

GEOGRAPHY

(Subject Code-36)

1. **Geomorphology** : Fundamental concepts; Endogenetic and Exogenetic forces; Denudation and weathering; Geosynclines, Isostasy, Continental Drift and Plate Tectonics Theories; Mountain Building, Concept of geomorphic cycle; Landforms associated with fluvial, glacial, arid, coastal and karst cycles, Modern Geomorphologists, Applied Geomorphology.
2. **Climatology** : Composition and structure of the atmosphere; Heat budget of the earth, Horizontal and Vertical Distribution of Temperature; Atmospheric pressure and general circulation of winds; Monsoon, jet stream and local winds; Tropical and temperate cyclones; Classification of world climates; Koppen's and Thornthwaite's schemes and features of World Climatic Regions.
3. **A- Oceanography** : Ocean Bottom Topography, Ocean deposits; Coral reefs; Temperature and salinity of the oceans; Density of sea water; Tides and ocean currents.
B- Bio and Environmental Geography : World distribution of plants and animals; Forms and functions, Conservation and management of ecosystems; Principle of ecology; Human ecological adaptations; Influence of man on ecology and environment; Global and regional ecological changes and imbalances; Environmental degradation, hazards Problems of pollution, ozone depletion and climate change, and their remedial measures, management and conservation; Biodiversity and sustainable development; Environmental policies; Environmental education and legislation
4. **Geographic Thought** : General character of Geographic knowledge in India and world during the ancient and medieval period; Geographical Knowledge in Vedas, Epic Periods, Puranas and Samritis. Foundations of Modern Geography and contributions of different scholars; Dichotomy and dualism; Determinism, possibilism; Man and Environment, Areal differentiation and spatial organization, Quantitative revolution. Locational analysis; radical, behavioural, human and welfare approaches.
5. **A- Population Geography** : Factors and Patterns of world population distribution; Growth and density of population; Patterns and processes of migration; Demographic transition, Population –resources region.
B- Settlement Geography : Site, situation, types, size, spacing and internal morphology of rural and urban settlements; Process and pattern of urbanization; City–region; Primate city; Rank–size rule; Settlement hierarchy; Christaller's Central Place theory; August Losch's theory of market Centres; Concept of Smart City and Development of Urban Centres.
6. **Economic Geography** : Sectors of Economy : primary, secondary, tertiary and quaternary; Natural resources: renewable and non-renewable, conservation of resources. Measurement of agricultural productivity and efficiency, agricultural revolution, agricultural types and typology; Crop combination and diversification; Theories of Agricultural Location; Von Thunen's Model. Agricultural systems and regions of the world. Classification of industries: Weber's and Losch's approaches; Resource based and footloose industries. Models of transportation and transport cost : Accessibility and connectivity.
7. **A- Political Geography** : Heartland and Rimland theories; Boundaries and frontiers; Nature of administrative areas and Geography of public policy and finance.

B- Social Geography : Ethnicity; tribe; dialect; language, caste and religion; Concept of social well-being. Social Groups and Organisation.

C- Cultural Geography : Culture – Realms, Areas and Cultural Regions of the World; Human races; Habitat; Economy and Society of tribal groups; Diffusion of Cultural innovations; Human Development and their Index; Impact of Globalization on Indian Society and Culture.

8. Regional Planning : Regional concept in Geography; Concept of planning regions; Types of regions; Methods of regional delineation; Regional planning in India; Indicators of development; Regional imbalances; Evolution, nature and scope of town planning with special reference to India, and Fundamentals of Town and Country planning.

9. Geography of India : Physiography and Physiographic divisions; Climate : Its regional variations; Mechanism of Indian monsoons and rainfall patterns, Tropical cyclones and western disturbances; Floods and droughts; Vegetation types and vegetation regions, Forest and wild life resources, deforestation and their conservation, Major soil types; Irrigation and multipurpose projects. Agriculture and its regionalisation; agro-climatic zones; agro-ecological regions.; Population distribution and growth, Demographic attributes: sex-ratio, age structure, literacy rate, work-force Urbanization; Indian Society- Racial, linguistic and ethnic diversities; religious minorities; major tribes, tribal areas and their problems; Land, surface and ground water, energy, minerals, biotic and marine resources and their conservation, Energy crisis; major industries and industrial regions, New industrial policies; Special Economic Zones; Tourism including eco -tourism. Transport and Communication; national and foreign trade; Trade balance; Trade Policy; Export processing zones; Five Year Plans; Integrated rural development programmes; Panchayati Raj and decentralised planning;

10. A- Cartography : Types of maps : Techniques for the study of spatial patterns of distribution; Choropleth; Isopleth and Chorochromatic maps and pie diagrams; Mapping of location – specific data; Accessibility and flow maps. Topographical Maps-types and features; Map Projection- graticules, types, construction and salient features of map projections,

B- Statistical Methods : Data sources and types of data; 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. Nearest– neighbour analysis; Scaling techniques; Rank score; Weighted score; Sampling.

C- Remote sensing and GIS- Its principles, development and application; Development of Remote Sensing of India; Features of Indian Satellite; Computer application in mapping; Digital mapping; Geographic Information System (GIS).