

GEOGRAPHY OPTIONAL HANDOUT By – Md. Rizwan Ahmed

Syllabus
(Geography Optional Mains)
PART I

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; agroforestry; Wildlife; Major gene pool centres.

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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.

PART- II**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-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: 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 urbanisation; Sustainable development of cities.

GEOGRAPHY OPTIONAL HANDOUTS -01 By – Md.Rizwan Ahmed**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; Rostov's model of stages 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 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 groundwater, energy, minerals, biotic and marine resources; Forest and wildlife resources and their conservation; Energy crisis.

3. Agriculture:

Infrastructure: irrigation, seeds, fertilisers, 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 regionalisation; agro-climatic zones; agro-ecological regions.

GEOGRAPHY OPTIONAL HANDOUTS -01 By – Md.Rizwan Ahmed**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 policies; Multinationals and liberalisation; 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 economic and social; Indian space program.

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, workforce, 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 urbanisation and remedies, Regional Development and Planning: Experience of regional planning in India; Five Year Plans; Integrated rural development programs; Panchayati Raj and decentralised planning; Command area development; Watershed management; Planning for the backward area, desert, drought-prone, hill, tribal area development; multi-level planning; Regional planning and development of island territories.

GEOGRAPHY OPTIONAL HANDOUTS -01 By – Md.Rizwan Ahmed**8. Political Aspects:**

Geographical basis of Indian federalism; State reorganisation; 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 the Indian Ocean realm.

9. 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.

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


VAJIRAM & RAVI

GEOGRAPHY OPTIONAL HANDOUTS -01 By – Md.Rizwan Ahmed**Reference Books-**

- **“Physical Geography”** by Savindra Singh
- **“Human Geography”** by Majid Hussain
- **“Models and Theories”** by Majid Hussain
- **“Geographical Thought”** by R.D. Dixit
- **“Geographical Thought”** by Sudipta Adhikary
- **“Settlement Geography”** by K. Siddhartha

- NCERT Class X textbook (Old Edition) is good for Economic Geography Coverage.
- **“Indian Geography”** by D.R. Khullar
- **“Geography of India”** by Majid Hussain
- **“Physical Geography”** by Made Simple, Rupa Publication
- **“Economic and Social Geography”** by Made Simple, Rupa Publication

- **Other References:**
 - Like in all other subjects, and in GS, students must read various magazines and enrich current affairs-based enrichment.
 - Certificate Physical and Human Geography by Goh Cheng Leong
 - Some of the sources one can be regular with are:
 - Yojana
 - Kurukshetra
 - Geography and You
 - NITI Aayog reports (particularly those on Agriculture, Infra, Regional development, Rural development etc.)
 - Select UN docs on Population, Development & Environment. (UNDP's document is most helpful)
 - India Yearbook, published by the Ministry of Information and Broadcasting.

GEOGRAPHY OPTIONAL HANDOUTS -01 By – Md.Rizwan Ahmed**Tips for Geography optional preparation-****➤ *Develop Conceptual Understanding-***

Build a strong foundation and ***clear your fundamentals with the Class Notes and other foundation books***, as concepts are explained in simple, easy-to-understand language.

Once you are clear with the fundamentals, you can proceed to the advanced version of books such as Physical Geography by Savindra Singh for Geography preparation.

➤ *Refer to Atlas-*

Geography preparation is incomplete without referring to the atlas. It is essential to keep an atlas by your side for adequate preparation. Not only will it help you to understand the concepts better, but it will also help you to retain them for a longer period.

➤ *Understand the Syllabus:*

Familiarize yourself with the UPSC geography optional syllabus. It will give you a clear idea of the topics you need to cover and the depth of knowledge required.

➤ *Interlink Static and Dynamic Portion-*

Do focus on Current affairs related to Geography while preparing for the static part. Gone are the times when the UPSC used to ask questions from the Static part only. The times have changed, and it is normal to find questions related to current events. Hence, it is *advisable to focus on current affairs and other contemporary developments* while preparing for the Static part. For the same, you can refer to Yojana, Kurukshetra, and Down to Earth magazine.

➤ *Focus on Maps & Statistics-*

Maps are big magnets that can attract good marks if prepared. You should consider *preparing region-wise maps* from textbooks that should include topics like physical features, soil, terrain, agriculture, rivers, monsoon, drainage, etc. Make sure to include maps, diagrams and all the relevant data in your answers to make them more optional-oriented rather than writing GS-type answers.

➤ *Follow the Integrated Preparation Approach*

Focus on integrated preparation to make your preparation more productive. While writing answers for Paper II, you can use the relevant concepts/models studied in Paper-I to make your answers more appealing. Integrated preparation will give you an edge in your exam preparation.

➤ *Make Notes and Refer to the Previous Year's Questions*

Note-making and referring to previous year's questions are an inevitable part of the UPSC exam preparation. While self-prepared notes will serve as an ultimate

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guide and save you crucial time during revision, the previous year's questions will help you understand the type of questions asked in the exam. It will help you identify the important topics and focus your preparation accordingly.

➤ ***Practice Answer Writing:***

Practice writing answers within the word limit and time constraints. Develop a structured approach to your answers, and include relevant examples, case studies, and data to support your arguments. Also, join a test-series program to get yourself evaluated.

➤ ***Mock Tests and Revision:***

Take regular mock tests to assess your preparation and improve your speed and accuracy. Allocate dedicated time for revision to consolidate your knowledge.

