

**Part-I**  
**Paper – I**  
**First Half**  
**Full Marks: 50**  
**Microeconomic Theory - I**

<b>. Topic</b>	<b>Lectures</b>
General Concept	05
<b>Theory of Demand</b>	<b>17</b>
<ul style="list-style-type: none"> <li>• The Marshallian Approach: measurement of utility – derivation of demand curve – consumer’s surplus. 05</li> <li>• Indifference curve approach: indifference curve and its properties, the consumer-pathological cases – price consumption curve and income consumption curve, - price effect, income effect and substitution effect, derivation of demand curve – Giffen paradox – market demand. 06</li> <li>• The Revealed Preference approach, derivation of demand function from Revealed Preference approach. 04</li> <li>• Elasticities of demand – price, income and cross elasticities, relation between price elasticity of demand, price and marginal revenue, relation between price elasticity and total expenditure. 02</li> </ul>	
<b>Theory of Production and Cost</b>	<b>18</b>
Production function: the neo – classical production function – relation between total, Average and marginal productivities – law of variable proportions – the fixed coefficient Production function.	03
<ul style="list-style-type: none"> <li>• Iso-Profit curve and Iso-cost line: definition of Iso- Profit curve, economic region of production, marginal rate of technical substitution, equilibrium of the producer - constrained output maximization and constrained cost minimization, output and substitution effects – elasticity of substitution – expansion path, returns to</li> </ul>	09

scale - homogeneous and homothetic production function, the Cobb Douglas and CES production function.

- Cost function: different concepts of costs, short run cost analysis and long run cost Analysis- relation between the expansion path and cost function – total, average and Marginal cost curves – long run cost curves as envelope of short run cost curves. 06

**Theory of perfect competition** 20

Perfect competition and pure competition— 02

Short run and long run equilibrium of a competitive firm-

- Short run and long run supply curves—Long run equilibrium of the competitive industry- 05
- price determination in a competitive industry- existence, uniqueness and static stability of equilibrium – 07
- long run supply curves of the industry- effects of external economies and diseconomies – 04
- effect of change in cost – effect of imposition of tax- effect of price control. 02

References:

1. Samuelson and Nordhaus : Economics
2. Koutsoyiannis : Microeconomic Theory
3. Ferguson and Gould :Microeconomic Theory
4. H. Varian : Intermediate microeconomics
5. Henderson and Quandt : Microeconomic Theory

## Paper – I - Second Half

### Macroeconomic Theory – I

Full Marks: 50

- PAPER I, GROUP B: MACROECONOMICS (55 classes)

#### 1. Introduction: (04 Classes)

- Introduction to Economics and distinction between microeconomics and macroeconomics; circular flow of income: 1 classes
- Scope and nature of Macro Economics : 1 classes
- Introduction to major macroeconomics problems of India; Targets & Instruments of macroeconomic policy: 1 classes
- Snapshot of current macroeconomic scenario in India: A brief review since 2008-09: 1 class

#### 2. The National Income and Products Accounts: (10 classes)

- Definition, Concepts and Measurement of GNP, NNP, GDP, NDP, NI, DI: 2 class
- The flow of product method and the flow of expenditure method: 2 classes
- Value Added Method (in presence and absence of government): 2 class
- Concept of GDP deflator and Price Indices: CPI, WPI, GDP Deflator and their comparison: 1 class
- Interrelation between measures of National Income in the absence and presence of Governmental sector and International Transactions: 1 class
- The Accounting Identity of Saving and Investment: 1 class
- Problems of using National Income as a measure of Economic Welfare: 1 class

#### 3. The Simple Keynesian Model of Income Determination: (11 classes)

- Introduction to Keynesian economics: 1 class
- Concept of Inventory Accumulation and De-accumulation: 1 class
- Keynesian Consumption function and its properties: 1 class
- Saving Function & its properties: 1 class
- The divergence between investment and saving motivations: 1 class
- Equilibrium in absence of government, Keynesian Cross and stability: 2 class
- Equilibrium in presence of government, Keynesian Cross and stability: 1 class
- Comparative static analysis – the Multiplier analysis with and without governmental sector – Investment Multiplier, Government Expenditure Multiplier, Balanced Budget Multiplier; Limitations of the multiplier analysis: 2 class
- The Paradox of Thrift : 1 classes

#### 4. Introducing the Money Market: (10 classes)

- Three motives of holding money - Transactions, Precautionary and Speculative motives : 1 class
- Introduction to bond market; relation between bond price and interest rate: 1 classes

