

**M.A. Economics**  
**Semester – I**  
**Paper – I - Macro Economic Analysis**

**Unit – I**

**Introduction to Macro Economics and Macro Economic Measurement :**

Meaning and some preliminary concepts involved in Macroeconomic, Development of Macro-Economics : An overview, Macro-economic issues and their measurement : inflation, unemployment, output and growth, separating growth from cycles, Detrending a GDP time series, Persistence and coherence. Macro-economic framework : An overview of the circular flow of income. Classical and Keynes theory of employment

**Unit – II**

**Neo-classical and Keynesian Approaches to Macro-Economics :** One sector Neo-classical model, Simple Keynesian model, economic implication of these models and essential differences between the two. Two sector ISLM model : Both Neo-classical and Keynesian versions, Role and relative effectiveness of fiscal and monetary policies.

**Unit – III**

**Demand for Money :** Classical approach to demand for money-quantity theory approach, Fisher's equation, Cambridge quantity theory, Keynes's liquidity preference approach, transaction, precautionary and speculative demand for money-aggregate demand for money; Derivation of LM curve.

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

**Unit – IV**

**Supply of Money :** A behavioural model of money supply determination, A demand determined money supply process, High powered money and money multiplier. RBI approach to money supply, Control of money supply with special reference to India.

**M.A. Economics**  
**Semester – I**  
**Paper – II – International Economics - I**

**Unit – I**

Pure theory of International Trade, Evaluation of the Classical Theory & Trade, Opportunity Cost approach to the theory of I.N.T., Terms of Trade, Concepts Measurements and Trends in Terms of Trade. Mill's Reciprocal Demand Analysis.

**Unit – II**

Trade Policy; Free Trade-Evolution and Breakdown of free trade. Arguments for and against the Policy of Protection. Economic and Non-economic arguments for Tariff.

**Unit – III**

Theories and Forms of Economic Integration. Custom Union: Production and Consumption effects of Customs Union-Static and Dynamic framework.

**Unit – IV**

The Balance Payments Account and the foreign Exchange Market. Alternative Mechanisms of Adjustment in Balance of Payments.

**M.A. Economics**  
**Semester – I**  
**Paper – III – Econometrics : Theory & Application - I**

**Unit – I**

**Probability**: Probability of an event, Theorems of total and compound probability, Baye's theorem, Mathematical expectations.

**Statistical Inference** : Sampling-Random and Non-random sampling. Simple random, concept of an estimator and its sampling distribution, Desirable properties of an estimator.

**Unit – II**

Definition and scope of Econometrics, Basic Linear Regression Model, Correlation and regression, The two variable linear model, The ordinary least squares methods (OLS), Assumptions, Gauss-Markov theorem, Significance tests of parameters,  $R^2$  and adjusted  $R^2$  . Properties of OLS estimators.

**Unit – III**

Auto correlation, Nature of the problem, Consequences of using OLS in the presence of Auto correlation, Detecting Auto-correlation-Graphical Method, Durbin-Watson 'd-statistic', Remedial measures, Heteroscedasticity-meaning, graphical presentation of the presence of Heteroscedasticity. Consequences of Heteroscedasticity, Detection and remedial measures of the problem.

**Unit – IV**

Application of Econometric Methods: Production Function, Micro and Macro Production Function, Properties and estimation of the Production Function, the Cobb-Douglas and CES Production Functions, Trans log and other forms of Production Function. Demand Analysis, Basic theory of Consumer Demand, Specification of the Demand Function, Price and Income elasticities of Demand, Engle's Law, Demand Equations-Linear, Semi-log and Log-linear forms, Systems of Demand Equation-Linear expenditure system, Aggregation and Data Problems in Estimation.

**M.A. Economics**  
**Semester – I**  
**Paper – IV – Environmental Economics - I**

**Unit – I**

Introduction, Nature Scope and Methodological Issues in Environmental Economics, Institutions and Environmental Governance, Relation between development and environmental stress; Environmental Kuznet's Curve, Impact of Human Activity on Environment.

