The University of Burdwan
Syllabus for B.A./B.Sc. Honours
(1+1+1 Pattern)
in
Economics
with effect from 2008-2009

Syllabus for B.A. / B.Sc. Honours (1+1+1 Pattern) in Economics

Part-I

Paper – I - First Half: **Microeconomic Theory - I**

Paper – I - Second Half: **Macroeconomic Theory – II**

Paper – II - First Half: **Mathematical Economics**

Paper – II - Second Half: **Indian Economic History**

Part-II

Paper – III - First Half: **Microeconomic Theory – II**

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Paper – IV - First Half: **Statistical Methods – I**

Paper – IV - Second Half: **Selected Features of Indian Economy**

Part-III

Paper – V - First Half: **International Economics**

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Paper – VIII - First Half: **Indian Economic Planning**

Paper – VIII - Second Half: **Public Economics and Environmental Economics**

All Half-papers are of 50 Marks each with approximately 70 Lectures

Syllabus for B.A./.B.Sc. Honours (1+1+1 Pattern) in Economics

Part-I
Paper – I
First Half

Microeconomic Theory - I

Full Marks: 50 **Number of Lectures: 70**

1. General Concept: (10 Lectures)

- Distinction between Microeconomics and Macroeconomics – concept of different Microeconomic units - commodity, consumer, firm, industry, market – concepts of equilibrium, - statics, dynamics, comparative statics and stability of equilibrium.

2. Theory of Demand: (20 Lectures)

- The Marshallian Approach: measurement of utility – derivation of demand curve – consumer's surplus.
- 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.
- The Revealed Preference approach, derivation of demand function from Revealed Preference approach.
- 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.

3. Theory of Production and Cost. (20 Lectures)

- Production function: the neo – classical production function – relation between total, Average and marginal productivities – law of variable proportions – the fixed coefficient Production function.
- 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 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.

4. Theory of perfect competition: (20 Lectures)

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

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

Second Half

Macroeconomic Theory - II

Full Marks: 50 **Number of Lectures: 70**

1. Introduction: (8 Lectures)

- Scope and nature of Macro Economics with emphasis on macroeconomic problems and policies – Targets & Instruments of macroeconomic policy etc.

2. The National Income and Products Accounts: (12 Lectures)

- Definition, Concepts and Measurement of GNP, NNP, GDP, NDP, NI, DI – The flow of product method and the flow of expenditure method; Concept of GDP deflator and Price Indices
- Interrelation between measures of National Income in the absence and presence of Governmental sector and International Transactions
- The Accounting Identity of Saving and Investment
- Problems of using National Income as a measure of Economic Welfare.

3. The Simple Keynesian Model of Income Determination: (15 Lectures)

- Keynesian Consumption Function and its properties – Factors affecting Consumption Expenditure – Saving Function & its properties;
- The divergence between investment and saving motivations
- Determination of National Income – nature of equilibrium – unemployment, full employment and inflation – stability of equilibrium

- Comparative static analysis – the Multiplier analysis with and without governmental sector – Investment Multiplier, Government Expenditure Multiplier, Balanced Budget Multiplier; Limitations of the multiplier analysis.
- The Paradox of Thrift

4. Introducing the Money Market (15 Lectures)

- Three motives of holding money - Transactions, Precautionary and Speculative motives
- Keynesian Liquidity Preference Theory - Indeterminacy of Rate of Interest in the Liquidity Preference Theory - the Liquidity Trap
- The Inventory Theoretic Approach to Transaction Demand for Money – Baumol and Tobin
- Supply of Money - Credit creation by commercial banks – Money Multiplier - Interest sensitivity of Money Supply.

5. Interaction between Commodity Market & Money Market: (20 Lectures)

- Construction of the IS and LM curves – Determination of equilibrium value of Rate of Interest and National Income – Stability of equilibrium
- Comparative static analysis of shifts in Saving, Investment, Government Expenditure, Taxation, Money Demand, and Money Supply Schedules
- Relative effectiveness of Monetary and Fiscal policies in terms of IS-LM model.