- c. Keynesian Liquidity Preference Theory; Indeterminacy of Rate of Interest in the Liquidity Preference Theory; the Liquidity Trap: 1 classes
  - d. The Inventory Theoretic Approach to Transaction Demand for Money and Baumol and Tobin model of money demand-interest and income elasticity of money demand: 2 classes
  - e. Supply of Money – various measurements of money supply: 2 classes
  - f. Credit creation by commercial banks; Money Multiplier; Interest sensitivity of Money Supply: 2 classes
  - g. OMO: 1 class
5. **Interaction between Commodity Market & Money Market: (10 classes)**
- a. Criticisms of Keynesian Model, Investment and interest rate: 1 class
  - b. Product Market Equilibrium and IS curve, Derivation of IS curve from Keynesian Cross: 1 class
  - c. Mathematical derivation of IS curve; interpretation of slope of IS curve: 1 class
  - d. Introduction to LM curve and its derivation, Mathematical derivation of LM curve and interpretation of slope: 1 class
  - e. Equilibrium in IS-LM Model; state of markets off the IS and LM curve and stability analysis: 1 classes
  - f. Comparative static analysis (graphical and mathematical) of shifts in Saving, Investment, Government Expenditure, Taxation, Money Demand, and Money Supply Schedules : 2 classes
  - g. Introduction to open-economy model; import multiplier: 1 classes
  - h. Comparison between investment and government expenditure multiplier in closed and open economy model (graphical analysis): 1 class.
  - i. Comparison between investment and government expenditure multiplier in closed and open economy model (Mathematical analysis): 1 class.
6. **The Classical System: (10 Lectures)**
- a. Difference between Short run and long run and introduction to Classical Economics: 1 class
  - b. Assumptions of Classical Model; Says Law and Walrus Law-1 Class
  - c. The Classical Theory of Rate of Interest - Loanable fund theory as a synthesis between Classical Theory and Keynesian Liquidity Preference Theory of Interest – the Complete Classical Model: 2 classes
  - d. Savings and Investment in Classical Model and departure from CKM: 1 Class
  - e. Equilibrium in labour, capital: 1 classes
  - f. Derivation of Supply Curve; Classical Dichotomy: 1 Class
  - g. The classical quantity theory of money and its criticism; 1 Class
  - h. AD curve and PME and MME: 1 class
  - i. Monetary Neutrality: 1 class

**Paper – II - First Half:**

**Selected Features of Indian Economy**

**Full Marks: 50**

**1. Structure of Indian Economy:**

Sectoral distribution of NI	03 lectures
Occupational structure & its changes	02 lectures
Income inequality	03 lectures
Poverty	03 lectures
Population growth	02 lectures
Unemployment	03 lectures
Unorganized Labour market: Female & Child Labour	04 lectures
<b>2. Agriculture:</b>	
Land tenure system	02 lectures
Land reform	03 lectures
Farm size & Productivity	02 lectures
Green Revolutipon	03 lectures
Agricultural credit	02 lectures
Marketed surplus	02 lectures
Food security & PDS	04 lectures
<b>3. Industry:</b>	
De-industrialization in pre-independent India	02 lectures
Industrial policies	04 lectures
Industrial Licensing Policies	02 lectures
Competition Policy	02 lectures
Small industries	03 lectures
<b>4. Service:</b>	
Growth & contribution of Service Sector	06 lectures
IT industry	04 lectures

## References:

Dutta and Sundharam: Indian Economy  
Mishra and Puri: Indian Economy  
Agarwal : Indian Economy  
V. K. R. V. Rao: India's National Income  
P. Chowdhury: Indian Poverty and Development  
Lucas and Papanek (ed): Indian Economy  
Bhagwati and Chakraborty: Contributions to Indian Economic Analysis  
Kapila (ed): Indian Economy  
A. K. Sen: Employment, Technology and Development

### Paper – II - Second Half

#### Statistical Methods-I

Targeted Number of Lectures: 80  
Full Marks: 50

#### 1. Tabular and Diagrammatic Presentation of data:(10Lectures)

Statistical Data

Classification and presentation

Methods of collection of data

Difference between variable and attributes

Frequency distribution and its diagrammatic presentation

Choice of class interval

Diagrammatic representation of frequency distribution

Frequency curve

Cumulative frequency distribution (more than and less than)

Ogive

Simple numerical exercise

#### 2. Measures of Central Tendency (13 Lectures)

Arithmetic mean (for both grouped and ungrouped data) (1)

Median (for both grouped and ungrouped data) (1)

Mode (for both grouped and ungrouped data) (1)

Comparison of mean, median and mode (2)

Geometric mean (for both grouped and ungrouped data) (1)

Harmonic mean (1)

Composite mean (average from combined data) (1)

Properties for all these measures (2)

Simple numerical exercise (3)