**Unit – II**

Ecology, Environment and Eco-system, Ecology and Economics, Economy-Ecology-Environment Interaction; Conflicting Paradigms, The Material Balance Principle: Ecological Concern in the evolution of Economic thought. Entropy Law, Economics of Exhaustible Resources: Hotelling's rule; Solow-Harwick's Rule; Market structure and optimal extraction policy; Uncertainty and the rate of resources extraction; Resource scarcity. Economics of Renewable Resources; Economic Models of forestry and fisheries; Extinction of species; Economics of Biodiversity.

**Unit – III**

Concept of Sustainable Development, Sustainable Economic Growth and Development: An Economists perspective. Rules of Sustainable Development, Indicators of Sustainable Development, Measuring Sustainable Development, Sustainable Accounting, Political Economy and Sustainable Development, Participatory Institutions and Environmental Governance. Environmental Accounting

**Unit – IV**

Energy & Environment, Infrastructure and Environment, Trade and Environment, Agriculture and Environment, Industry and Environment, Services Sector and Environment, Economics of Pollution (air, Water, Solid Waste, Noise, Land degradation), Stationary and Mobile Sources of Pollution, Pollution Management, Waste Management Causes and effects of Environmental Degradation; Urban and Rural Environmental problems.

**M.A. Economics**  
**Semester - I**

**Paper-V(d)- Mathematics For Economic Analysis -I**

**UNIT-I**

Determinants, Properties of determinant, Minors and Cofactors, Jacobian and Hessian determinants and their use. Matrices : Definitions, Addition, Subtraction and Multiplication of matrices; Inverse matrices; Rank of matrix; Solving matrix equations with inverse; Eigen values and Eigen vectors.

**UNIT-II**

Elements of Trigonometry and Coordinate Geometry; Trigonometric functions and identities. Two –dimensional coordinates; Plotting of curves; Straight line; Parabola and Hyperbola.

**UNIT-III**

Differential Calculus : The derivative. Higher order derivative; maximization and minimization of a function; Partial derivatives; Differentials, Total differentials, Rules of Differentials; Optimization of a function without and with constraints. Economic Application.

**UNIT-IV**

Integral Calculus ; Indefinite and definite integration; Rules of integration; Integration by Substitution; Integration by parts. Economic Applications.

**M.A. Economics**  
**Semester - I**

**Paper-V(b)- Labour Economics -I**

**UNIT-I**

Labour: Some key Issues, Labour in a Developing Economy, Structure and Peculiarities of Labour Market, Indian Labour; Characteristics of Indian Labour, Recruitment of Industrial Workers-Employment Exchange, National Employment Service in India, Rural Labour in India, Unemployment, Employment Programmes in India, Labour Productivity and Wage Relationship.

**UNIT-II**

Trade Unionism- Theories, Functions, Trade Union Movement Abroad.

**UNIT-III**

Industrial Relations; Industrial Disputes and Establishment of Industrial Peace, Methods of Settlement of Industrial Disputes; Collective Bargaining, Conciliation, Arbitration and Adjudication.

**UNIT-IV**

Labour Welfare: Labour Welfare Measures in India, Social Security-Social Security in India, Social Security Abroad.

**M.A. Economics**  
**Semester-I**  
**Paper- V(a)- Economics of Agriculture – I**

**UNIT – I**

Agriculture and Economic Development : Interrelationship between Agriculture and Industry, Model of interaction between agriculture and rest of the economy. Allocation of investment between agriculture and industry in India during different plan period. Trend in sectoral distribution of India's GDP and employment elasticity. Empirical generalisation about role of agriculture.

**UNIT – II**

Institutional Development for Agricultural Growth : Asset distribution of rural households in India over time, Indebtedness of rural households, non-institutional and institutional sources of credit, role of cooperations, Schedule Commercial Banks, Regional Rural Banks and NABARD, Agricultural insurance.

**UNIT – III**

Infrastructural Development for Agricultural Growth : Tenancy in agriculture-incidence, effects and reforms, Land reforms in India, Irrigation development, Availability and use of HYV seeds and fertilizers in India.

**UNIT – IV**

Growth and composition of output in agricultural and allied activities in India : trends in overall agricultural growth as well as of cereals, Pulses, Food and Non-food item. Demand and supply of agricultural commodities including plantation and Horticultural Produce. Demand, availability and Future prospects of live stock-, Poultry and Fishery in India.