Basic Readings:

Rowan, D.C – Output, Inflation & Growth
Mankiew – Macroeconomics
Sikdar, S – Principles of Macroeconomics, OUP
D'souza, Erol - Macroeconomics
Lipsey – An Introduction to Positive Economics
Samuelson and Nordhaus – Economics 13-th ed. Ch.9

Advanced Readings:

Ackley (2nd ed.) – Macroeconomic Theory and Policy
Branson – Macroeconomic Theory and Policy
Dornbusch and Fisher: Macroeconomics
Froyen - Macroeconomics
Levacic – Macro Economics
Mueller: (ed) Readings in Macroeconomics

Paper – II
First Half

Mathematical Economics

Full Marks: 50 **Number of Lectures: 70**

1. **Some Basic Mathematical Concepts for Economics: (10 Lectures)**
   - Formulae of Sum of AP and GP Series –- Equations of Straight line, circle, Parabola and Rectangular hyperbola – Their graphical representations - concept of function – Linear quadratic and cubic functions - Homogeneous function - Formulae of Basic log operations- Exponential function–Concept of limit and continuity- Concept of differentiation – Rules of differentiation –partial differentiation- Euler's theorem (statement only).
2. **Application in Economics (8 Lectures)**
   - The demand function – Elasticity of demand – Marginal revenue – Marginal utility – Relation between average revenue and marginal revenue – Slope and curvature of indifference curve and Isoquant – Marginal product – Elasticity of factor substitution – Returns to scale – Properties of Cobb – Douglas production function – Product exhaustion theorem
3. **Maxima and Minima (Extrema) of Functions (10 Lectures)**
   - Relative (local) and absolute (global) extrema – The first derivative test for local extrema – The second derivative test for global extrema – Convexity and concavity of functions. Extrema of functions of several variables without and with constraints – First and second order conditions for optimization without constraints – optimization with constraints – The method of Lagrange multiplier
4. **Application of Maximisation and Minimisation Techniques in Economics (8 Lectures)**
   - Relation between AP and MP – Relation between AC and MC – Profit maximization – Utility maximization subject to budget constraint – Output maximization subject to cost constraint – Cost minimization subject to output constraint
5. **Integration (8 Lectures)**
   - Concept of Integration as a reverse process of differentiation – Rules of Integration – Techniques of definite integral
6. **Application of Integration in Economics (8 Lectures)**
   - Finding out total functions (TR, TC, Consumption Function, Saving function) when marginal functions are given – Consumer's Surplus – Producer's surplus

7. **Determinants and Matrices** **(10 Lectures)**
   - Concept of scalar, vector , matrices and determinants. Matrix operations: Addition, Subtraction, Multiplication, Inversion of matrices(2x2 model only) , Bordered Hessian Determinant, Technique of solving simultaneous equation by Cramer's rule
8. **Application of Determinant and Matrix Operations in Economics (8 Lectures)**
   - Derivation of Slutsky equation
   - Generalised Multiplier in IS-LM model

References:

1. Henderson and Quandt: Micro economic theory
2. Das and Mukherjee: Fundamentals of differential and integral calculus
3. Chiang - Fundamental Methods of Mathematical Economics
4. Yamane : Mathematics for Economists
5. Mukherjee & Pandit – Mathematical Method for Economic Analysis
6. Allen : Mathematics for Economists
7. P. Abbot : Teach Yourself Calculus
8. Schaum Series : Mathematics for Economics
9. Srinath Barua: Mathematical Economics, Macmillan

Second Half

Indian Economic History

Full Marks: 50 **Number of Lectures: 70**

1. **Land Settlements during the British Regime** **(12 Lectures)**
   - Permanent settlement – Objectives and their fulfillments – Ryotwari settlement – Mahalwari settlement.
2. **Land Relations:** **(12 Lectures)**
   - Major tenancy reforms and their implications.
3. **Agriculture:** **(12 Lectures)**
   - Commercialization in agriculture and its effects.
4. **Development of Railways and Irrigation:** **(12 Lectures)**
   - Economic effects of development of Railways – Development of Irrigation System – Railway Vs Irrigation.
5. **Deindustrialization and Growth of Modern Industries:** **(12 Lectures)**
   - Decline of handicrafts and its effects – Growth of modern industries like Cotton Textile, Jute, Iron and Steel.
6. **Economic Consequence of the British Rule in India:** **(12 Lectures)**
   - The economic drain – Concept – Measurement – Effects.

