b> <b>19PECO313</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: III</b>	<b>CREDITS: 4</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To understand and analyse the different international trade theories.*

**Course Outcome:**

On completion of the course the students will be able

1. To analyse the different international trade theories.
2. To Demonstrate different concepts in terms of trade.
3. To evaluate the technical progress in international trade.
4. To analyse different forms of Government intervention in international trade and development.
5. To critically analyse the role of FDI in economic development and demonstrate the foreign
6. exchange market and different types of exchange rate.

**UNIT I: International Economics: Introduction**

**(18 Hrs.)**

Concept of Inter-regional and International Trade - Theory of Comparative Advantage, Hecksher-Ohlin Theory of trade - Factor Endowment and Factor Price - Leontief Paradox - Empirical verification and relevance of Theories - International Trade under Imperfect Competition

**UNIT II: Terms of Trade and Economic Growth**

**(18 Hrs.)**

Terms of Trade and Economic Growth - Secular determination of terms of trade hypothesis: a critical review - International trade as an engine of growth - Gains from Trade and LDCs - Foreign Trade Multiplier: Trade and Labour Skills Theory by Donald Kessing - Research and Development factor and Structure of Commodity Trade (By Gruber, Mehta and Vernon)

**UNIT III: Measurement of Gains from Trade**

**(18 Hrs.)**

Measurement of Gains from Trade; Concepts of Terms of trade - their uses and limitation - Factors affecting Terms of Trade - Impact of Tariffs - Political economy of Non- tariff Barriers - Trade and Development - Trade as engine of growth - Two Gap analysis: views of Prebisch, Singer and Myrdal.

**UNIT IV: Balance of Trade and Balance of Payment**

**(18 Hrs.)**

Meaning and concepts of Balance of Trade and Balance of Payment - Equilibrium and Disequilibrium in Balance of Payment - The process of adjustment under systems of Gold Standard - Steps to Correct imbalance of payments - traditional and monetary approaches for adjustment in the Balance of Payment - Theory of international reserves - Theory of Foreign Exchange Rate - Purchasing Power Parity Theory – fixed versus flexible exchange rate system.

**UNIT V: Theory of Interventions****(18 Hrs.)**

Tariffs and development-Impact of tariffs –partial and general equilibrium analysis- Political economy of non-tariff barriers-quotas types-dumping and the economic rationale of dumping.

**Recommended Text:**

1. M.C. Vaish & Sudama Singh: International Economics, Oxford & IBH.
2. K.C. Rana and K.N. Verma (2004-05): International Economics, Vishal Publishing, Co. Jalandhar.
3. Francis Cherunilam (1998): International Economics, 3rd Edition, Tata McGraw Hill Publishing company.

**Reference Books:**

1. International trade theory and policy – Giancarlo Gandolfo
2. International Economics: Miltiades Chacholiades
3. International Economics – K.C. Rana and K.C. Verma
4. International Economics Francis Cherunilam
5. Krugman, P.R. and M. Obstfeld (1994), International Economics: Theory and Policy, Glenview, Foresman.
6. Soderston, Bo. (1991), International Economics, The Macmillan Press Ltd. London.
7. Dana, M.S. (2000), International Economics: Study, Guide and Work Book,(5<sup>th</sup> Edition), Routledge Publishers, London.

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

Sections	UNITs	No. of Questions	
		Theory	Problems
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT - 5	1	

**ELECTIVE – IV**  
**ECONOMICS OF DEVELOPMENT**

<b>SUBJECT CODE:</b> <b>19PECO314</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: III</b>	<b>CREDITS: 4</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To familiarize the students to analyse kuznet's invented U- hypothesis and welfare of Index.*

**Course Outcome:**

On completion of the course the students will be able

1. To analyse kuznet's invented U- hypothesis and welfare of Index.
2. To critically analyse population growth and economic development.
3. To demonstrate the role of education and health in economic development.
4. To analyse the role of agriculture and rural development in macro-economic stability.
5. Evaluate different development planning and apply the fiscal and monetary policy. To maintain
6. stability in an economy.

**UNIT I: Poverty, inequality, and Development (18 Hrs.)**

Poverty, inequality, and Development – measuring inequality and poverty – poverty, inequality, and social welfare – Kuznets' inverted-U Hypothesis – Growth and inequality – Rural poverty – women and poverty – Ahluwalia – Chenery Welfare Index.

**UNIT II: Population Growth and Economic Development (18 Hrs.)**

Population Growth and Economic Development: Causes, consequences – and controversies – population growth and the quality of life – the causes of high fertility in developing countries – the consequences of High fertility – goals and objectives.