**M.A. Economics**  
**Semester-II**  
**Paper-I-Macro Economic Analysis-II**

**UNIT-I**

Consumption Function: Short Run and Long Run, Consumption Functions, Alternative theories of consumption function: Absolute, Relative, Permanent and Life cycle hypotheses.

Investment function : Investment-interest rate relationship, Investment demand function, Investment income relationship. Accelerator and Investment behavior, Multiplier- Accelerator Models

**UNIT-II**

Neo-classical and Keynesian approaches to the labour market equilibrium. Three sector macro model and derivation of aggregate demand and aggregate supply curves in the Neo-Classical and Keynesian cases. Interaction between aggregate demand and aggregate supply curves. Application and limitations of the Neo-Classical and Keynesian Models, Neo Classical-Keynesian synthesis and its policy implications. Walras general equilibrium analysis

**UNIT-III**

Post Keynesian Economics: Rejection of general equilibrium analysis and main ideas of post Keynesian Economists; Neo-Keynesian disequilibrium approach (Quantity-Constrained Models) and its policy implications. Early Phillips curve and Relevance of Keynesian Economics, Friedman, Phelps hypotheses and role of expectations; Expectation augmented Phillips Curve and policy relevance.

**UNIT-IV**

Phillips Curve and aggregate Supply Curve, Alternative theories (Neo Classical and Neo Keynesian approaches) regarding aggregate supply curve, classical and Keynesian theories in a dynamic setting, Neo Keynesian wage equation and synthesis of the dynamic classical and Keynesian approaches. Expectation of inflation in dynamic setting, Practical Relevance of dynamic approach

**M.A. Economics**  
**Semester-II**  
**Paper-II-International Economics-II**

**UNIT-I**

Factor Proportion Theory: H-O Theorem, Factor Price equalization, Effects of Growth on International Trade, Effects of Factor Endowment, Change in Technology, Change in demand Pattern, Gains from Trade.

**UNIT-II**

Trade Policy for Developing Countries, GATT, WTO; Agreements on Agriculture, Textile WTO and India; Doha, Cancun, Hong-Kong, North-South Trade Dialogue, UNCTAD, South-South Cooperation.

**UNIT-III**

General Equilibrium in International Trade, Quantitative Restriction: Quota and Tariff.

**UNIT-IV**

Foreign Exchange Reserve; Magnitude Components, Convertibility of Rupee in Current Account and Possibility in Capital Account. East-Asian Crisis.

**M.A. Economics**  
**Semester-II**  
**Paper-III-Econometrics-Theory and Applications-II**

**UNIT-I**

**Probability Distributions :**

Binomial, Poisson, Normal Distributions, their properties and uses.

**Statistical Inference:**

Testing of Hypotheses, Formulation of statistical hypothesis-Null and alternative, Type I and II errors, Goodness of fit, Confidence intervals and level of significance, Hypothesis testing based on Z, t,  $\chi^2$  (Chi-square) and F test..

**UNIT-II**

Multiple regression with two explanatory variables, The coefficient of Multiple Determination, Test of overall significance of the Regression, Partial correlation coefficients. General Linear Model-Estimation and properties of estimators.

**UNIT-III**

**Problems in Regression Analysis:** Nature, Tests, Consequences and remedies of Problem of Multicollinearity, Problems of specification error, Errors of Measurement.

**UNIT-IV**

**Applications of Econometric Methods:** Estimation of Consumption & Investment functions, Theories of Consumption :- Permanent Income Hypothesis, Absolute Income Hypothesis, Life Cycle Hypothesis Relative Income Hypothesis; Investment Function-Accelerator theory of Investment-Crude and Flexible Accelerator Models, Neo-Classical theory of Investment-Jorgenson's Model.

**M.A. Economics**  
**Semester – II**  
**Paper – IV – Environmental Economics – II**  
**Unit – I**

The theory of Externality and Public Goods: Concepts, Market failure, Pigouvian Solution, Buchanan's Theory, Coase's theorem and its critique, Pigouvian vs. Coasian solution; Detrimental externality and non-convexities in the production set; Property rights; Collective action.

