# **GEOGRAPHY**

## Unit-I

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

## Unit-II

Climatology: Composition and structure of the atmosphere: Insolation; 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 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, areal differentiation and spatial organisation; 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; Patterns 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 centres.

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#### 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; Dwelling 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; Agroclimatic regions; Mineral and power resources; Major industries and industrial regions; Population distribution and growth; Settlement patterns; Regional disparities in social and economic development.

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# 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-neighbour analysis; Scaling techniques, rank score, weighted score; Sampling techniques for geographical analysis.

Note: - Questions with special reference to Geography of Rajasthan may also be asked from the syllabus given below.

- 1. Broad physical features and major physiographic divisions.
- 2. Natural Resource of Rajasthan.
- 3. Climate, Natural Vegetation, Forests, Wildlife and Bio-diversity.
- 4. Major irrigation projects.
- 5. Mines and Minerals.
- 6. Population.
- 7. Major industries and Potential for Industrial Development.