**UNIT III: Roles of Education and Health (18 Hrs.)**

Roles of Education and Health – Investing in education and health: the human capital approach – child labour – the gender gap: women and education – educational systems and development – health systems and development.

**UNIT IV: Agricultural Transformation and rural development (18 Hrs.)**

Agricultural Transformation and rural development – agricultural progress and rural development – the structure of agrarian system in the developing world – the economics of agricultural development: transition – subsistence farming: Risk Aversion – improving small scale agriculture – conditions of rural development – macroeconomic instability, IMF stabilization policies and their critics.

**UNIT V: The nature of development planning and the role of the state (18 Hrs.)**

The nature of development planning and the role of the state – planning in mixed developing economics – the rationale for development planning – fiscal policy for development – macro stability and resource mobilization – state owned enterprises. Military expenditures and economic development.

**Recommended Text:**

1. Adelman, I (1961): Theories of Economic Growth and Development, Stanford University Press, Stanford.
2. Michael P. Todaro and Stephen C. Smith (2003): Economic Development, Pearson Education Pte. Ltd., Singapore.
3. Thirillwall, A.P. (1978): Growth and Development, 2ed. Macmillan.

**Reference Books:**

1. Chakravarthy, S. (1982): Alternative Approaches to a theory of Economic Growth, Oxford University Press.
2. Chakravarthy, S. (1989): Development Planning: The Indian Experience, Clarendon Press.
3. Chatak, S. (1986) An Introduction to Development Economics, Allen and Unwin.
4. Kindleberger, C.P. (1977): Economic Development 3ed McGraw Hill.
5. Basu, Kaushik (2003): Analytical development economics: The less developed Economy revisited, MIT Press Cambridge.
6. Meier, G.M. and J.E. Rauch (2005), Leading Issues in Economic Development, (8th Edition), Oxford University Press, New Delhi.
7. Sen, A.K. (Ed.) (1990), Growth Economics, Penguin, Harmondsworth.
8. Todaro, M.P. and S.C. Smith (2003), (8th Edition), Economic Development, Pearson Education, Delhi.

**Question Paper Pattern:**

<b>Section</b>	<b>Question Component</b>	<b>Numbers</b>	<b>Marks</b>	<b>Total</b>
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>



**Distribution of Questions:**

<b>Sections</b>	<b>UNITs</b>	<b>No. of Questions</b>	
		<b>Theory</b>	<b>Problems</b>
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	

**EXTRA DISCIPLINARY – II**  
**GENDER ECONOMICS**

<b>SUBJECT CODE:</b> <b>19PECO315</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: III</b>	<b>CREDITS: 3</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To understand the students to demonstrate the significance of women studies in socio-Economic development.*

**Course Outcome:**

On completion of the course the students will be able

1. To demonstrate the significance of women studies in socio-Economic development.
2. To analyse the different theories of public expenditure on women empowerment.
3. To demonstrate the role of UNO and World Bank in women's development.
4. To analyse the contribution of women in economic development and demonstrate the progress
5. and demonstrate the foreign exchange market and different types of exchange rate.
6. To analyse the problems of women and provide solutions to empower them.

**UNIT I: Introduction of Gender Economics** **(20 Hrs.)**

Meaning and scope of Gender Economics – Nature and Significance of Women Studies – Distinction between economic and Non-economic Dimensions of Women Studies – Some key Concepts – Exploitation, Deprivation, oppression, Gender Display index and HDI, HPI and GEM.

**UNIT II: Theories of Woman Exploitation** **(25 Hrs.)**

Need for theories of women exploitation – Marx and Engel's Theory of Exploitation – Exchange theory and Exploitation – Perspectives of Gary. S Becker and Amartya Sen on Women Exploitation.

**UNIT III: International Concern for Women Development** **(20 Hrs.)**

Role of UNO and World bank in Women's Development – Significance of International Women's Year and Decade – International Conferences on Women.

**UNIT IV: Women and Economic development** **(25 Hrs.)**

Women contributions to economic development – Women in Agriculture and industry and in Services – development programmes for Empowering Women under India's Five-Year Plans.

**UNIT V: Women and Entrepreneurship**

Emergence and Growth of Women Entrepreneurship – Motivating factors – Role of State – progress and Performance of Women Entrepreneur Schemes – problems and prospects of Women Entrepreneurship.