#### 3. Measures of Dispersion (17 Lectures)

Absolute measures (1)  
Range, mean deviation and Standard deviation and Quartile Deviation (1)  
Relative measures (1)  
Curve of concentration (1)  
Simple numerical exercise (2)  
Measurement of economic inequality: nature of distribution of income and wealth graduating from income distribution – Lorenz Curve representation of income distribution – Gini Coefficient and Lorenz Curve (1)  
Simple numerical exercise (3)  
Moments (1)  
Measures of skewness and Kurtosis: moments, skewness and kurtosis definition (1)  
Relationship between central and non-central moment (1)  
Sheppard's correction (1)  
Simple numerical exercise (3)

#### 4. Bivariate Data: Simple Correlation and Regression Analysis (15 Lectures)

Scatter diagram (1)  
Simple correlation coefficient and its properties (2)  
Calculation from grouped and ungrouped data (1)  
Limitations of correlation coefficient (1)  
Simple regression analysis (2)  
Properties of regression line (1)  
Relationship between correlation coefficient and regression coefficient (2)  
Spearman's rank correlation coefficient (without tie) (1)  
Kendall's rank correlation coefficient (1)  
Simple numerical exercise (3)

#### 5. Index Numbers (13 Lectures)

Purpose and uses of index number (1)  
Problems of construction (2)  
Different formulae for price and quantity index numbers (2)  
Tests for index numbers (1)  
Chain index (2)  
Cost of living index (2)  
Simple numerical exercise (3)

#### 6. Time Series (12 Lectures)

Nature and decomposition of time series (2)  
Analysis of trend (2)  
Polynomial trend (1)  
Non-linear growth curves (1)  
Moving average method (2)  
Seasonal component (1)  
Simple numerical exercise (3)

### **Part-II**

#### **Paper – III - First Half**

#### **Microeconomic Theory – II**

**Full Marks: 50**

<b>. Topic</b>	<b>Lectures</b>
<b>Imperfect Competition</b>	16
Theory of monopoly: Characteristics- AR and MR curves under monopoly-Relation among AR , MR and Elasticity of demand- Equilibrium under monopoly-major features of monopoly- index of monopoly power-	05
• price discrimination –when possible?- when desirable? – degree of price discrimination- equilibrium under price discrimination- Is price discrimination desirable? Equilibrium under multiplant monopoly- Monopsony - Equilibrium under bilateral monopoly	07
• Monopolistic competition: Short run and long run equilibrium- excess capacity.	04
<b>Theory of oligopoly</b>	14
Characteristics of oligopoly- non-collusive oligopoly models of Cournot and Stackelberg –	08
• collusive oligopoly – price leadership – market sharing model- price rigidity under oligopoly.	06
<b>Theory of factor pricing</b>	20
Demand for factors of production - Determinants of price elasticity of demand for a factor – marginal productivity theory and its limitations	08
• Theory of wage - Choice between work and leisure – derivation of individual labour supply curve – total labour supply curve – demand for labour – determination of equilibrium in a competitive labour market- collective bargaining and wage rate.	04
• Theory of rent - Transfer earning and economic rent – quasi rent – Rent and price	04
• Theory of profit - Gross and net profit-elements of profit- risk and uncertainty theory-Innovation theory of profit.	04



## **General equilibrium and economic welfare 10**

Partial and general equilibrium – a formal statement of general equilibrium approach- the concept of Pareto optimum- Pareto optimality in consumption-Pareto optimality in production-General Pareto optimality condition.

1. Koutsoyiannis : Microeconomic Theory
2. Ferguson and Gould : Microeconomic Theory
3. H. Varian : Intermediate microeconomics
4. Henderson and Quandt : Microeconomic Theory

### **Paper – III - Second Half**

#### **Macroeconomic Theory – II**

**Full Marks: 50**

### **1. The Complete Keynesian Model:**

Labour market	02 lectures
Aggregate Demand & Aggregate Supply	04 lectures
Interaction of Commodity, Money & labour market	04 lectures
Determination of Equilibrium: Effects of changes in money supply	04 lectures
Comparison with Classical system	02 lectures
Real Balance Effect	02 lectures

### **2. Consumption Function:**

Empirical findings regarding Con. Fun.	02 lectures
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Alternative theories regarding its behavior 08 lectures

### **3. The Investment Function:**

MEC & MEI criterion of Investment 04 lectures

NPV criterion of Investment 03 lectures

Acceleration Principle of Investment 06 lectures

### **4. Theories of Inflation:**

The Quantity theory approach of inflation 06 lectures

Demand Pull Inflation & Inflationary Gap analysis 02 lectures

Cost Push & Mark Up inflation 03 lectures

The Philips Curve 04 lectures

Consequences & measures to control inflation 04 lectures

### **5. Economic Growth:**

Harrod Model: 03 Classes

Domar Model: 03 Classes

Comparison between Harrod and Domar model: 02 Classes

### **References:**

Mankiew – Macroeconomics

Ackley – Macroeconomic Theory and Policy

Branson – Macroeconomic Theory and Policy

Dornbusch and Fisher: Macroeconomics

Froyen - Macroeconomics

Levacic – Macro Economics

Rowan, D.C. – Output, Inflation & Growth

## Mathematical Economics

Full Marks: 50

### Linear Programming:

Linear Programming Technique as a Tool for Optimization 01

General Formulation of the 2

LP Problem 02

Applications in Economics 02

Graphical Solutions of Some Standard 01

Problems (Maximization & Minimization) 2

Concepts of Slack Variable, Basic Feasible 02

Solution – Solution of Some Simple Problems by Simplex Method (Maximization Case only) – 02