References :

1. R. C. Dutt : Economic History of India. (Vols. I & II)
2. D. Bhattacharya : A Concise Economic History of India.
3. G. Kaushal : Economic History of India.
4. V.B Singh : Indian Economic History
5. Barun Chakraborty : *Bharater Sankhipta Arthanaitik Itihaas,* Rajya Pustal Parshad
6. Sabyasachi Bhattacharya: *Oupanibeshik Bharater Arthaniti*
7. Ronesh Roy : *Bharater Arthanaitik Itihaas*, Progressive Publishers

Paper – III
First Half
Microeconomic Theory - II

Full Marks: 50 **Number of Lectures: 70**

1. Imperfect Competition: (20 Lectures)

- 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- 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
- Monopolistic competition: Short run and long run equilibrium- excess capacity.

2. Theory of oligopoly: (15 Lectures)

- Characteristics of oligopoly- non-collusive oligopoly models of Cournot and Stackelberg – collusive oligopoly – price leadership – market sharing model- price rigidity under oligopoly.

3. Theory of factor pricing: (20 Lectures)

- Demand for factors of production - Determinants of price elasticity of demand for a factor – marginal productivity theory and its limitations
- 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.
- Theory of rent - Transfer earning and economic rent – quasi rent – Rent and price
- Theory of profit - Gross and net profit- elements of profit- risk and uncertainty theory- Innovation theory of profit.

4. General equilibrium and economic welfare (15 Lectures)

- 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.

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

Second Half

Macroeconomic Theory - II

Full Marks: 50 **Number of Lectures: 70**

1. The Classical System: (15 Lectures)

- The Classical view of Macro Economics in respect of the determination of Employment, Output and Prices.
- The classical quantity theory of money and its criticism; 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.
- Say's Law and Walras' law - The Dichotomy between the real and monetary sectors - Neutrality of money.

2. The Complete Keynesian Model: (15 Lectures)

- Introduction of the Labour Market – the Aggregate Demand and Aggregate Supply apparatus – the interaction between Commodity Market, Money Market and Labour Market – Determination of Equilibrium – Effects of changes in Money Supply and other factors – Comparison with the Classical system – Price Flexibility – Real Balance Effect and Full Employment.

3. Consumption function: (10 Lectures)

- Empirical findings regarding Consumption Function – Alternative Theories regarding its behaviour – Keynes, Smithies, Duesenberry, Friedman, Ando-Modigliani.

4. The Investment Function: (10 Lectures)

- The Keynesian analysis of Investment – The Marginal Efficiency of Investment, and its relation with the amount of Investment – Shortcomings of Keynesian analysis
- Net Present Value criterion and Marginal Efficiency criterion of Investment
- The Fixed Accelerator Principle of Investment – its Implications and Limitations.

5. Theories of Inflation: (10 Lectures)

- The Quantity Theory approach to Inflation
- Demand Pull Inflation and Inflationary Gap analysis; Its shortcomings
- Concepts of Cost Push & Mark Up inflation
- The Philips Curve and the trade-off between Inflation and Unemployment – short-run and long-run Philips Curve
- Consequences of inflation – Measures to control Inflation.

6. Economic Growth: (10 Lectures)

- The Harror-Domar Model – Assumptions – Implications – Actual Warranted and Natural Rates of Growth – The Knife Edge Problem

Basic Readings:

Rowan, D.C – Output, Inflation & Growth
Mankiew – Macroeconomics
Sikdar, S – Principles of Macroeconomics, OUP
D'souza, Erol - Macroeconomics
Lipsey – An Introduction to Positive Economics
Samuelson and Nordhaus – Economics 13-th ed. Ch.9

Advanced Readings:

Ackley (2nd ed.) – Macroeconomic Theory and Policy
Branson – Macroeconomic Theory and Policy
Dornbusch and Fisher: Macroeconomics
Froyen - Macroeconomics
Levacic – Macro Economics
Mueller: (ed) Readings in Macroeconomics

Paper – IV
First Half
Statistical Methods - I

Full Marks: 50 **Number of Lectures: 70**

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

- 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 (12 Lectures)

- Arithmetic mean, median and mode (for both grouped and ungrouped data) – comparison of mean, median and mode – geometric mean and harmonic mean (for

both grouped and ungrouped data) – composite mean (average from combined data) – properties for all these measures-(simple numerical exercise)