**Reference Books:**

1. Maithreyi Krishnaraj, Gender Population and Development
2. R.K.Sen and Anita Banaerji, Women and Economic Development
3. Boserup E. (1970), Women's Role in Economic Development, George Allen and Unwin, London.
4. Desai, N. and M.K. Raj (Eds.) (1979), Women and Society in India, Research Center for
5. Women Studies, SNDT University, Bombay
6. Government of India (1974), Towards Equality – Report of the Committee on the Status of
7. Women in India, Department of Social Welfare, Ministry of Education and Social Welfare, New Delhi.
8. Krishnaraj, M., R.M. Sudarshan and A. Shariff (1999), Gender, Population and Development, Oxford University Press, New Delhi.
9. Seth, M. (2000), Women and Development: The Indian Experience, Sage Publications, New Delhi.
10. Wazir, R. (2000), The Gender Gap in Basic Education: NGOs as Change Agents, Sage Publications, New Delhi.

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

Sections	UNITs	No. of Questions	
		Theory	Problems
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT - 5	1	

# **SEMESTER – IV**

**CORE THEORY - X**  
**MACRO ECONOMICS – II**

<b>SUBJECT CODE:</b> <b>19PECO316</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: IV</b>	<b>CREDITS: 4</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To analyse the usage of IS-LM in determining equilibrium of an economy and evaluate the applicability of IS-LM in international trade.*

**Course Outcome:**

On completion of the course the students will be able

1. To analyse the usage of IS-LM in determining equilibrium of an economy and evaluate the applicability of IS-LM in international trade
2. To demonstrate the evil effects of inflation and provide solutions for the problems of inflation through proper implementation of monetary and fiscal policies.
3. Critically analyse the theories of business cycle and finding solution to recover the economy from different phases of trade cycle
4. To apply Keynesian and Neo Keynesian models in the real world and find out the reasons for market and Government failure and giving solutions for these problems.
5. To analyse the different views of modern economists in solving the problem of inequality in international trade and maintain stability in an economy.

**UNIT I: The IS –LM Model**

**(18 Hrs.)**

The neo-classical and Keynesian version of IS-LM models – Interaction of Real and Monetary Sector- Fiscal and Monetary Policy analysis in IS – LM model – Pigou effect and Real balance effect in IS-LM model – Trade policy in IS-LM models.

**UNIT II: Theory of Inflation and Unemployment**

**(18 Hrs.)**

Theory of Inflation: Concept – Types – Categories, Excess demand Inflation Keynesian Income Expenditure approach, Inflationary gap –Phillips curve Controversy, Tobins modified Phillips Curve, Policies to control inflation- Natural Rate of Hypothesis and its implication of Monetary Policy.

**UNIT III: Business Cycle**

**(18 Hrs.)**

Business Cycle: Theories of Schumpeter, Kaldor, Samuelson, Hicks and Goodwin model, Control of Business Cycles, relative Efficiency of Monetary and Fiscal Policies

**UNIT IV: Post – Keynesian Macro Economics**

**(18 Hrs.)**

Walrasian and Keynesian Adjustment mechanism – Reinterpretation of Keynes – Dual Decision hypothesis - Neo-Keynesian quantity constraint models – micro theoretic foundation for wage and price rigidity – small menu cost – Efficient wage theory – staggered wage setting – insider – outsider model – models of coordination failure.

**UNIT V: Macro Economics in an Open Economy****(18 Hrs.)**

Macro Economics is an open Economy, Mundell-Flemming Model – New Classical Macro Economics –Policy Implications of New Classical Approach. Macro-Economic Policy Goals - Full Employment – Price Stability – Economic Growth – Monetary and Fiscal Mechanism in the Indian Context

**Recommended Text:**

1. Branson, W.A. (1989): Macroeconomic Theory and Policy, (3<sup>rd</sup> Edition), Harper and Row, New York.
2. Shapiro, E. (1996): Macroeconomic Analysis, Galgotia Publications, New Delhi.
3. M. L. Jhingan and C. Murthy (2017): Macro Economics, Vrindha Publications, New Delhi

**Reference Books:**

1. Ackley, G. (1978): Macroeconomics: Theory and Policy, Macmillan, New York.
2. Blackhouse, R. and A. Salansi (2000) Macroeconomics and the Real World (2 Vols.) Oxford University Press, London.
3. Dornbusch, R. and F. Stanley (1997): Macroeconomics, McGraw Hill, Inc., New York.

