GEOGRAPHY

Unit-I

Geomorphology : Fundamental concepts ; Factors controlling landform development; Endogenetic and Exogenetic forces; Denudation process: wheathering. and erosion, Geosynclines, mountain building, continental drift and plate tectonics; Concept of Geomorphic Cycle; Landforms associated with fluvial, glacial, arid, coastal and karsts cycles, Slope forms and processes; Environmental and Applied Geomorphology.

Unit-II

Climatology : Composition and structure of the atmosphere; Isolation ; Heat budget of the earth; Distribution of temperature, atmospheric pressure and general circulation of winds; Monsoons and jet streams ; Stability and instability of the atmosphere; Air-masses; Fronts, temperate and tropical cyclones ; *Types* and distribution of precipitation; Classification of world climates ; Koppen's and Thornthwaite's i schemes; Hydrological Cycle; Global warming.

Unit-III

Oceanography : Origin of ocean basins; Bottom relief of Indian, Atlantic and Pacific Oceans; Ocean deposits; Coral reefs; Temperature and salinity of the Oceans; Density of sea water; Tides and ocean currents; Sea-level changes.

Bio-Geography : Physical factors influencing world distribution of plants and animals; Forms and functions of ecosystem: Forest, grassland, marine and mountain ecosystem; Bio-diversity and its depletion through natural and man induced causes. Conservation and management of ecosystems; Environmental hazards and problems of pollution; Ozone depletion.

Unit-IV

History of Geographic Thought : General character of Geographic knowledge during the ancient and medieval period; Foundations of Modern Geography : Contribution of German, French, British and American schools; Conceptual and methodological developments during the 20th century; Changing paradigms; Man and Environment, determinism and possibilism, area! differentiation and spatial organization; Quantitative revolution; Impact of positivism, humanism, radicalism and behaviouralism in Geography.

Unit-V

Population Geography : Nature, scope, subject matter and recent trends; Patterns of world distribution, growth and density of population; Policy issues; Patens and processes of migration; Demographic transition; Population-resource regions.

Settlement Geography : Site, situation, types, size, spacing and internal morphology of rural and urban settlements; Ecological processes of urban growth; Urban fringe; City-region; Settlement systems; Primate city; Rank-Size rule; Settlement hierarchy; Christaller's Central Place theory; August Losch's theory of market centers.

Unit-VI

Economic Geography : Location of economic activities and spatial organization of economies; Classification of economies; Sectors of Economy: primary, secondary, tertiary and quaternary; Natural resources -.Renewable and non-renewable; Conservation of resources.

Agricultural Geography : Concept and techniques of delimitation of agricultural regions; Measurement of agricultural productivity and efficiency; Crop combinations and diversification; Von Thunen's Model; Agricultural systems of the world.

Industrial Geography : Classification of industries : Weber's and Losch's approaches; Resource based and footloose industries.

Geography of Transport and Trade : Models of transportation and transport cost; Accessibility and connectivity: Inter-regional and Intra-regional: Comparative cost advantages.

Unit-VII

Political Geography : Definition and scope of Political Geography ; Geopolitics; Global strategic views (Heartland and Rimland theories);-Concept of nation, state and Nation-State; Boundaries and frontiers; Politics of world resources; Geography and Federalism.

Social Geography : Nature and scope of social geography ; Social structure and social processes; Elements of Social Geography—ethnicity, tribe, dialect, language, caste and religion; Concept of Social well-being.

Cultural Geography : Nature and scope of Cultural Geography; Environment and culture; Concept of culture-areas and cultural regions; Theories of tribal groups; I)welling places as cultural expressions.

Unit-VIII

Regional Planning : Regional concept in Geography; its application to planning; Concept of planning region; Regional hierarchy; Types of regions and methods of regional delineation; Conceptual and theoretical framework of regional planning; Regional planning in India: Concept of development; Indicators of development; Regional imbalances.

Unit-IX

Geography of India : Physiographic divisions; Climate : Its regional variations ; Vegetation types and vegetation regions; Major soil types ; Coastal and Marine resources; Water resources; Irrigation; Agriculture; Agro-climatic regions; Mineral **and** power resources; Major industries and industrial regions ; Population distribution and growth; Settlement patterns; Regional disparities in social and economic development.

Unit-X

Cartography : Map as a tool in Geographical studies ; Types of maps: Techniques for the study of spatial patterns of distribution; Single purpose and composite maps; Choropleth, Isopleth and Chorochromatic maps and pie diagrams; Mapping of location specific data; Accessibility and flow maps.

Remote sensing and computer application in mapping; Digital mapping; Geographic Information System (GIS) : Thematic maps.

Statistical Methods : Data sources and types of data; Statistical diagrams; study of frequency distribution and cumulative frequency; Measures of central tendency; Selection of class intervals for mapping; Measures of dispersion and concentration; Standard deviation; Lorenz curve; Methods of measuring association among different attributes; Simple and multiple correlation; Regression.

Measurement of spatial patterns of distribution; Nearest-neighbor analysis; Scaling techniques, rank score, weighted score; Sampling techniques for geographical analysis.