The Dual Problem – Economic Interpretation of Duality. 02

### Input-Output Analysis:

Basic Concept of Input-02

output Analysis – Assumptions & Structure of the Leontief Static Open Model (2.2 Case) 05

Solution in such a Model 02

Hawkins-Simon Condition and its Economic Interpretation 04

Price System in L S O M (2.2 Case) with Economic Implications. 04

### Basic Game Theory:

**Basic Concepts & Assumptions of Game Theory** –02

Two-Person Zero-Sum Game with Saddle Point – 02

Concept of Dominance – 02

Elements of Non-Zero-Sum Game – 02

Prisoner's Dilemma – 02

Concept of Nash Equilibrium.-03

### Decisions under Uncertainty:

Maximin,01

Maximax, 01

Hurwicz, 01

Laplace-01

Savage -01

### References:

A.C. Chiang- Fundamental Methods of Mathematical Economics, McGraw – Hill International Edition

Dorfman, Samuelson & Solow-Linear Programming and Game Theory: An Economic Analysis

N.D.Vora: Quantitative Techniques in Management, Tata McGraw-Hill

Sharma: Operation Research: Theory and Applications, Macmillan India Ltd.

W.J.Baumol: Economic Theory and Operations Analysis, Prentice Hall

**Paper – IV**  
**Second Half**  
**Statistical Methods – II**

**Full Marks: 50**

**Set Theory**

Set Notations –01

Universal Set –01

Subsets – 01

Null Set –01

Finite & Infinite Sets –01

Convex Sets – - 01

Convex Sets – 01

Relationships between Sets – 01

Basic Set Operations. 01

Applications: Consumer Preference & Budget in terms of Sets 01

**2. Probability Theory**

Random Experiments –02

Sample or Outcome Spaces (Discrete and Continuous case) – 02

Events and their Algebra – 02

Mutually Exclusive, Equally Likely and Collectively Exhaustive Events – 02

Probability: Classical and Axiomatic Definition –02

Complementary Event – 02

Theorem of Total Probability – 02

Conditional Probability –02

Theorem of Compound Probability – I-02

Independent Events, Bayes' Theorem.02

**3. Random Variables and related concepts:**

Random Variables – 02

Probability Mass and Density Functions – 02

Expectation and Variance of Random Variables (for Random Sampling With and Without replacement) -05

**4. Univariate Probability Distributions:**

Binomial, -02

Poisson, -02

Normal Distributions – Mean, Variance. Moment Generating Functions. -05

**5. Sampling Theory and Sampling Distributions:**

Population and Sample –02

Parameter and Statistic –02

Random Sampling – 02

Practical Methods of Drawing Random samples – 02  
 Random sampling Numbers –02  
 Sampling Distribution – 02  
 Standard Error-01  
 Sampling Distributions associated with Normal Population, Expectation and Standard-03  
 Error of Sample Mean, Chi-Square Distribution, Student's t Distribution, -03  
 F-Distribution (definition and importance, properties and uses only) -02  
**7. Estimation:**  
 Desirable Properties of estimators –02  
 Unbiasedness, Minimum Variance – 03  
 Simple Methods of Point Estimation –02  
 Maximum Likelihood. Estimators and their properties – 03  
 Maximum Likelihood estimation of the parameter of Binomial, Poisson and Normal Distribution-05  
**8. Testing of Hypothesis:**  
 Null hypothesis & Alternative Hypothesis – 02  
 Confidence Intervals – 01  
 Testing of Hypothesis – 01  
 P-value – 01  
 Type-I and Type-II Errors – 02  
 Simple applications of tests for the Mean and Variance of a Univariate Normal Population. -04

**References:**

Nagar and Das – Basic Statistics  
 Mathai & Rathie – Probability and Statistics  
 Goon, Gupta and Dasgupta – Fundamentals of Statistics, Vol. I & Vol. II  
 R Spiegel and L.J. Stephen. Statistics, Schaum Series  
 Sheldon Ross: A First Course in Probability, 9<sup>th</sup> Edn. Pearson  
 E. Rukmangadachari: Probability and Statistics-Pearson

