

# **SHANKAR IAS ACADEMY**

## **Geography Optional Part B Mains**

### **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;** **Erosion 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 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 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; **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: locational 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- 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:** 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.**
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:** Systems 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. Heartland and Rimland theories; Laws of international boundaries and frontiers.

1. **Physical Setting:** Space relationship of India with neighboring 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, apiculture 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, fertilizer, paper, chemical and pharmaceutical, automobile, cottage and agro - based industries;** **Industrial houses and complexes including public sector undertakings;** Industrial regionalisation; 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; Slums 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 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 relating 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.**

# **SHANKAR IAS ACADEMY**

## **GEOGRAPHY (Prelims & Mains)**

1. 6 to 12<sup>th</sup> NCERT Books
2. Physical Geography → Savindra Singh
3. Spectrum Mains
4. Climatology – D.S Lal
5. Geography through Maps → Siddhartha
6. Geographical thought → Majiid Husain
7. Indian Geography → Khullar
8. Models & Theories → Siddhartha
9. Certificate Physical → Gocheng leong  
Geography
10. • Orient long men  
• TTK Atlas  
• Oxford Atlas

## **GEOGRAPHY (Mains)**

1. NCERT Books 10<sup>th</sup>, 11<sup>th</sup> & 12<sup>th</sup>
2. Physical Geography → Savindra Singh
3. Spectrum Mains
4. Climatology – D.S Lal
5. Indian Geography → Khullar
6. Models & Theories → Siddhartha
7. Certificate Physical → Gocheng leong  
Geography
8. • Orient long men  
• TTK Atlas  
• Oxford Atlas