**Unit – II**

Measurement of Environmental Values: Use values; Option value and non-use values. Techniques of Valuation: Market and Non-Market Valuation: Physical linkage methods; Abatement Cost Methods; Behavior Linkage Method-Revealed and stated preference; Social Cost benefit Analysis; Environmental impact assessment, Hedonic property values and household production models (Travel cost method and household health production function). Methods based response to hypothetical Markets, Contingent Valuation Methods.

**Unit – III**

Environmental and Natural resource policy and strategies, Evolution of Environmental Policy, Economics of Environmental Policy. Protection, Conservation. Policy Instruments; Pigouvian Tax and Subsidies, Tradable permits and fees, Price vs. Quantity instruments, Mixed instruments, Monitoring and Enforcement Issues, India's Environmental Policy and Performance, International Environmental Policy, Environmental Planning and Management, Macroeconomic Policies and Environment, People's Participation.

**Unit – IV**

Population and Environment, Poverty and Environment, Trade and environment in the WTO regime, Eco-labeling, Economics of climate change, Causes and Consequences of Ozone depletion and climate change. Rio and other than Rio Conference, Protocols and Treaties relating to climate change and Environmental degradation, Ozone depletion and Bio diversity.

**M.A. Economics**  
**Semester - II**

**Paper-V(b)- Labour Economics -II**

**UNIT-I**

Wages Determination: Theories of Wage Determination, System of Wages Payment Various Concepts of Wages-fair. Living and Minimum, Minimum Wages Act, Profit, Sharing, Payment of Bonus Act, Wage Structure, Share of Wages in National Income in India, Wage Differentials, Standardisation of Wages and National Wage Policy.

**UNIT-II**

Trade Union Movement in India.

**UNIT-III**

Labour Participation in Management, Machinery for the Prevention and Settlement of Industrial Disputes.

**UNIT-IV**

Working Conditions and hours of Work, Child and Women Labour, Labour Legislation in India: Factory, Mine and Plantation, International Labour Organization and India.

**M.A. Economics**  
**Semester-II**

**Paper-V(d)-Mathematics For Economic Analysis-II**

**UNIT-I**

Differential Equations ; Definitions and Concepts; First-order Linear Differential Equations; Exact Differential Equations; Integrating Factors; Separation of variables; Second-order Differential Equations. Economic Application.

**UNIT-II**

Difference Equations: Definitions and Concepts; First-order and Second-order, Linear Difference Equations; Stability conditions. Economic Applications.

**UNIT-III**

Input-Output Analysis : Leonief's static open input-output model, Game theory- the zero-sum two-person game, pay-off matrices, Maximum and Minimax Strategies, Saddle point, Strategies.

**UNIT-IV**

Linear Programming : Graphic Approach; Simplex method; The Dual. Other approaches to optimization.

**M.A. Economics**  
**Semester-II**  
**Paper-V(a)-Economics of Agriculture – II**

**UNIT – I**

Strategy of Agricultural growth and Technological Progress :Capital formation in Indian Agriculture, Public and Private investment, Type and Measurement of technical changes, Nature and Pattern of technical change, Agricultural production function, farm size, Returns to scale and productivity.

**UNIT – II**

Marketing Structure : Agricultural marketing, Future trading of agricultural commodities, Price trends, Cobweb theorems, Terms of Trade, Agricultural Price Policy in India.

**UNIT – III**

Labour and work force in rural farm and non-farm sectors, Concept and measurement of rural employment, Agricultural labour, Problem and policy, Rural poverty, Size and measurement, Poverty alleviation Programmes.

**UNIT – IV**

Current issues in Indian Agriculture, Agro - subsidies in India, Subsidy vs Public investment, Exports and imports of agricultural commodities, WTO and Indian agriculture.

**M.A. Economics**

**Semester - III**

**Paper-IV : INDIAN ECONOMY - I**

**UNIT - I**

Brief History of Indian Economy; Growth Pattern of Indian Economy; Sectoral Behavior and Relationship; Growth Pattern at Sub-National Level; Major Challenges before Indian Economy.