**Paper – V - First Half**

**International Economics**

**Full Marks: 50**

• **PAPER 5: GROUP A: INTERNATIONAL ECONOMICS (35 CLASSES)**

- 1. Introduction to International Trade: (2 classes)**
  - a. Basis of Trade, Cause of arbitrage: demand and supply bias: 1 class
  - b. Merchantist View of Trade, Absolute Advantage Theory: 1 class

**2. Theory of Trade (18 Classes)**

- a. The Ricardian theory: Assumptions, Concept of PPF, CIC and Equilibrium: 3 Classes
- b. H-O Model: Assumptions, Proof (Using physical and price definition), Limitation: 6 classes
- c. Comparison of CA in the two ( HO and Ricardo): 1 class
- d. Commodity and Factor prices under trade- 1 class
- e. Factor price equalization, factor intensity reversal and factor Prices: 2 classes
- f. Leontief paradox: 1class
- g. Gains from trade and income distribution 1 class
- h. Offer Curve: Definition, derivation (using TICs and trade triangle), and international equilibrium: 2 classes
- i. Rbynski theorem, Metzler Paradox: 1 class.

**3. Trade Intervention (6 classes)**

- a. Theory of Tariff and income distribution – the Stolper-Samuelson theorem: 1class
- b. Tariffs and its effect on terms of trade, domestic prices, national income in partial and general framework: 2 classes
- c. Optimum tariff: 1 class
- d. Quotas and quantitative trade restrictions -effects of quotas and quantitative trade restrictions and balance of payments, the infant industry argument: 1 class
- e. Problems of international reserves and liquidity and of development finance: 1 class

**4. Balance of Payments and Problems of Adjustment (7 classes)**

- a. The mechanism of adjustment under fixed exch. Rates , automatic adjustment under Gold Standard: 1 class
- b. Expenditure reducing and Expenditure switching policies: 2 classes
- c. Ddevaluation and the elasticity and absorption approaches : 2 classes
- d. Direct controls- mechanism of adjustment under flexible exchange rate and uncertainty, Speculation and the stability of exchange rate and inflation: 1 class
- e. Costs and benefits of flexible exchange rates vis-a-vis fixed exchange rate: 1 class

**5. IMF and its role- as a source of international liquidity. SDRs, IBRD, World Bank: (2 classes)**

**Paper – V - Second Half**

**Money and Capital Market**

**Full Marks: 50**

- 1. Definition of Money Market (12 Lectures)
- 2. Commercial and the Central Bank (15 Lectures)
- 3. Non-Banking Financial Intermediaries (NBFIs) (10 Lectures)
- 4. Introduction to Capital Market (15 Lectures)
- 5. Indian Stock Market terminology (12 Lectures)
- 6. Capital Market Regulatory Authority (6 Lectures)

## References:

- S.B. Gupta: Monetary Economics-Institutions, Theory and Policy.  
E. Gordon, K. Natarajan: Financial Markets and Services.  
Varshney & Mittal: Indian Financial System  
D.M.Mithani: Money Banking International Trade and Public Finance.  
Desai, V.: The Indian Financial System.  
Bhole: Indian Financial System

### Paper – VI - First Half

#### Development Economics

Full Marks: 50

. Topic	Lectures
<b>. Economic Development</b>	05
Meaning of Development – Growth and Development – Broad Indicators of Economic Development – Per capita Income –	02
• PQLI – Basic needs approach – Human Development Index – Gender Development Index – Human Poverty Index.	
	03
<b>Persistence of Underdevelopment and Way to Develop</b>	10
Characteristics of underdevelopment – Obstacles to underdevelopment – Trap Models – Vicious circle of poverty – Critical minimum effort thesis –	04
• Low level equilibrium trap – Process of cumulative causation – Concept of surplus labour – Surplus labour as	

<ul style="list-style-type: none"> <li>potential saving –</li> <li>• Economic development with unlimited supplies of labour (Lewis Model).</li> </ul>	03
	03
<b>Development Strategy</b>	07
Capital intensive Vs Labour intensive technique – Choice of technique in a labour surplus economy – Sustainable development	
<b>Trade and Development</b>	05
Trade as an engine of growth – Terms of trade and economic development (Prebisch – Singer Thesis) – Imports substitution Vs export promotion.	
<b>Development and Underdevelopment as a Historical Process</b>	08
<ul style="list-style-type: none"> <li>Dependency theory of Baran – Frank’s Theory of colonial exploitation</li> <li>• Merchant capital in shaping underdevelopment (Kay) – Emmanuel’s theory of unequal exchange.</li> </ul>	02
	03
	03
<b>Historical Evolution from GATT to WTO</b>	10
<ul style="list-style-type: none"> <li>Objectives of GATT – Main resolutions of Uruguay Round – WTO – Objectives – Functions –</li> <li>• Advantages and disadvantages of less developed countries – Role of less developed countries in the WTO regime..</li> </ul>	05



**References:**

1. Thirlwall : Growth and Development
2. Debraj Roy : Development Economics
3. Meier (ed) : Leading Issues in Economic Development
4. K. Basu : A Critique of Less Developed Economy
5. Debesh Bhattacharya : Political Economy of Development
6. Pearce and Turner : Economics of Natural Resources and the Environment..

