

ECONOMICS 2021

UNIT-I: MICRO AND MACRO ECONOMICS

Consumer Theory: Indifference curves and their Properties, Optimization and Equilibrium, Change in equilibrium – Income Offer Curve and Engel Curve, price, income and substitution effects; Revealed Preference Theory, Consumer's Surplus and Producer's Surplus.

Production and Cost Functions: Production with one variable input (labour) and with two-variable inputs; Returns to Scale; Four Simple Production Functions (Linear, Fixed Proportions, Cobb-Douglas, CES); Isoquants and Producer's Equilibrium; Costs, Cost Functions and Cost Curves; Objectives of a Business Firm and Validity of Profit maximization hypothesis.

Markets and Equilibrium : Pure and perfect competition, Supply decision of a competitive firm, Equilibrium in Short and Long Run; Monopoly and Price Discrimination; Monopolistic competition and Equilibrium; Oligopoly – Price leadership, Cournot Equilibrium, Kinked demand curve.

Distribution, General Equilibrium and Welfare Economics: Marginal productivity theory, Theories of Rent, Wages, Interest and Profit; General Equilibrium (2X2X2) model, Efficiency of General Equilibrium; Marshallian and Pigovian Welfare economics; Pareto optimality; Compensation Principle; Social welfare function.

Game Theory: The Payoff Matrix of a Game; Nash Equilibrium; Mixed Strategies ;The Prisoner's Dilemma; Repeated Games; Enforcing a cartel; Sequential Games; A Game of entry deterrence.

Macroeconomics and National Income Accounting: Macro vs. Micro-Economics; National Income Concepts; Real and Nominal GDP; Output, Income and Expenditure Approaches to measuring national income; National Income Identities in a simple 2- sector economy, and with government and foreign trade sectors; Circular Flows of Income; National Income and Economic Welfare; Green Accounting.

Money: Demand for and Supply of Money; Measures of Money Supply in India; Quantity Theory of Money; Value of Money and Index Number of Prices; Inflation, Deflation, Depression and Stagflation and measures to control them; Inflation, Unemployment and Expectations; Trade Cycles- Hawtrey's Monetary Theory, Hayek's Over-investment Theory and Keynes' views on Trade Cycles.

Banking: Functions of commercial banks and Central Bank, Instruments of credit control and monetary policy, Non-Banking Financial Intermediaries.

Open Economy Macroeconomics: The basic Mundell-Fleming Model.

Determination of National Income: The Classical Approach; The Keynesian Approach; Consumption Function & Absolute, Relative, Permanent and Life-Cycle Hypotheses; MEC, MEI and Theories of Investment; Income Determination in a Simple 2-Sector Model; Derivation of Aggregate Demand and Aggregate Supply Curves in the IS-LM Framework and Determination of Equilibrium; Investment Multiplier; Income Determination in a 3-Sector Model and Fiscal Multipliers; Relative efficacy of monetary and fiscal policies; Crowding out effect.

UNIT-II: PUBLIC ECONOMICS AND INTERNATIONAL ECONOMICS

Introduction to public finance: Public Finance and private finance; public good vs. private good; Merit Goods; Market failure and role of government.

Public Expenditure: Classification, cannons, causes of growth of public expenditure-Wagner's law and Peacock-Wiseman hypothesis and effects of Public Expenditure; Criteria for public investment Social Cost-Benefit Analysis; Maximum Social Advantage.

Public Revenue: Sources of Public Revenue; Taxation - cannons and classification, impact and incidence of taxes; The benefit and ability to pay approaches; Taxable capacity; Effects of taxation; Characteristics of a good tax system.

Public Budget: Kinds of budget- Economic and Functional classification, Balanced and unbalanced budgets; Balanced budget multiplier; Budget as an instrument of economic policy; Concepts of Deficits.

Indian Public Finance : Expenditure-Growth and Composition, Tax Revenue of Central and State Governments; The GST debate; India's Fiscal Policy. Criteria of Devolution or Resources by Finance Commission, Major trends in tax revenue of central and state governments in India.

Public Debt: Sources and effects; Debt burden- inter-generational shifting of burden and intergenerational equity; Methods of debt redemption; Debt management; Tax vs. debt. Debt Sustainability.