3. **Measures of Dispersion (12 Lectures)**
   - Absolute measures – Range, mean deviation and Standard deviation and Quartile Deviation – Relative measures – curve of concentration - (simple numerical exercise)
   - 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-(simple numerical exercise)
   - Moments and measures of skewness and Kurtosis: moments, skewness and kurtosis – definition – relationship between central and non-central moment – Sheppard's correction - (simple numerical exercise)
4. **Bivariate Data: Simple Correlation and Regression Analysis (12 Lectures)**
   - Scatter diagram – simple correlation coefficient and its properties, its calculation from grouped and ungrouped data, limitations of correlation coefficient. Simple regression analysis – properties of regression line – relationship between correlation coefficient and regression coefficient. Spearman's rank correlation coefficient (without tie) – Kendall's rank correlation coefficient- (simple numerical exercise)
5. **Index Numbers (12 Lectures)**
   - Purpose and uses of index number, problems of construction, different formulae for price and quantity index numbers, tests for index numbers, chain index, and cost of living index-(simple numerical exercise)
6. **Time Series (12 Lectures)**
   - Nature and decomposition of time series – analysis of trend—polynomial trend – exponential trend – non-linear growth curves – moving average method – seasonal component-(simple numerical exercise)

References:

1. Goon, Gupta and Dasgupta – Fundamental of Statistics, Vol. I & II
2. Goon, Gupta and Dasgupta – Basic Statistics
3. N. G. Das – Statistical Method (Part I & II)
4. Yule and Kendall – An Introduction to the Theory of Statistics
5. Gupta and Kapoor – Fundamental of Mathematical Statistics.

Second Half
Selected Features of Indian Economy

Full Marks: 50 **Number of Lectures: 70**

1. **Structural Changes in Indian Economy: (14 Lectures)**
   - Trends in national and per capita income – Changes in occupational pattern – Sectoral distribution of national income.
2. **Agricultural Sector (14 Lectures)**
   - (a) Farm size and productivity (b) Price elasticity of marketed surplus (c) Green Revolution – Productivity, Employment and Distribution aspects (d) Land Reforms.
3. **Industrial Sector (14 Lectures)**
   - (a) New Industrial Policy 1991 (b) The Exit policy (c) Industrial Licensing Policy
4. **Poverty and Unemployment (14 Lectures)**
   - (a) Poverty – Concept and measurement issues (b) Nature and types of unemployment in India - Problems of measurement of unemployment (c) Unorganized labour market : Female and Child Labour
5. **Development of Basic Infrastructure (14 Lectures)**
   - Irrigation, Energy, Transport and Communication.

Basic References :

1. Dutta and Sundharam : Indian Economy
2. Mishra and Puri : Indian Economy
3. Agarwal : Indian Economy
4. Gupta : Business Environment

Advance References :

1. V. K. R. V. Rao : India's National Income
2. P. Chowdhury : Indian Poverty and Development
3. Lucas and Papanek (ed) : Indian Economy
4. Bhagwati and Chakraborty : Contributions to Indian Economic Analysis
5. Wadhva (ed) : Some Problems of India's Economic Policy
6. Kapila (ed) : Indian Economy
7. Rudra : Political Economy of Indian Agriculture
8. A. K. Sen : Employment, Technology and Development

Part-III
Paper – V
First Half
International Economics

Full Marks: 50 **Number of Lectures: 70**

1. Theory of Trade (20 Lectures)

- The Ricardian theory – generalization of Ricardian model- the H-O Model, comparison of CA in the two (HO and Ricardo) – Commodity and Factor prices under trade- factor price equalization, factor intensity reversal and factor Prices- Leontief paradox, gains from trade and income distribution.

2. Balance of Payments and Problems of Adjustment (20 Lectures)

- The mechanism of adjustment under fixed exch. Rates – automatic adjustment under Gold Standard- expenditure reducing and Expenditure switching policies – devaluation, the elasticity and absorption approaches – direct controls- mechanism of adjustment under flexible exchange rate and uncertainty, speculation and the stability of exchange rate and inflation- costs and benefits of flexible exchange rates.