**UNIT - II**

Pattern of Industrial Growth & Policy Shifts; Evolution of Economic Policies in India: Industrial Policy, Fiscal and Monetary Policies, Trade Policy.

**UNIT - III**

Pattern of Farm and Service Sector Development, Agricultural Price Policy, Food Security, Modernisation & Diversification of the Farm Sector, Other Activities of the Primary Sector, Natural Resources etc

**UNIT - IV**

Social Sector Development, Human Development, Poverty, Inequality, Unemployment, Women Development, Micro Finance & SHGs.

## **M.A. Economics**

### **Semester - III**

#### **Paper-V(e) : FINANCIAL INSTITUTIONS AND MARKETS – I**

##### **UNIT – I**

**Nature and Role of Financial System and Structure of Interests Rates:** Money and finance money and near-money-financial intermediation and financial intermediaries- The structure and Functions of Financial system, Indicators of Financial Development, Financial System and Economic Development.

##### **UNIT – II**

**The Central Bank, Commercial Banks and Non-Bank Financial Intermediaries:** Function of Central Bank-The aims and Objectives of the Monetary Policy-Proliferation of Banking and non-Bank Financial intermediaries-Effectiveness of Monetary Policy Credit Creation and its Control.

##### **UNIT – III**

**Financial Markets:** Role and Structure of Money and Capital Market-call money market. Treasury bill market, Commercial bill market including commercial paper and certificate of deposits. Primary and Secondary market for securities; Infrastructure Financing.

##### **UNIT – IV**

**International Financial Markets:** Nature, Organization and Participants-Exchange Rates-Devaluation, and Depreciation-Working of Floating Exchange Rates since 1973; Currency Convertibility: The Indian Experience.

## **M.A. Economics**

### **Semester - III**

#### **Paper-I : MICRO ECONOMIC ANALYSIS - I**

##### **UNIT – I**

**Consumer Behavior:** Measurement of Utility, Cardinal vs Ordinal Approaches, Indirect Utility Function, Roy's Identity, Theory of Revealed Preference and logic of Ordering; Strong and weak Ordering and theory of Demand; Hicks Revision of Demand theory and characteristics approach to Demand composite commodity theorem.

##### **UNIT – II**

**Theory of Production:** Production Function of a Single and Multi Product Firm, Technological Progress and Production Function, Choice of Optimal Input Combinations. Cost Function: Meaning and Types of Cost, Traditional and Modern Theory of Cost, Shapes of Cost Curves, Analysis of Economies of Scale.

##### **UNIT – III**

**Markets Form and Pricing of Product:** Types of Market Situations, Relationship between Perfect and Monopoly Situation, Duopoly Market Situation, Cournot's, Stackelberg, Edgeworth and Bertrand Models, Monopolistic Competition: Characteristics, Price and Non-Price Competition.

##### **UNIT – IV**

**Welfare Economics:** Old Welfare Economics: Marshall and Pigou, Pareto and Welfare Economics: Criteria and Optimality, Compensation Principle: Hicks, Kaldor and Scitovsky, Social Welfare Function: Bergson and Samuelson, Arrow on Social Choice and Individual Values.

**M.A. Economics**  
**Semester – III**  
**Paper – V(b) – Population Theory & Demographic Analysis – I**

**Unit – I**

Concept of Population and Demography; Biological Theories; Theories of Population: Malthusian, Post-Malthusian, Neo-Malthusian; Optimum theory; Modern theories and Recent Developments; Theory of Demographic Transition.

**Unit – II**

Measures of Demographic Analysis; Fertility, Mortality, Nuptiality; Morbidity; Population Ageing; Migration.

**Unit – III**

Population and Economic Development; Models of Population and Economic Development; Demand for Children in Poor Countries; Demographic Variables and Income Inequality.

**Unit – IV.**

Indian Population and Demographic Changes; Inter-State Variations; Population Policy; Sources of Data-Census, SRS, NFHS, RCH etc.