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
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<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

Sections	UNITs	No. of Questions	
		Theory	Problems
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	

**CORE THEORY – XI**  
**PUBLIC ECONOMICS-II**

<b>SUBJECT CODE:</b> <b>19PECO317</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: IV</b>	<b>CREDITS: 4</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To understand and evaluate demand revealing schemes of public goods find out applicability of Keynesian case for stabilization.*

**Course Outcome:**

On completion of the course the students will be able

1. To evaluate demand revealing schemes of public goods find out applicability of Keynesian case
2. for stabilization.
3. To critically analyse Wiseman-Peacock hypothesis and reforms in public expenditure policy.
4. To demonstrate the equity and efficiency issues in fiscal federation.
5. To analyse the problems in Indian fiscal federation and different tax policies of center and state.
6. To brief stability in an economy how to apply fiscal and monetary issues.

**UNIT I: Budget**

**(18 Hrs.)**

Budgeting-type of budgeting-public budget, kinds of budgets, zero based budgeting- programme and performance budgeting-Union and State government Budgets-Neutral and compensatory and functional finance-balanced budget multiplier.

**UNIT II: Fiscal Policy**

**(18 Hrs.)**

Fiscal Policy: Meaning and definition of Fiscal policy- Objectives of Fiscal policy – Instruments of Fiscal policy – role of fiscal policy in controlling inflation - fiscal policy for full employment – limitations of fiscal policy – fiscal reforms in India.

**UNIT III: Theories of Fiscal Federalism**

**(18 Hrs.)**

Meaning of Federal Finance- Principles of Federal Finance - Theories of Fiscal Federalism- Concepts of Deficits – Deficit Financing – Budget Deficit – Issues of Equity and Efficiency –Designing Equalisation transfers – Conditional and Unconditional grants

**UNIT IV: Indian Federalism System**

**(18 Hrs.)**

Indian federalism system - Problems of Centre-State Financial relations in India-Imbalance between fiscal Needs and Capacity- Indian federal finance - Finance commission and recommendation of latest Finance commission.

**UNIT V: Goods and Service Tax (GST)**

**(18Hrs.)**

Introduction to GST – Meaning, evolution of GST – Salient features of GST - Structures and functions of GST Council - Stages of GST – Issues and Challenges of GST in India – Pro and Cons of GST.

**Recommended Text:**

1. Bhargava (2004): Public finance, Its Theory and working in India, Chaitanya Publishing House.
2. Musgrave, R.A. (1959): The Theory of Public Finance, McGraw Hill, Kogakhusa, Tokyo
3. Musgrave, R.A. and P.B. Musgrave (1976): Public Finance in Theory and Practice, McGraw Hill, Kogakusha, Tokyo.

**Reference Books:**

1. Atkinson, A.B. and J.E. Siglitz (1980): Lectures on Public Economics, Tata McGraw Hill, New York.
2. Auerbach, A.J. and M. Feldstern (Eds.) (1985): Handbook of Public Economics, Vol.I, North Holland, Amsterdam.
3. Buchanan, J.M. (1970): The Public Finances, Richard D. Irwin, Homewood.
4. Goode, R. (1986) Government Finance in Developing Countries, Tata McGraw Hill, NewDelhi.

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

Sections	UNITs	No. of Questions	
		Theory	Problems
<b>Section A</b>	UNIT – 1	3	
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	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	



**CORE THEORY – XII**  
**INTERNATIONAL ECONOMICS – II**

<b>SUBJECT CODE:</b> <b>19PECO318</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: IV</b>	<b>CREDITS: 4</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To demonstrate the developments in International monetary system.*

**Course Outcome:**

On completion of the course the students will be able

1. To demonstrate the developments in International monetary system.
2. To analyze the problems of disequilibrium in BOP and finding solutions to correct disequilibrium in BOP.
3. Critically analyse the international problems of Asian region and European Union.
4. To demonstrate the function of WTO, IMF and World Bank and Asian Development Bank.
5. To evaluate different theories of trade.

**UNIT I: Foreign Capital**

**(18 Hrs.)**

Role of foreign capital in economic development – issues in foreign capital in economic development – theory of direct investment – issues in foreign direct investment – Multinational Corporations – Transfers and Capital movements – interest rate and capital movements – foreign aid.