3. Trade Intervention (20 Lectures)

- Theory of Tariff and income distribution – the Stolper-Samuelson theorem, tariffs terms of trade and domestic prices, tariffs and national income, the optimum tariff, other effects of tariffs – quotas and quantitative trade restrictions -effects of quotas and quantitative trade restrictions and balance of payments- trading state, the infant industry argument

4. Problems of international reserves and liquidity and of development finance

(10 Lectures)

- IMF and its role- as a source of international liquidity. SDRs, IBRD, World Bank and its Affiliates

Basic References:

Salvatore: International Economics (A Schaum Series introduction to International trade theory.
Soderstein, Bo International Economics, 2nd Edition
Kennen, P International Economics

Advanced References

Caves, Frankel and Jones World Trade and Payments
Krugman and Obstfeld International Economics

Second Half
Money and Capital Market

Full Marks: 50 **Number of Lectures: 70**

1. **Definition of Money Market:** **(12 Lectures)**
   - Basic Concepts of Call money market, Commercial Bills market, Treasury Bills market, Short-Term loan market. Features and objectives of Money Market. Features of Developed Money Market.
2. **Commercial and the Central Bank** **(15 Lectures)**
   - Nature and function of Central Bank and the money supply-different concept of money supply and their uses-credit creation and credit multiplier-theories of asset management-role of commercial banks in development.
   - Central Bank's functions-Central Bank and money market – Techniques of management- bank rate policy, open market operations and variable reserve ratio and selective instruments of credit control.
3. **Non-Banking Financial Intermediaries (NBFIs)** **(10 Lectures)**
   - Distinction between commercial banks and NBFIs- validity of the distinction-Central bank's control over the NBFIs.
4. **Introduction to Capital Market** **(15 Lectures)**
   - Basic Concept of organized and unorganized Capital Market. Distinction between Primary Market and Secondary market. Differences between Share and Bond.
5. **Indian Stock Market terminology** **(12 Lectures)**
   - **(Only the following terms)**: *Arbitrager, Hedger, Speculator, Day trader, Broker, IPO, Preferential Share, Equity, Bonus Share, Blue Chips Stocks, Rolling Settlement, DEMAT, Open order & Limit order, Book Value, Face Value, Market Value, Buy Back, Insider Trading, EPS, P/E ratio, SENSEX, NIFTY, Credit rating and credit rating agencies.*
6. **Capital Market Regulatory Authority** **(6 Lectures)**
   - Role and Functions of Regulatory Authorities
   - Securities and Exchange Board of India (SEBI).

References:

1) S.B. Gupta: Monetary Economics-Institutions, Theory and Policy.
2) E. Gordon, K. Natarajan: Financial Markets and Services.
3) Varshney & Mittal: Indian Financial System
4) D.M.Mithani: Money Banking International Trade and Public Finance. (Chapters 11,13,14,16,17,18).
5) Desai, V.: The Indian Financial System.

6) Machiraju, H. R.: Indian Financial System.
7) Bhole: Indian Financial System.

Paper – VI
First Half
Development Economics

Full Marks: 50 **Number of Lectures: 70**

1. Economic Development (10 Lectures)

- C Meaning of Development – Growth and Development – Broad Indicators of Economic Development – Per capita Income – PQLI – Basic needs approach – Human Development Index – Gender Development Index – Human Poverty Index.

2. Persistence of Underdevelopment and Way to Develop (20 Lectures)

- Characteristics of underdevelopment – Obstacles to underdevelopment – Trap Models – Vicious circle of poverty – Critical minimum effort thesis – Low level equilibrium trap – Process of cumulative causation – Concept of surplus labour – Surplus labour as potential saving – Economic development with unlimited supplies of labour (Lewis Model).

3. Development Strategy (7 Lectures)

- Capital intensive Vs Labour intensive technique – Choice of technique in a labour surplus economy – Sustainable development.

4. Trade and Development (8 Lectures)

- Trade as an engine of growth – Terms of trade and economic development (Prebisch – Singer Thesis) – Imports substitution Vs export promotion.

5. **Development and Underdevelopment as a Historical Process (10 Lectures)**

- Dependency theory of Baran – Frank's Theory of colonial exploitation – Merchant capital in shaping underdevelopment (Kay) – Emmanuel's theory of unequal exchange.

6. Historical Evolution from GATT to WTO (15 Lectures)

- Objectives of GATT – Main resolutions of Uruguay Round – WTO – Objectives – Functions – Advantages and disadvantages of less developed countries – Role of less developed countries in the WTO regime..

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..

Second Half
Marxian Economics

Full Marks: 50 **Number of Lectures: 70**

1. Classical Background **No. of Lectures: 20**

- Chief features of classical system, Adam Smith Labour Theory of Value, the Ricardian one sector model, Classical political economy and Marx.

2. Stages of Development **No. of Lectures: 13**

- Marxian theory of stages of growth, Rostow's theory of stages of growth.