## **M.A. Economics**

### **Semester - III**

#### **Paper-III- DEVELOPMENT ECONOMICS - I**

##### **UNIT - I**

Meaning and Measurement of Economic Growth and Development, General theories of Growth and Development : Classical theory, Smith, Ricardo, Malthus, Marxian theory of capitalist development, Schumpeterian view of dynamic evolution of economy, role of innovations in economic development, Rostow's stages growth theory, development in historical perspective.

##### **UNIT - II**

Modern Theories of Economic Growth : Conceptual framework and methodology of modern growth theories. Harrod-Donar growth model contemporary growth theories of neo-classical, Solow, Meade, Samuelson and Swan, Uzawa.

##### **UNIT - III**

Cambridge theories of growth, Joan Robinson, Kaldor, Pasinetti, Kahn, Kalecki, the capital controversy, money and economic growth-Tobin, Levhari, Patinkin and Johnson's models.

##### **UNIT - IV**

Development Policies and Perspectives- Role of economic and non-economic factors , sectoral Priorities and Development policies, role of the informal sector, environmental issues in development, Human Development-

HDI, food security, education, health and nutrition, Gender and Development.

## **M.A. Economics**

### **Semester - III**

## **Paper-II : Economics of Fiscal Theory and Public Choice**

### **UNIT – I**

Overview of Fiscal Function: Allocation, Distribution and Stabilization, Non-Fiscal and Quasi-Fiscal Government Activities. The Pure Theory of Public Expenditure and Its Integration with Welfare Maximization, Models of Efficient Allocation, Merit Goods.

### **UNIT – II**

The Budget Cycle and the Budgetary Process: Classification of Budgets and Budgetary Practices: Fiscal Federalism: Union-State Financial Relations in India: Finance commission.

### **UNIT – III**

Structure of Government Income, Principles of Taxation, the Allocation Effects of Taxation. Taxation of Income (Individual) and Corporate; Wealth and Consumption: Taxation of Agricultural Incomes, Commodity Taxation on Production Base, Value Added Tax and Modified Value Added Tax.

### **UNIT – IV**

Public Debt: Ownership and Consumption of Public Debt, Macro Economic Policy and Economic Effects of Public Debt, Management of Public Debt; Pricing of Public Utilities; Marginal Cost Pricing, Postal Services, Railways and Electricity.

## **M.A. Economics**

### **Semester - III**

#### **Paper-V(a)- Techniques of Development Planning:**

##### **UNIT - I**

Nature and forms of Development Planning: Concept, Rationale, Need and Evolution, Development Planning in Different Economic Systems- Capitalist, Socialist and Mixed Economies, Role and formation of Prices, Types of Planning.

##### **UNIT - II**

Planning in Stages, Formulation of a Development Plan: Determination of the Size of a Plan, Rate of Growth and Priorities, Simple Aggregative Models- Harrod - Domar Model, Planning for Sectors: Sectoral Planning- Linear Programming and Input-Output Analysis, Multi-Sector Models and Problems of Consistency and Optimality .

##### **UNIT - III**

Project Planning, Formulation and Evaluation of Projects: Social Cost-Benefit Analysis; Concept and use of Shadow Prices: Investment Criterion: Choice of Techniques : Labour Intensive and Capital Intensive Techniques.

##### **UNIT - IV**

Spatial Planning- Choice of Regions, Multi Level Planning: Temporal Planning- Short, Medium and Long Term Perspective Planning, Forecasting Methods, Decentralised Planning.

**M.A. Economics**

**Semester - III**

**Paper-V(d)- Advanced Econometric Methods - I**

**UNIT – I**

Methodology of Econometrics; Sources of Hypotheses; Econometric and Economic Models. General Linear Model (GLM): Assumptions; OLS Estimation; Inference.

**UNIT – II**

Structural Change; Dummy Variables; Specification Error; Prediction.

**UNIT –III**

Autocorrelation; Heteroscedasticity; Sets of Equations; Distributed Lag Models and Their Estimation.

**UNIT – IV**

Simultaneous-Equation Models: The Nature of Simultaneous-Equation Models; Reduced form Models, Recursive Models. The Simultaneous-Equation Bias: Inconsistency of OLS Estimators. The Identification Problem, Under, Exact and Over Identification, The Rank and Order Conditions of Identification. Identification and Choice of Econometric Method.

