

## **12 . GEOGRAPHY**

### **DETAILS OF SYLLABUS**

#### **1. CONCEPTS AND TRENDS IN GEOGRAPHY**

General characteristics of Geography in the ancient and modern periods. Contributions of Herodotus, Erathosthenes, Strabo, Ptolemy, Humboldt, Ritter, Ratzel, Kant, Ritzthofen, Vidal de la Blache and Mackinder. Arab, American and Soviet contributions in geography, Dualism in Geography, Regional approach in Geography, Scientific approaches in Geography, Quantitative trends in Geography; influence of GIS. GPS and internet resources; Modern concepts in Geography.

#### **2. GEOMORPHOLOGY**

Geomorphological concepts; Structure of the earth; evolution of continents and oceans, weathering and erosion; Geomorphic agents, process and their impacts. Theories of landform development; Climate and landforms; Slopes; Planation surfaces; Geomorphic mapping; Applications of geomorphology; Man's influence of landforms.

#### **3. CLIMATOLOGY**

Elements of weather and climate; Distribution of temperature and pressure; General circulation in the atmosphere, Planetary winds, Seasonal winds and Local winds, Atmospheric disturbances, Atmospheric moisture, Air masses and Fronts, Climatic classification-Koeppen and Thorthwaite, Ozone depletion, Global Warming, El Nino, La Nino and Southern Oscillation.

#### **4. GEOGRAPHY OF INDIA**

Unity in diversity, Physiography , Climate, Drainage, Soil, Vegetation, irrigation, Crops - Rice, Wheat, Sugar cane, Cotton, Jute, Tea and Coffee, Land uses, Fisheries, Minerals, Industries – Iron and Steel, Textiles, Sugar, Paper and Fertilizer, Demographic characteristics, Multipurpose projects, Transport, Trade, Geography of Kerala.

## **5. ECONOMIC GEOGRAPHY**

Resources and economic development; Classification of resources Distribution of major resources; World agriculture regions: Von Thunen's agricultural location theory; Wilesey's classification; World industrial pattern, Weber's industrial location theory. Losch's hypothesis, Behaviour approach, structural approach, Patterns of the world trade.

## **6. REGIONAL PLANNING AND DEVELOPMENT**

Concepts , Planning regions; Conceptual and theoretical framework of regional planning; Theories of regional development and planning; Analysis of regional development; Regional planning and development in India, Development processes; Resource base of Indian economy. Types of planning. Micro level planning, Spatial Planning; Watershed plan; People's participation in the planning process; Sustainable development.

## **7. URBAN GEOGRAPHY**

Urbanization, Trends of Urbanization; Classification of urban centres; Central place theory; Rank size rule; Urban morphology; City regions, Urban sprawl; Slums; Urban planning, Urban dynamics; Urban problems.

## **8. CARTOGRAPHY**

Different types of maps; Phases of cartographic processes, Map scale Map projections, Quantitative techniques, Map design and layout; Lettering and toponomy; Compilation of maps; Thematic and complex mapping; Map reproduction, Construction of maps for specialized groups; Cartographic appreciation of maps.

## **9. REMOTE SENSING & GIS**

Data generation and acquisition principles; Types of platforms, Photogrammetry; Image interpretation; Types of IRS data and their uses; Remote sensing in resource mapping; Definition and evolution of GIS, Components of GIS; Capabilities of GIS, Types of GIS, Vector and Raster data. Data base concepts; Data input; Data integration; Data modeling; Applications of GIS.

## **10. ENVIRONMENTAL GEOGRAPHY**

Man and environment relationship, Ecosystem – functioning of the ecosystem, Biodiversity, Mans modifications of the Biosphere, Environmental degradation – Air pollution, Water pollution, Noise pollution, Land degradation, Environmental management and planning – Environmental quality – Environmental Laws – Environmental Impact Assessment.

## **11. POPULATION GEOGRAPHY**

Sources of population data, Distribution and Growth of population, Fertility and Mortality, Migration – Laws of migration, Concepts of Optimum and Overpopulation, Demographic transition theory, Population Resource Regions of the World, Theories of Population - Malthus, Ricardo and Marx.