3. Marx's Theory of Value **No. of Lectures: 12**

- Qualitative and quantitative aspects of value, commodity fetishism, constant and variable capital, circuits of capital, surplus value, organic composition of capital.

4. The Reproduction Schemes & Accumulation of Capital **No. of Lectures: 10**

- Industrial reserve army, accumulation and technological change.

5. Origin of Surplus Value and Profits **No. of Lectures: 15**

- The law of falling rate of profit - Theories of Crisis: Under consumption, realization crisis, disprotionality crisis.

References:

1. Ben Fine- Marx's capital
2. Sweezy- Theory of Capitalist Development.
3. M. Desai- Marxian Economics.
4. Blaug, M - [PDF]
5. Marc Blaug, Economic Theory in Retrospect, 3rd ed

Paper – VII
First Half
Statistical Methods - II

Full Marks: 50 **Number of Lectures: 70**

1. Probability Theory **(Lecture: 08)**

- Introduction to Set Theory - Elementary set theory - Finite and infinite sets- convex sets- basic set operations- union, intersections, complements and difference of events – Venn Diagram -commutative property – associative property - Permutation and combination – concepts and elementary problems
- Definition and meaning of probability – Classical definition – some basic results – theorem of total probability – conditional probability and statistical independence and

mutual independence – theorems of compound probability – Bayes' Theorem-limitation of the classical definition -(simple numerical exercise).

2. **Random Variables, Mathematical Expectations & Generating Function (Lecture: 08)**
   - Definition of random variables – probability function and distribution function– mass and density function – joint density function – marginal and conditional distribution – expectation and variance of random variables – moment generating function (about any origin and about mean) –first four central moments-(simple numerical exercise)
3. **Theoretical Distributions (Lecture: 10)**
   - Discrete Distribution: Binomial and Poisson- Derivation of mean and variance- other properties (without proof)- Continuous Distribution – Normal Distributions. Properties of Normal Distribution-Standard Normal Deviate- Limiting forms of Binomial and Poisson distribution- (simple numerical exercise)
4. **Sampling Theory (Lecture: 08)**
   - Meaning and objects of sampling-Sampling Vs Complete enumeration-types of sampling (concept only)- biases in surveys, random sampling- simple random sampling with replacement - simple random sampling without replacement (concept with example) -practical methods of drawing a random sampling- random sampling from a probability distribution-parameter, Statistic and sampling distribution-(simple numerical exercise)
5. **Statistical Inference (Lecture: 08)**
   - Fundamental ideas of statistical inference – difference between estimation and hypothesis testing – properties of a good estimator: unbiasness, consistency, sufficiency and efficiency. Testing of hypothesis: Definition of null and alternative hypothesis, simple and composite hypothesis – Type l and Type II errors – meaning of level of significance and power of the test – test and confidence interval for a single mean and variance under normality-(simple numerical exercise)
6. **Vital Statistics (Lecture: 08)**
   - Rates of Vital event – Measurement of mortality (crude, specific and standardized death rates, comparative mortality index) – Life Table: description and construction – measurement of fertility – crude birth rate, general fertility rate – measurement of population growth – crude rate and vital index, gross reproduction and net reproduction rate – population projection-(simple numerical exercise)

References:

1. Goon, Gupta and Dasgupta – Fundamental of Statistics, Vol. I & II
2. Goon, Gupta and Dasgupta – Basic Statistics
3. N. G. Das – Statistical Method (Part I and II)
4. Hoel – Introduction to Mathematical Statistics
5. Keriney and Keeping – Mathematics for Statistics (Part I)
6. Gupta and Kapoor – Fundamental of Mathematical Statistics.
7. Yule and Kendall – An Introduction to the Theory of Statistics
8. Mathai and Rathi – Probability and Statistics.

Second Half
Entrepreneurship Development & Decision Theory

Full Marks: 50 **Number of Lectures: 70**

1. **Concept of Entrepreneurship and Motivation (12 Lectures)**
   - Basic features - Entrepreneurship and economic development - Growth of entrepreneurship in India-- Problem of Rural entrepreneurship in India
   - Motivation Theories – Maslow's Needs Hierarchy Theory, MccLelland's Acquired Needs Theory, External & Internal Theory of Motivation, The Kakinara Experiment
2. **Project identification and selection (6 Lectures)**
   - Meaning of project- project report - planning commission's guidelines for formulating a project report
3. **Financial resources for new ventures (10 Lectures)**
   - Sources of finance - capital structure - institutional support to enterprises—national small industries board – state small industries development corporation--- district industries center - industrial estates
4. **Expansion Strategies (8 Lectures)**
   - Growth strategies in small business
   - Support infrastructure and operational environment for successful entrepreneurship.
5. **Linear programming (10 Lectures)**
   - Linear programming technique as a tool for optimization: Graphical solution of two variable problem, Simple concept of Primal and Dual
6. **Interdependence between sectors (10 Lectures)**
   - Concept of interdependence between sectors, Static input-output model- Viability of production in input-output system- Hawkins-Simon condition in Two-by-Two system