## **M.A. Economics**

### **Semester - IV**

#### **Paper-III- DEVELOPMENT ECONOMICS – II**

##### **UNIT – I**

###### **Development Underdevelopment : An overview**

Meaning and Measurement of Economic growth and development, the characteristics and explanations of underdevelopment – Vicious circle of poverty, circular causation, Dualism-social, technological, financial, organizational, Model of dual economy, Lewis, Ranis-Fei, Jorgenson, Kelly et al, dependency theories of underdevelopment.

##### **UNIT – II**

Models of Technical Progress, embodied and disembodied technical progress, Neutral technical progress-Hicks, Harrod, Solow, Kaldor, Mirrlees technical progress function, Arrow's learning by doing approach to economic growth, total factor productivity and growth accounting.

##### **UNIT – III**

Optimal growth theory-Ramsay, Von Neumann, Turnpike theorems, Golden Rule of Accumulation Endogenous growth, Intellectual capital, role of learning, education and research, AK model, Explanations of cross country differentials in economic growth, Information Paradigm-Stiglitz.

##### **UNIT – IV**

International Trade, Aid, Finance in Development, Technology, Transfer and Multinational Corporations. Dual Gap Model, W.T.O., Regional Cooperation. Problems of Unemployment, inequality and poverty in developing economies. Economic development and institutions-markets and market failure, state and state failure, issues of good governance.

## **M.A. Economics**

### **Semester - IV**

#### **Paper-V(a)- Practice of Development Planning :**

##### **UNIT - I**

Planning for Social Infrastructure, Planning for Human Resource Development, Education and Manpower Planning – Techniques and Problems, Planning for Health Sector

##### **UNIT - II**

State and District Planning with special reference to UP. Plan formulation and allocation of financial resources. Resource Mobilisation. Role of PRIs in Planning and Role of NGOs, Inter-Regional and Inter - District Disparities.

##### **UNIT - III**

Policy Issues and Perspectives of Indian Planning- Objectives, Strategy, Mahalanobis and other Plan Models Evaluation of the Plans- Sectoral Outlays, Financing, Targets and Achievements, Problem of Regional Disparities

##### **UNIT - IV**

Planning in Selected Countries. Study of Planning Experiences of France, China and other developing countries.

**M.A. Economics**

**Semester - IV**

**Paper-V(d)- Advanced Econometric Methods – II**

**UNIT – I**

General Linear Model (GLM) Revisited : Estimation under Linear Restrictions; Errors in Variables; Proxy Variables; Non-Linearities in Multiple Regression; Missing Observations; Aggregation; Weighed least Squares.

**UNIT – II**

Generalised Least Squares; Quantitative Dependent Variables; Multicollinearity; Solutions to Multicollinearity; Instrumental Variables.

**UNIT – III**

Regression Analysis of Time-Series Data; Vector Auto regression; Unit-Roots; Co integration; Conditional Heteroscedasticity.

**UNIT – IV**

Simultaneous-Equation Methods- Single Equation and System Methods of estimation; Indirect Least Squares (ILS); The Method of Instrumental Variables (IV); Two-Stage Least Squares (2SLS); Other Methods; Macroeconometric Models; K-G Model; Dynamic Properties. Construction of Econometric Models in India: Selected Illustrations.

**M.A. Economics**

**Semester - IV**

**Paper-I- Micro Economic Analysis – II**

**UNIT – I**

Market Failure and Asymmetric Information : Quality Uncertainty, Market Signaling, Moral Hazard and Principal – Agent Problem. Measurement of Utility: Neuman- Morgenstern Utility Index.

**UNIT – II**

Market and Price Determination: Oligopoly; Non-Collusive and Collusive Oligopoly, Kinked Demand Analysis, Role of Cartel and Price Leadership Models. Merger and Acquisition, Types of Mergers and Economic Theories Regarding Mergers. Limit-Price Theorem: Role of Natural and Strategic Barriers in the Determination of Limit Price.

