

Syllabus – Geography (Main)

PAPER – I

PRINCIPLES OF GEOGRAPHY

PHYSICAL GEOGRAPHY

1. **Geomorphology:** Factors controlling landform development; endogenetic and exogenetic forces; Origin and evolution of the earth's crust; Fundamentals Of geomagnetism; Physical conditions of the earth's Interior; Geosynclines; Continental drift; Isostasy; Plate tectonics, Recent views on mountain building; Vulcanicity; Earthquakes and Tsunamis; Concepts of geomorphic cycles and Landscape development; Denudation chronology; Channel morphology; Erosional surfaces; Slope-development; Applied Geomorphology; Geohydrology, 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 frontogenesis, Temperate and Tropical cyclones; Types and, distribution of Precipitation; Weather and Climate; Koppen's, Thornthwaite's and Trewartha's classification of world climates; Hydrological cycle; Global climatic change and role and response of man in climatic changes, Applied climatology and Urban climate.
3. **Oceanography:** Bottom topography of 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, the 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; agroforestry; Wild life; Major gene pool centers.
5. **Environmental Geography:** Principle of 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; Environmental policy; Environmental hazards and remedial measures; Environmental education and legislation.

HUMAN GEOGRAPHY

6. **Perspectives in Human Geography:** Areal differentiation; regional synthesis; Dichotomy and dualism; Environmentalism; Quantitative revolution and locational analysis; radical, behavioral, human and welfare approaches; Languages, religions and secularization; Cultural regions of the world; Human development index.
7. **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: locational patterns and problems; patterns of world trade.
8. **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.

9. Types and pattern of rural settlements; Environmental issues in rural settlements; Hierarchy of urban settlement; Urban morphology; Concepts 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.
10. **Regional Planning:** Concept of a region; Types of regions and methods of regionalization; Growth centers and growth poles; Regional imbalances; regional development strategies; environmental issues in regional planning; Planning for sustainable development.
11. **Models Theories and Laws in Human Geography:** Systems analysis in Human geography; Malthusian, Martian 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 stage of growth. Heartland and Rimland theories; Laws of international boundaries and frontiers.



PAPER – II

GEOGRAPHY OF INDIA

1. **Physical Setting:** Space relationship of India with neighboring countries; Structure and relief; Drainage system and watersheds; Physiographic regions; Mechanism of India 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, land 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 socioeconomic and ecological implications; Significance of dry farming; Livestock resources and white revolution; aquaculture; sericulture, apiculture and poultry; agricultural regionalization; agroclimatic zones; agroecological regions.
4. **Industry:** Evolution of industries; Locational factors of cotton, jute, textile, iron, and steel, aluminum, fertilizer, paper, chemical and pharmaceutical, automobile, cottage and agro-based industries; Industrial houses and complexes including public sector undertaking; Industrial regionalization; New industrial policies; Multinationals and liberalization; Special Economic Zones; Tourism including eco-tourism.
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, intra-regional 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; Skims and associated problems; town planning; Problems of urbanization 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 reorganization; Emergence of new states; Regional consciousness and interstate 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 relating to environmental pollution; Change 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; Environmental awareness; Linkage rivers; Globalization and Indian economy.
11. **Note:** Candidates will be required to answer on compulsory map question pertinent to subjects covered by this paper.