

GEOGRAPHY

PAPER I - PRINCIPLES OF GEOGRAPHY

Section A - Physical Geography :

1. Geomorphology :

- **Factors controlling landform development; endogenetic and exogenetic forces;**
- **Origin and evolution of the earth's crusts;**
- **Fundamentals of geomagnetism;**
- **Physical conditions of the earth's interior; Geosynclines;**
- **Continental drift; Isostasy; Plate tectonics; Recent views on mountain building; Volcanicity; Earthquakes and Tsunamis;**
- **Concepts of geomorphic cycles and Land scape development;**
- **Denudation chronology; Channel morphology; Erosion surfaces; Slope development;**
- **Applied Geomorphology; Geomorphology, economic geology and environment.**

2. Climatology :

- **Temperature and pressure belts of the world; Heat budget of the earth; Atmospheric circulation;**
- **Atmospheric stability and instability. Planetary and local winds; Monsoons and jet streams; Air masses and fronts; Temperate and tropical cyclones;**
- **Types and distribution of precipitation; Weather and Climate; Koppen's Thornthwaite's and Trewartha's classification of world climate; Hydrological cycle;**
- **Global climatic change, and role and response of man in climatic changes Applied climatology and Urban climate.**

3. Oceanography :

- **Bottom topography of the Atlantic, Indian and Pacific Oceans;**
- **Temperature and salinity of the oceans; Heat and salt budgets, Ocean deposits;**
- **Waves, currents and tides;**
- **Marine resources; biotic, mineral and energy resources;**
- **Coral reefs coral bleaching; Sea-level changes; Law of the sea and marine pollution.**

4. Biogeography :

- **Genesis of soils; Classification and distribution of soils; Soil profile;**
- **Soil erosion, Degradation and conservation;**
- **Factors influencing world distribution of plants and animals;**
- **Problems of deforestation and conservation measures; Social forestry, agro-forestry; Wild life; Major gene pool centres.**

5. Environmental Geography :

- **Principle ecology; Human ecological adaptations; Influence of man on ecology and environment;**
- **Global and regional ecological changes and imbalances; Ecosystem their management and conservation;**
- **Environmental degradation, management and conservation; Biodiversity and sustainable development;**
- **Environmental policy; Environmental hazards and remedial measures; Environmental education and legislation.**

Section B - Human Geography :

1. Perspectives in Human Geography :

- **Areal differentiation; Regional synthesis; Dichotomy and dualism;**
- **Environmentalism; Quantitative revolution and locational analysis;**
- **Radical, behavioural, human and welfare approaches;**
- **Languages, religions and secularisation; Cultural regions of the world;**
- **Human development index.**

2. Economic Geography :

- **World economic development: measurement and problems;**
- **World resources and their distribution; Energy crisis; the limits to growth;**
- **World agriculture: typology of agricultural regions; Agricultural inputs and productivity; Food and nutrition problems; Food security; famine: causes, effects and remedies;**
- **World industries: location patterns and problems; Patterns of world trade.**

3. Population and Settlement Geography :

- **Growth and distribution of world population; Demographic attributes; Causes and consequences of migration; Concepts of over-under-and optimum population;**
- **Population theories, world population problems and policies, Social well-being and quality of life; Population as social capital.**
- **Types and patterns of rural settlements; Environmental issues in rural settlements;**
- **Hierarchy of urban settlements; Urban morphology; Concept of primate city and rank-size rule; Functional classification of towns; Sphere of urban influence; Rural-urban fringe; Satellite towns; Problems and remedies of urbanization; Sustainable development of cities.**

4. Regional Planning :

- **Concept of a region; Types of regions and methods of regionalisation;**
- **Growth centres and growth poles; Regional imbalances;**
- **Regional development strategies;**
- **Environmental issues in regional planning; Planning for sustainable development.**