**UNIT II: Foreign Exchange Market**

**(18 Hrs.)**

Introduction: structure and functions of foreign exchange market- methods of foreign payments - concepts of Spot and Forward exchange Rate - Determinants of Exchange Rate under Fixed and Flexible Exchange rate - Regime and Role of hedging in the determination of exchange rate - Theory of Interest Rate parity

**UNIT III: The Theory of Regional Blocks**

**(18 Hrs.)**

Forms of economic cooperation - Reforms for the emergence of trading blocks at the global level –Static and dynamic effects of a customs union and free trade areas – Rationale and economic progress of SAARC/SAPTA and ASEAN regions – Problems and prospects of forming a customs union in the Asian Region – European Union – Functions of GATT/WTO (TRIPs/TRIMs) – UNCTAD – IMF – World Bank and Asian Development Bank – Their achievements and failures.

**UNIT IV: International Monetary System:**

**(18 Hrs.)**

International Monetary System: Problems in International Monetary System – International debt - International Liquidity – I.M.F. and Special Drawing Rights – Euro-dollar market. – Recent developments and issues in regional common currencies

**UNIT V: Alternative Theories of Trade**

**(18 Hrs.)**

Alternative theories of Trade – Economies of Scale, Imperfect competition and International trade. Monopolistic competition –Technology imitation gaps and Product cycles.

**Recommended Text:**

1. M.C. Vaish & Sudama Singh: International Economics, Oxford & IBH.
2. K.C. Rana and K.N.Verma(2004-05) :International Economics, Vishal Publishing Co.Jalandhar,.
3. Francis Cherunilam (1998): International Economics, 3rd Edition, TataMcGraw Hill Publishing company.

**Reference Books:**

1. Bo Sodersten. (1980): International Economics.
2. Kindleberger, C.P.: International Economics, 5th Edition.
3. Paul R. Krugman and Maurice Obstfeld (2005): International Economics Theory and Policy, 6th Edition, Pearson Education.
4. Bhagwati. J: International Economics.

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

Sections	UNITs	No. of Questions	
		Theory	Problems
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	

**CORE THEORY – XIII**  
**MONETARY ECONOMICS**

<b>SUBJECT CODE:</b> <b>19PECO319</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: IV</b>	<b>CREDITS: 4</b>	<b>TOTAL HOURS: 90</b>

**Course Framework:**

*To demonstrate the role of money in Keynesian and Post-Keynesian approach.*

**Course Outcome:**

On completion of the course the students will be able

1. To demonstrate the role of money in Keynesian and Post-Keynesian approach.
2. To analyze the demand for money in Keynesian and Post-Keynesian.
3. To distinguish between Classical and New Tobin's views on interest and monetary policy.
4. To evaluate monetary system in India.
5. To analyse International monetary system.

**UNIT I: Money in Macro Economy (18 Hrs.)**

Major issues in Monetary theory - The Classical Approach; Fishers Equation - The Keynesian Approach: Keynes Reformulated Quantity Theory of Money – Critical Evaluation of Keynes Theory of Money and Price - Post – Keynesian Developments: Friedman theory – Empirical Evidence.

**UNIT II: The Demand for Money (18 Hrs.)**

Classical and Neo-Classical Theories of Money: Early Versions. Pigou and Cambridge School, etc., The Dichotomy between the Monetary Theory and Value Theory; Patinkin's Critique of Neo-Classical Theory. - Money in Keynesian Framework: Liquidity Preference (L-P) Theory and Further Developments in L-P Approach; Tobin, Boumal Models- Friedman, New Monetarism and its Critique

**UNIT III: The Supply of Money (18 Hrs.)**

Monetary Aggregates, Liquidity Aggregates and Divisia Index - H-Theory of Money Supply - Money Multiplier Process and Factors Affecting H - Exogeneity of Money Supply - Money Supply in India: its Components and Trends

**UNIT IV: Development Financial Institutions (18 Hrs.)**

Role, Growth and Structure of Development Financial Institutions in India - Types and Control of Non - Banking Financial Companies (NBFCs) by RBI- International Monetary System: IMF and International Liquidity. European Monetary System – Features of the Maastricht Treaty and Post Maastricht Treaty Developments.

**UNIT V: Monetary Management and Monetary Policy (18 Hrs.)**

Monetary Management – Rules vs. Discretion - Price Targeting vs inflation Targeting vs Exchange Rate Targeting - Monetary Policy – Challenges before Reserve Bank of India - Difficulties of Controlling Money Supply in an open Economy - Further Issues of Monetary Policy and Monetary Management in India.