7. Basic Game Theory (8 Lectures)

- Basic assumptions of game theory; The zero sum game with Saddle Point; Concept of Dominance; Elements of Non-zero sum game: Prisoners' Dilemma; Concept of Nash equilibrium

8. Decisions under uncertainty (6 Lectures)

- Maximin, Maximax, Hurwicz , Laplace and Savage criterion for optimal decision.

Basic References:

1. S.S Khanka--- Entrepreneurial Development, S.Chand & Company Ltd
2. Bill Bolton and John Thompson ---- Entrepreneurs : Talent, Temperament and Technique, Butterworth and Heinemann .
3. A.C. Chiang---Fundamental Methods of Mathematical Economics, Mcgraw-Hill International Edition.
4. Dorfman, Samuelson & Solow - Linear Programming and Game Theory: An Economic Analysis.
5. Koutsoyiannis – Modern Microeconomics
6. Baumol – Economic Theory and Operations Analysis

Advanced References

1. David .H Holt---Entrepreneurship New Venture Creation
2. N.D.Vohra- Quantitative Techniques in Management , Tata Mcgraw-Hill
3. Sharma- Operations Research , Macmillan India Ltd.

Paper – VIII
First Half
Indian Economic Planning

Full Marks: 50 **Number of Lectures: 70**

1. Role of Planning (Lecture: 08)

- Planning in a mixed economy – Planning Vs Market – Decentralized planning – The Indian experience – Pre-1991 and Post-1991 plans – Major objectives and achievements of Indian plan.

2. Monetary Policy and Plans

- Objectives of RBI's monetary policy – Monetary policy in recent years – Recent problems of nationalized banks.

3. Indian Tax Structure during Plan Period

- Trends, problems, reforms in tax structure – Centre – State Financial Relation.

4. The External Sector

- Balance of payments – Problems and policies in recent years – Exim policy of the government.

5. Public Sector in India

- Role of Public Sector in India during the plan period – Problems and policies with special emphasis on disinvestment policy.

6. Financial Sector Reforms

- Recent reforms in Banking and Insurance Sector.

Basic References :

1. Dutta and Sundharam	:	Indian Economy
2. Mishra and Puri	:	Indian Economy
3. Dhingra, I.C	:	Indian Economy

Advanced References :

1. Bhagwati and Chakraborty	:	Contributions to Indian Economic Analysis
2. Chakraborty	:	Development Planning: The Indian Experience
3. Wadhva (ed)	:	Some Problems of India's Economic Policy
4. Lucas and Papanek (ed)	:	Indian Economy
5. Jalan	:	Indian Economic Crisis
6. Nayaar	:	On Economic Liberalization
7. Kapila (ed)	:	Indian Economy

Second Half
Public Economics and Environmental Economics

Full Marks: 50 **Number of Lectures: 70**

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

- Public goods and private goods; The three bases of public finance (stability etc).
- Externalities; Public Economics and Public Finance; Provisioning of Public Goods and Public Finance; Economy-Environment Interfaces

2. Principles of Taxation (25 Lectures)

- Ability and benefit approaches – voluntary exchange model – degree of progression bases of taxation – income, expenditure wealth and commodities – income versus expenditure tax – shifting and incidence of taxes.

3. Co**mpensatory Fiscal Policy (20 Lectures)**

- Effects of changes in govt. expenditure and taxation – balanced budget multiplier – public debt and its economic effects – anti-inflationary fiscal policy.

4. Environment and negative externalities: (8 Lectures)

- The uniqueness, uncertainty and irreversibility - The use and nonuse value of environment;

5. Pollutions and other environmental Degradations (7 Lectures)

- Optimal level of pollution; the conflict between net private and net social benefits of pollution and abatement; Concept of WTP & WTA – A statement of Coase Theorem; Global Issues and the North-South Debate..

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