**Paper – VI - Second Half:**

**Classical Political Economy**

Targeted Number of Lectures: 70

Full Marks: 50

1. Classical Background (20 Lectures)  
Chief features of classical system (5)  
Adam Smith Labour Theory of Value (5)  
Ricardian one sector model (5)  
Classical political economy and Marx (5)
2. Stages of Development (13 Lectures)  
Marxian theory of stages of growth (6)  
Rostow's theory of stages of growth (7)
3. Marx's Theory of Value (12 Lectures)  
Qualitative and quantitative aspects of value (1)  
Commodity fetishism (3)  
Constant and variable capital (1)  
Circuits of capital (3)  
Surplus value (3)  
Organic composition of capital (1)
4. The Reproduction Schemes & Accumulation of Capital (10 Lectures)  
Industrial reserve army (5)  
Accumulation and technological change (5)
5. Origin of Surplus Value and Profits (15 Lectures)  
The law of falling rate of profit (2)  
Theories of Crisis: Under consumption, realization crisis, disproportionality crisis. (13)

**Paper – VII**  
**First Half**  
**Econometrics & Quantitative Technique**  
**Full Marks: 50**

<b>TOPIC</b>	<b>NO OF LECTURES</b>
<b>1. Econometrics:</b> Concept - Types – theoretical and applied econometrics- importance and role of Econometrics in economics- Classical Methodology of Econometrics.	<b>10</b>
<b>2. The Classical Linear Regression Model (Two variable case)</b> The Classical Ordinary Least Square Method (CLSM) – Assumptions – estimation of parameters in two variable case – Properties of least-square estimators – testing of regression coefficients – The Gauss-Markov Theorem – BLUE – Goodness of Fit- the Coefficient of determination R <sup>2</sup> – Numerical Problems.	<b>20</b>
<b>3. The Classical Linear Regression Model (Three variable case)</b> The Classical Ordinary Least Square Method (CLSM) – estimation of parameters with Two independent variables – Violation of the Assumptions of CLSM – Multicollinearity, Heteroscedasticity and Autocorrelation (Concepts only).	<b>20</b>
<b>4. Technique of Dynamic Analysis:</b> Notion of Stationary values and Stability – First order Differential Equation-First and • Second Order Linear Difference Equation with constant Terms Applications: Domer’s Analysis of Growth – Price Dynamics in a Competitive Market – The Cobweb Model – Dynamic Multiplier – Multiplier – Accelerator Interaction Model.	<b>20</b>

**Paper – VII**  
**Second Half**  
**Public Economics and Environmental Economics**  
**Full Marks: 50**

1. Introduction to instruments and objective of Public Finance (10 Lectures)

2. Principles of Taxation (25 Lectures)
3. Compensatory Fiscal Policy (20 Lectures)
4. Environment and negative externalities: (8 Lectures)
5. Pollutions and other environmental Degradations (7 Lectures)

References:

1. Musgrave - Theory of Public finance
2. Subrata Gupta - Public Finance
3. Hanley Shogren & White - Environmental Economics
4. Titenberg - Environmental Economics
5. R.N. Bhattacharya ed. - Environmental Economics An Indian perspective

**Paper – VIII**  
**First Half**  
**Indian Economic Planning**  
**Full Marks: 50**

• *PAPER 8: GROUP A: INDIAN ECONOMIC PLANNING (30 CLASSES)*

**1. Role of Planning (6 classes)**

- a. Planning: Definition and need; centralized vs decentralized planning, indicative planning: 1 class
- b. Planning in a mixed economy; Planning Vs Market: 1 class
- c. Indian experience Pre-1991 and Post-1991 plans: major plans, objectives and performance: 2 classes
- d. Major objectives and achievements of Indian plan: 1 classes
- e. Analysis of success and failures of Indian plans: 1 class

**2. Monetary Policy and Plans (4 classes)**

- a. Objectives of RBI's monetary policy, Instruments of monetary policy (1 class)
- b. Monetary policy in recent years (2 classes)
- c. Recent problems of nationalized banks (1 class)

**3. Indian Tax Structure during Plan Period (6 classes)**

- a. Trends, problems, reforms in tax structure; characteristics of a good tax system and where India stands: 2 classes
- b. Centre – State Financial Relation (2 classes)
- c. 11<sup>th</sup> and 12<sup>th</sup> plan details (1 classes)