**Recommended Text:**

1. Jadhav N., Monetary Economics for India, Macmillan India Ltd., 1994
2. Gupta S.B., Monetary Economics: Institutions, Theory and Policy, 1982

**Reference Books:**

1. Laidler, D.E.W.: The Demand for Money: Theories and Evidence, Allied publisher (Pvt) Ltd.
2. Pierce, D.G. and Shaw, D.M.: Monetary Economics: Theories, Evidence and Policy. Butter Worths, London.
3. R.B.I.: Working of the Monetary System in India; Report of Sukumoy Chakravarthi Committee, 1985.
4. Aschier, J. and Hsich, Ching Yao: Macro Economics, Income and Monetary Theory, Charles Merrill & Co, Ohio.
5. Report of the Committee on the Financial System 1991 – Narasimhan Committee.

**Question Paper Pattern:**

Section	Question Component	Numbers	Marks	Total
<b>Section A</b>	<b>Definition/Principle</b> Answer any 10 out of 12 questions (each in 50 words)	1-12	3	<b>30</b>
<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

Sections	UNITs	No. of Questions	
		Theory	Problems
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	

**Introduced Project work in lieu of two papers  
(Paper –XIV and Paper – XV)**

**ELECTIVE - V**  
**COMPUTER APPLICATION IN ECONOMIC ANALYSIS**

<b>SUBJECT CODE:</b> <b>19PECO321</b>	<b>THEORY</b>	<b>MARKS: 100</b>
<b>SEMESTER: IV</b>	<b>CREDITS: 3</b>	<b>TOTAL HOURS: 60</b>

**Course Framework:**

*To know the economics application in computer. To understand the use of computer tools in the analysis of statistical and mathematical methods in economics.*

**Course Outcome:**

On completion of the course the students will be able

1. Demonstrate different parts of computer and its application in business.
2. Demonstrate MS office, MS word, MS Excel, MS outlook, and MS Power point and MS Access.
3. Examine Electronic transaction and E-commerce.
4. Analyse Internet, Intranet and anti-virus programmes.
5. Demonstrate business related packages like Tally, SPSS, Tele meeting and Voice mail.

**UNIT I: Brief History of Computer**

**(12 Hrs.)**

Brief History of Computer – Application of Computer in Business – Parts of Computer – Steps in Programming – Algorithms – Flow Charts – Overview of Operating Systems – Computer Languages.

**UNIT II: MS Office**

**(12 Hrs.)**

MS Office – MS Word – MS Excel – MS Power Point – MS Outlook – MS Access.

**UNIT III: Introduction of E-Commerce**

**(12 Hrs.)**

Introduction of E-Commerce – Electronic data Interchange B to C transaction – B to B transaction – Electronic Payment – Protocol – SET Secured Electronic Transaction – Certification of Authentication – Electronic cash payment.

**UNIT IV: Introduction to Internet**

**(12 Hrs.)**

Introduction – Internet – Intranet – Security issues and solutions – Antivirus programmes – E-mail – Chat – Secured mails.

**UNIT V: Business related packages**

**(12 Hrs.)**

Business related packages like Tally, SPSS, Video Conferencing – Tele meeting, Tele fax, Net meeting, Voice mail.

**Recommended Text:**

1. Sanders, D.H. (1988): Computers Today, McGraw Hill (3 rd Edition), New York.
2. Sinha, P.K. (1992): Computer Fundamentals, BPB Publications, New Delhi.
3. Handbook of Statistical.
4. Trasa Bradley, Mathematical Economics.

**Reference Book:**

1. Rajasekaran, S. (1986): Numerical Methods in Science and Engineering, A.H. Wheeler, Allahabad.
2. Rajasekaran, S. (1986): Numerical Methods in Science and Engineering, A.H. Wheeler, Allahabad.
3. Sanders, D.H. (1988): Computers Today, McGraw Hill (3rd Edition), New York.
4. Sinha, P.K. (1992): Computer Fundamentals, BPB Publications, New Delhi.

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<b>Section B</b>	<b>Short Answer</b> Answer any 5 out of 8 questions (each in 300 words)	13-19	6	<b>30</b>
<b>Section C</b>	<b>Essay</b> Answer any 4 out of 6 questions (each in 1200 words)	20-25	10	<b>40</b>

**Distribution of Questions:**

Sections	UNITs	No. of Questions	
		Theory	Problems
<b>Section A</b>	UNIT – 1	3	
	UNIT – 2	2	
	UNIT – 3	3	
	UNIT – 4	2	
	UNIT – 5	2	
<b>Section B</b>	UNIT – 1	2	
	UNIT – 2	2	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	
<b>Section C</b>	UNIT – 1	1	
	UNIT – 2	1	
	UNIT – 3	2	
	UNIT – 4	1	
	UNIT – 5	1	