Trade Theories: Absolute advantage; Comparative advantage and opportunity cost; Heckscher-Ohlin theory of trade.

Trade and Economic Growth: Terms of trade; Reciprocal demand and Offer curve; Gains from trade; International Trade and Growth; Free trade and policy of tariffs in relation to economic growth.

Exchange Rate: Types of Exchange Rate (bilateral vs. trade-weighted exchange rate, cross exchange rate, spot, forward, futures); Demand for and Supply of foreign exchange; Exchange Rate Determination-Purchasing Power Parity Theory, The Monetary Model of Exchange Rates, Asset or Portfolio Model of Exchange Rates; Fixed vs. Flexible exchange rate.

Balance of Trade and Payments: Concepts and components of balance of trade and balance of payments; Equilibrium and disequilibrium in balance of payments and measures to correct deficit in BoPs; Foreign trade multiplier.

International Economic Institutions: IMF, World Bank, WTO and Asian Development Bank—their achievements and failures; Forms of economic cooperation; Reforms for the emergence of international monetary system and trading blocs at the global level.

UNIT-III: DEVELOPMENT AND ENVIRONMENTAL ECONOMICS

Study of economic development: Economic growth and economic development; Characteristics of underdeveloped countries; Obstacles to economic development; Measures of economic development – national and per capita income, basic needs approach, capabilities approach, three core values of development, PQLI, HDI, HPI, MDPI, GDI.

Theories of Economic Growth and Development: Classical, Marxian and Schumpeterian theories; Rostow's stages of economic growth; Balanced vs. unbalanced growth; Low level equilibrium trap and Critical minimum effort theories; Modeling Economic Growth-The Basic Harrod- Domar Model, Joan Robinson and the Golden Rule of Capital Accumulation, The Basic Solow Model, The Rudimentary A-K Model of Endogenous Growth.

Poverty, Inequality and Development: Concepts of poverty and inequality; Measuring poverty–Lorenz curve and Kuznets' inverted U hypothesis; Growth, poverty and inequality linkage; Poverty groups- rural poverty, women and poverty, indigenous population and poverty; Dualism, Regional inequalities and economic development.

Institutions and Economic Development: Role of institutions in economic development; The role of democracy in economic development; Role of state; Role of markets and market failure; Limitations of markets in LDCs; Corruption and economic development.

Financing Economic Development: Saving, capital formation and economic development; Foreign finance, investment and aid – controversies and opportunities; Private foreign investment and private portfolio investment.

Globalisation, International Trade and Economic Development: Trade and economic development; Export led growth; Trade liberalisation and growth of exports; Terms of trade and economic growth – the Prebisch Singer Hypothesis; Trade vs. aid.

Economy and Environment: Environment and Economy interaction; Environment as a public good- National versus global public goods; Market failure-Environmental degradation and externalities; The nexus involving environment, development and poverty; Population, resources and the environment; Poverty, economic growth, rural development, urban development and the environment; Common property resources as public goods and the free-rider problem.

The Economics of Pollution and Climate change: Pollution as externality; The market Approach to optimal pollution, Property rights and market bargain theorems, Coase theorem;

Taxation, Subsidies and optimal pollution; Pollution permit trading; Climate change – concept, causes, effects and management; Climate change and Agriculture.

Valuation of Environmental Damage: Methods and difficulties of environmental valuation, Direct and Indirect Valuation of Environmental Goods-The hedonic price approach, Contingent valuation, Travel cost approach; Willingness-to-pay. Willingness-to-accept ; Mechanism for environmental regulation in India- Environmental policy and legislations.

Natural Resources and Sustainable Development: Environment and sustainable development, Concept and indicators of sustainable development; Resource scarcity, Renewable and exhaustible resources; Optimal use of renewable resources – fishery and forest; Tragedy of commons; People's Participation in the management of common property resources.

Economics of Social Sector:- Human Capital, Education and Economic Growth, Costs and benefits of Education, Returns to Education, Demand and Supply of Health and Healthcare, Economics of Moral Hazards, Health and Development, Health Production Function.

UNIT-IV: INDIAN ECONOMY

Population and Human Development: Demographic issues – Sex and Age Composition of population; Dynamics of Occupational structure; Population policy; Demographic Dividend; Urbanisation and Migration; Human Resource Development.