- d. Concepts of various types of budget deficits 1 class
  
- 4. **The External Sector** (5 classes)
  - a. Balance of payments: definition, trend and components (1951 to 2014): 1 classes
  - b. Role of foreign exchange reserves and relation between exchange rate and India's macroeconomic variables: 1 classes
  - c. Problems and policies in recent years : 2 classes
  - d. Exim policy of the government (up to recent one): 1 classes
  
- 5. **Public Sector in India** (5 classes)
  - a. Public Sector in India: overview : 1 class
  - b. Role of Public Sector in India during the plan period: 2 classes
  - c. Problems and policies with special emphasis on disinvestment policy: 2 classes
  
- 6. **Financial Sector Reforms** (4 classes)
  - a. Banking sector reform (3 classes)
  - b. Insurance Sector Reform (1 classes)

**Paper – VIII**  
**Second Half**  
**Group A: Computer Application (Practical)**  
**Full Marks: 25**

*It is a Lab Based Practical Paper. The student shall learn the operations through hands – on Training followed by practical tests.*

**The Nature and Sources of Data for Economic Analysis**  
**(06 Lectures)**

Types of Data – Time Series, Cross Section – Basic Data Presentation  
 , Introduction to Excel/Spreadsheet, Excel Basic, Formulas and Functions, Sort and Filter.

**Graphical Representation of Data Sets: (12 Lectures)**

Pie Chart, Bar Chart, Histogram frequency Polygon, Ogive, Bivariate Scatter Diagram.

**Using Spreadsheet / Excel for Statistical Analysis Estimation of Descriptive Statistics: (12 Lectures)**

Mean, Median, Mode, Standard Deviation, Simple Correlation, Rank Correlation, Correlation, Classical Regression.

**Group B: Project**  
**Full Marks: 25**

**(Project Report: 20 Marks)**  
**(Viva-Voce: 05 Marks)**

**Project:** Introduction – Motivations – Literature Review – Objectives – Methodology – Estimator – Policy Suggestion – Bibliography

**Project to be done on a small Primary sample of size 20 or more observations.**

**References:**

Data Analysis Using Microsoft Excel – Ash Narayan Sah Excel Books India

Excel 2010 For Dummies Colin Banfield, John Walkenbach

Gray Koop (2009), Analysis of Economic Data, 3<sup>rd</sup> Edition (University of Strathclyde, UK)

BA/BSC General Course:

• **PAPER I: MICROECONOMICS**

**1. Consumer's Behaviour:**

- a. Utility: Concept; Total and Marginal Utility-Law of Diminishing Marginal Utility: 4classes
- b. Law of Demand. Relation between Law of Demand and Law of Diminishing Marginal Utility; Derivation of demand in one-commodity and two-commodity framework: 2 classes
- c. Indifference Curve: Definition and Characteristics, Axioms and Derivation of IC: 3 classes
- d. Consumer's Equilibrium-Income Effect and Substitution Effect and Price Effect; Slutsky's and Hick's Decomposition: 6 classes
- e. Derivation of demand curve from Price Effect: 1 class
- f. Normal, Giffen and Luxury Goods: 2 classes
- g. Elasticity of Demand: Price Elasticity and Income Elasticity of Demand Measurement of Price Elasticity (Revenue Method and Point Method): 2 classes

**2. Producer's Behavior:**

A. Production Function: AP, MP and their Derivation from TP Curve  
Return to factor and Returns to Scale: 10 Classes

B. Cost of Production: Real Cost and Opportunity Cost, Fixed and Variable Cost, Shape of Cost Curves, Relation between Average Cost and Marginal Cost: 12 Classes

C. Total Revenue, Marginal Revenue and Average Revenue: 1Class

Relation between Total Revenue, Average Revenue and Marginal Revenue: 1Class  
Relation between Average Revenue, Marginal Revenue and Price Elasticity of Demand: 2 Classes

### 3. Market Morphology:

A. Perfect Competition, Monopolistic Competition, Oligopoly, duopoly and Monopoly : 05 Classes

B. Short-run and Long-run Equilibrium under perfect Competition : 03 Classes  
Price discrimination: 02 Classes

C. Price and Output Determination under monopoly: 04 Classes

### 4. Theory of Distribution:

- a. Marginal Productivity Theory of Distribution-Factor Price Determination: 2 classes
- b. Rent: (a) Ricardian Theory, (b) Modern Theory: 3 classes
- c. Wage: Distinction between Money Wage and Real Wage-Factors Determining Real Wage-Role of Trade Unions in Wage Determination under competitive set up: 5 Classes
- d. Interest: Real and Money Interest – Lovable fund and liquidity preference theory of interest: 4 classes
- e. Profit: Alternative thesis of profit: 2 classes