**UNIT – III**

Game Theory: Zero-Sum Game, Pure and Mixed Strategies under Zero-Sum Games; Variable Sum Game; Concept of Dominant and Dominated Strategies, Mixed Strategies under Variable Sum Game. Alternative Methods of Determination of Optimal Pay-Offs and Nash Equilibrium. Prisoners' Dilemma and Folk Theorem.

**UNIT – IV**

Theories of Distribution: Theories of Rent, Interest, Profit and Wages. General Equilibrium and Economic Efficiency, Efficiency and Attainment of General Equilibrium.

**M.A. Economics**

**Semester - IV**

**Paper-IV- Indian Economy – II**

**UNIT – I**

National Income and Pattern of Consumption in Indian Economy, Saving, Investment and Capital Structure, Resource Mobilization, Other Major Macro Economic Issues.

**UNIT – II**

Infrastructure of Indian Economy; Economic Infrastructure: Energy, Transport and Communication, Banking, Finance, Science and Technology. Social Infrastructure: Education, Health, Social Welfare, Environment and Employment.

**UNIT – III**

External Sector of the Economy: Evolution of Trade Policy in India. Trade Policy Reforms, Globalisation, Foreign Direct Investment, Recent Development in Foreign Trade of India, Convertibility, WTO & India.

**UNIT – IV**

Recent Trends and Emerging Issues in the Economy of the U.P. Five year Plans of U.P., Agriculture, Industry and Social Sector Development

## **M.A. Economics**

### **Semester - IV**

#### **Paper-II- Government Budgeting and Fiscal Choice**

##### **UNIT – I**

Modern Public Choice Theory and the Fiscal Decision process. Simple and Complex model of Majority Voting. Redistribution via the Fiscal Process, Stable growth as a Fiscal Objective, redefine Role of Government, fiscal Decision Making Process.

##### **UNIT – II**

The Budget Cycle and the Budgetary Process. Classification of Budgets and Budgeting Practices, Integration with National Accounts, Implementation, Authorization, Accountability and Audit, expenditure Structure and Policy Principle, Methods and Techniques of Expenditure Evaluation. Planning Programming Budgeting System, Zero-Base Budgeting System.

##### **UNIT – III**

Fiscal Policy, Meaning, Objectives, Short and Long Perspectives, Different Budget Adjustment with Investment, Fixed and Variable and in Closed and Open. Economic Growth and Fiscal Policy, recent and Contemporary Theoretical Foundations and Analytics, Applicability to Less Developed Countries.

##### **UNIT – IV**

Fiscal Decentralization, Finances of Local Governments, Financial Administration of Local Governments : Budget, Accounts and Audit.

## **M.A. Economics**

### **Semester - IV**

#### **Paper-V(e) : FINANCIAL INSTITUTIONS AND MARKETS - II**

##### **UNIT – I**

Criteria to Evaluate Assets: Risk and Financial Assets, Types of Risk, Return on Assets, Risk-Return trade-off-Valuation of Securities. Theories of Interest Rate, Determination-Level of Interest Rates-Term Structure of Interest Rates – Spread Between Lending and Deposit Rates - Administered Interest Rates- Interest Rate Policy.

##### **UNIT – II**

Profitability and Efficiency of Banks; Development bank –role and functions; investment banking and merchant banking; Development reforms in India. Definition and types of non-bank financial institutions; Their Growth and impact on India's economics development. Measures taken on control their operations.

##### **UNIT – III**

Discount Market-Government Securities Market-Markets of derivatives; Futures and options and other derivatives; Types, Uses and pricing of derivatives. SEBI: Its impact on the working of the capital market in India: IRDA and its role in Financial Markets.

##### **UNIT – IV**

Risk Hedging and Futures in Exchange Rates – International Financial Flows, Forms and Volume – Rise and Fall of Brettonwood Institutions – International Liquidity – Post Maastricht Developments – Reforms in International Monetary System for Developing Countries – Lending Operation of World Bank and its Lending Affiliates – Working of IDA and IFC. The Theory of Optimum Currency Areas – Growth of Regional Financial Institutions. Asian Development Bank and its Lending Activities; Asian Development Bank of India. Euro – Dollar and Euro – Currency Markets; Their Development, Role and Regulation at the International Level, Policy Issues.