National Income in India: Trends in national and per capita income; Changes in sectoral composition of national income; Regional disparities in Growth of Income; Savings and Investment in India.

Economic Planning in India: Rationale, Features, Objectives, Strategies, Achievements and Assessment of Planning in India; From Planning to NITI Aayog– Transforming India's Development Agenda.

Indian Agriculture: Role of agriculture; Green Revolution and Land Reforms; Agricultural Finance; Agricultural Marketing.

Industrial Development in India: Role of Industrialisation; Trends in industrial output and productivities; Small Scale & Cottage Industries- Role, Problems and Remedies; Industrial Policies; Problems of Industrial Development in India; Industrial finance and industrial sickness.

Service Sector in India: Trend of Growth & Contribution to GDP; ICT and IT – Spread and Policy; Sustainability of services led growth.

External Sector in India: Trends, Composition & Direction in exports from and imports of India; Present balance of payments position of India – Need for and rationale of trade reforms in India including partial and full convertibility of rupee; Recent export and import policies in India; Export Promotion vs. Import Substitution; Foreign Trade Policy of India; FDI flow and regulatory framework; WTO and India.

Economic and Social Infrastructure of India: Growth of transport sector and development of its sub-sectors; Indian Telecom Industry- spread and competition; Irrigation; Energy- forms of energy, conservation and government policy; Education- finance for education, education policy; Health-health care structure in India, National Health Policies; Housing- rural and urban housing schemes in India; Sustainable Development Goals.

Financial Markets in India: Commercial Banking in India& Nationalisation of Banks; RBI – Functions, Monetary Policy and Techniques of monetary control; Development Banking; Microfinance institutions in India- Problems and prospects; Policy issues in banking sector- Non-performing assets; Indian Stock Market and SEBI; Banking and financial sector reforms in India.

Economic Reforms, Globalisation in India: Genesis of Reforms, Macroeconomic Stabilisation, Structural Reforms, Impact of Economic Reforms on the Indian Economy; IMF, World Bank, WTO and Asian Development Bank—Their Role from the point of view of India.

Current Challenges: Poverty and Poverty Alleviation Programmes; Inequality – Measures and trends in India; Unemployment and Employment Policy.

Odisha Economy:- Demographic Features, Macro Economic Indicators.

UNIT V: QUANTITATIVE METHODS

Functions and differentiation: Types of functions- constant, polynomial, rational, exponential, logarithmic; Rate of change and derivative; Rules of differentiation for a function of one variable; Partial differentiation techniques; Partial derivatives in Economics; Elasticity of a function – demand and cost elasticity, cross and partial elasticity; Technique of higher order differentiation; Second order derivative and curvature of a function; Concavity and convexity of functions; Points of inflection, Derivative of Implicit Function.

Integration: Indefinite Integrals; Rules of Integration; Techniques of Integration: Substitution Rule, Integration by parts, and Partial Fractions; Definite Integral – Area Interpretation.

Optimisation: Relative maximum and minimum; Necessary versus sufficient conditions - First and Second derivative tests (Using Hessian Determinants); Economic applications thereof, First and second order condition for extremum of multivariable functions; Effects of a constraint; Finding stationary value – Lagrange-Multiplier method: First and second order condition; The Bordered Hessian determinant.

Measures of Central Tendency and dispersion: Mean, median, mode, geometric mean, harmonic mean, their relative merits and demerits; Measures of Dispersion: absolute and relative - range, mean deviation, standard deviation, coefficient of variation, quartile deviation, their merits and demerits; Measures of skewness and kurtosis.

Correlation and regression: Karl Pearson's correlation coefficient and its properties, Spearman's rank correlation coefficient; Two variable linear regression analysis - estimation of regression lines (Least square method) and regression coefficients - their interpretation and properties, standard error of estimate.

Probability theory: Basic concepts, addition and multiplication rules, conditional probability.

Sampling: Meaning and types of Sampling; Probability Sampling versus Non-Probability Sampling; Simple Random Sampling and its selection, Systematic Sampling, Multi-stage Sampling, Quota Sampling; Error: Sampling and Non-sampling.

Hypothesis Testing:- Steps, Small and large sample Tests.

Estimation : Point and Interval, Criteria of a good estimator, OLS: Assumptions, Methods of estimation (2-Variables).