



UPSC CIVIL SERVICES EXAM

BY NITIN KUMR SIR

GEOGRAPHY OPTIONAL TEACHERS

GEOGRAPHY

OPTIONAL



**NARENDRA
SHARMA SIR**



**ABHISHEK
MISHRA SIR**

GEOGRAPHY OPTIONAL

PAPER-I (PRINCIPLES OF GEOGRAPHY)

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.

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- **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.

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.

Human Geography:

- **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.

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.

GEOGRAPHY OF INDIA

- **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.

GEOGRAPHY OF INDIA

- **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.

GEOGRAPHY OF INDIA

- **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

List of Physical Geography Optional Book for UPSC 2026

List of Physical Geography Optional Book for UPSC 2026		
Book Title	Author	Description
Geomorphology	Savindra Singh	This book covers the structure and processes shaping the earth's surface, making it essential for understanding landforms.
Climatology	D.S. Lal	A comprehensive guide to weather patterns, atmospheric conditions, and climatic zones, is crucial for understanding global climate dynamics.
Oceanography	Sharma & Vatal	This textbook is designed to provide insight into oceanic processes and the marine environment in the world's oceans and seas.
Biogeography	Savindra Singh	An exploration of the distribution of life forms on earth and their relationships with the environment.
Environmental Geography	Savindra Singh	This book addresses the interaction between humans and their environment, emphasizing sustainability and conservation.

Human Geography Optional Book for UPSC 2026

List of Human Geography Optional Book for UPSC 2025

Topic	Book Title	Author	Description
Perspectives in Human Geo.	<i>Geographical Thought</i>	R.D. Dixit	Covers the evolution of geographical thought and various approaches to understanding human geography.
Economic Geography	<i>Economic and Social Geography</i>	Rupa Publisher	Provides insights into how economic activities are distributed and managed across different regions.
Population Geography	<i>Population Geography</i>	R.C. Chandna	Examines the patterns and processes of human population distribution, migration, and demographics.
Settlement Geography	<i>Urban Geography</i>	R.N. Dubey	Focuses on the development and organization of human settlements, both urban and rural.
Regional Planning	<i>Regional Development and Planning</i>	Chandna & Sidhu	Discusses strategies and policies for regional development and the planning processes involved.

Indian Geography Optional Book for UPSC 2026

List of Indian Geography Optional Book for UPSC 2025

Topic	Book Title	Author	Description
Physical Setting	Certificate Physical and Human Geography	G.C. Leong	A fundamental book for understanding the physical and human geography aspects of the world, with useful insights into India.
Resources	India: A Comprehensive Geography	D.R. Khullar	Comprehensive coverage of India's physical features, resources, and economic activities.
Agriculture	Agricultural Geography	Majid Husain	Detailed exploration of agricultural practices, types of farming, and agricultural patterns in India.
Industry	Economic and Commercial Geography of India	Sharma & Coutinho	Discusses India's industrial development, distribution of industries, and economic zones.
Transport & Communication	Transport, Communication and Trade	Maji Husain	Covers the various modes of transport, communication networks, and trade routes within India.

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Phone Number :- 9999154587

Email :- k.nitinca@gmail.com

You Tube :- <https://youtube.com/@nitinsirclasses8314?si=a7Wf6zaTC5Px08Nf>

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Telegram :- <https://t.me/+ebUFssPR83NhNmJl>



**thank
you!**