## **ECONOMICS GENERAL**

### **Paper – II**

#### **Macroeconomics**

**100 Marks**

#### **TOPIC**

#### **NO OF LECTURES**

- |   |    |
|---|----|
| 1. National Income: Distinction between-Gross and Net National Income Different Methods of Measuring National Income. | 10 |
| 2. Money: Function of Money-Value of Money-Different Concepts of Money (M1, M2, ETC)                                  | 10 |

3. Quantity Theory of Money: Fisher's Version and Cambridge Version L10 - Concept of Classical Theory of Employment and output – Say's Law of markets. 10
4. Simple Keynesian Theory of Income and Employment: Concept of Effective Demand – Keynesian Consumption Function – Relation Between Average and Marginal Propensity to Consume – Simple Keynesian static Multiplier Theory – Investment. 14
5. Concept of Inflation, Deflation and Stagflation: Inflationary Gap –Distinction between Demand-Pull and Cost-Push inflation – Effect of 4 Inflation – Anti-inflationary Monetary and Fiscal Policy, Construction of CPI and WPI & its implications. 12
6. Banking: Functions of Commercial Banks – Credit Creation - L8 Functions of Central Banks – Credit Control Methods. 08
7. Public Goods: Characteristics – Exclusion Principle – Non Applicability of exclusion Principle. 12
8. Principles of Taxation: Benefit and Ability to Pay approach – Direct And Indirect Taxation – Regressive, Progressive, Proportional Taxation – Public Debt – Internal and External – Burden of Debt.
9. International Trade: Distinction between Internal and International Trade –Basis of Trade – Absolute and Comparative Advantage – Arguments for free Trade and Protection. 12

**Paper – III:  
Problems of the Indian Economy**

**100 Marks**

1. Current Features of the Indian Economy: 05 Classes
2. National Income of India Trend, Estimation and Distribution: 04 Classes
3. Population: Trends of Population Growth – Population Policy of the Govt: 07 Classes
4. Dualism in the Indian Economy: Poverty Line-Poverty Eradication Programmes in India: 05 Classes
5. Agriculture – Causes of Low Productivity: 07 Classes

**Paper-IV  
Group A: Development Economics 50 Marks**



1. Distinction between Economic Growth and Economic Development: 02 Classes

Net National Income and Per Capita Income as Growth Indicators: 02 Classes

Concept of HDI: 01 Classes

2. Development Planning and its necessity: 02 Classes

balanced vs. unbalanced Growth: 02 Classes

Complementary Roles of Agriculture and Industry: 04 Classes

3. Population and Economic Development: 05 Classes

4. Domestic Capital Formation in an Underdeveloped Country: 04 Classes

Incentives for Saving and Investment: 03 Classes

5. Foreign Investment: Different forms. Their Roles in Economic Development: 05 Classes

6. Role of IMF and World Bank in economic development of the LDCS: 06 Classes

7. Elementary concepts of Externality: 04 Classes

#### **Paper –IV**

#### **Group B: Elementary Statistics 50 Marks**

1. Meaning of Statistics , Variable and Attribute, primary and Secondary Data: 02 Classes

Population and Sample, Complete Enumeration (or Census) and Sample Survey: 05 Classes

Classification of data and Tabulation: 02 Classes

2. Chart and Diagram: Objects of Diagrammatic Representation -

Types of Charts and Diagrams- Line Diagram, Bar Diagram, Pie Diagram, Pictogram: 12 Classes

3. Frequency Distribution: Observation and Frequency – Ungrouped

Frequency Distribution – Construction of Frequency Distribution-  
Cumulative Distribution –Diagrammatic Distribution: 12 Classes

4. Measures of Central Tendency: Arithmetic Mean(AM) (Applications

Of statistical Tools up to this); Geometric Mean (GM), Harmonic  
Mean (HM), Median, Mode: 08 Classes

5. Measures of Dispersion: Their Meaning and Necessity, Range

Quartile Deviation, Mean Deviation (MD), Standard Deviation (SD),  
Coefficient of Variation (CV): 12 Classes

6. Land Reforms: Meaning – Importance – Evaluation of the Programmes.	L8
7. New Technology and Green Revolution and its effects.	L6
8. Effects of GATT on Indian Agriculture.	L2
9. Industry: Role of Small – Scale and Large –Scale Industries in India’s Economic Development – Problems and Solutions, Disinvestment Policy.	L10
10. Banking: Role of Indian Commercial Banks – Credit Control Policy of Reserve Bank of India – Money Market in India – Call Money Market, Repo, reverse repo rate, TBs, CDs	L8
11. Indian Public Finance: Sources of Revenue of Union and State Government – Union-State Financial Relation.	L10
12. India’s Foreign Trade: Volume and direction of trade in the post Liberalization Period.	L6
13. Indian Planning: Achievements and failure of India’s Five year Plans.	L10