5. Models, Theories and Laws in Human Geography :

- **System analysis in Human geography;**
- **Malthusian, Marxian and demographic transition models;**
- **Central Place theories of Christaller and Losch; Perroux and Boudeville;**
- **Von Thunen's model of agricultural location;**
- **Weber's model of industrial location;**
- **Ostov's model of stages of growth.**
- **Heart-land and Rimland theories; Laws of international boundaries and frontiers.**

PAPER II GEOGRAPHY OF INDIA

1. Physical Setting :

- Space relationship of India with neighbouring countries;
- Structure and relief; Drainage system and watersheds; Physiographic regions;
- Mechanism of Indian monsoons and rainfall patterns; Tropical cyclones and western disturbances;
- Floods and droughts; Climatic regions; Natural vegetation, Soil types and their distributions.

2. Resources : Land, surface and ground water, energy, minerals, biotic and marine resources, Forest and wild life resources and their conservation; Energy crisis.

3. Agriculture :

- Infrastructure: irrigation, seeds, fertilizers, power;
- Institutional factors; land holdings, land tenure and land reforms;
- Cropping pattern, agricultural productivity, agricultural intensity, crop combination, land capability; Agro and social-forestry;
- Green revolution and its socio-economic and ecological implications; Significance of dry farming;
- Livestock resources and white revolution; Aqua-culture; Sericulture, Agriculture and poultry; Agricultural regionalisation; Agro-climatic zones; Agro-ecological regions.

4. Industry :

- Evolution of industries; Locational factors of cotton, jute, textile, iron and steel, aluminium, fertiliser, paper, chemical and pharmaceutical, automobile, cottage and agro-based industries;
- Industrial houses and complexes including public sector undertakings;
- Industrial regionalisation;
- New industrial policy; Multinationals and liberalisation; Special Economic Zones;
- Tourism including ecotourism.

5. Transport, Communication and Trade :

- Road, railway, waterway, airway and pipeline networks and their complementary roles in regional development;
- Growing importance of ports on national and foreign trade; Trade balance;
- Trade Policy; Export processing zones;
- Developments in communication and information technology and their impacts on economy and society; Indian space programme.

6. Cultural Setting :

- Historical Perspective of Indian Society; Racial linguistic and ethnic diversities; religious minorities;
- Major tribes, tribal areas and their problems; Cultural regions;
- Growth, distribution and density of population;
- Demographic attributes: sex-ratio, age structure, literacy rate, work-force, dependency ratio, longevity; migration (inter-regional, interaregional and international) and associated problems;
- Population problems and policies; Health indicators.

7. Settlements :

- Types, patterns and morphology of rural settlements;
- Urban developments; Morphology of Indian cities; Functional classification of Indian cities; Conurbations and metropolitan regions; Urban sprawl; Slums and associated problems;
- Town planning; Problems of urbanisation and remedies.

8. Regional Development and Planning:

- Experience of regional planning in India; Five Year Plans; Integrated rural development programmes; Panchayati Raj and decentralised planning; Command area development;
- Watershed management; Planning for backward area, desert, drought-prone, hill tribal area development;
- Multi-level planning; Regional planning and development of island territories.

9. Political Aspects :

- Geographical basis of Indian federalism; State reorganisation; Emergence of new states; Regional consciousness and inter-state issues;
- International boundary of India and related issues; Cross-border terrorism; India's role in world affairs; Geopolitics of South Asia and Indian Ocean realm.

10. Contemporary Issues :

- Ecological issues:
 - Environmental hazards: landslides, earthquakes, Tsunamis, floods and droughts, epidemics;
 - Issues related to environmental pollution;
 - Changes in patterns of land use;
 - Principles of environmental impact assessment and environmental management;
- Population explosion and food security;
- Environmental degradation; Deforestation, desertification and soil erosion;
- Problems of agrarian and industrial unrest; Regional disparities in economic development;
- Concept of sustainable growth and development; Environmental awareness;
- Linkage of rivers;
- Globalisation and Indian economy.

NOTE : Candidates will be required to answer one compulsory map question pertinent to subjects covered by this paper.