

CCE(M)/GEG-I/10/2024

GEOGRAPHY

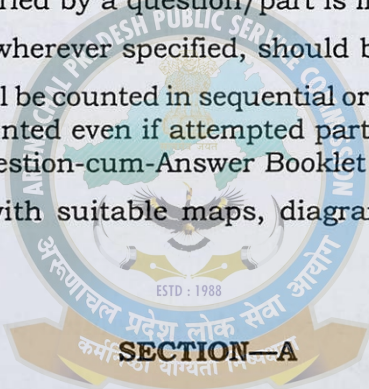
(PAPER—I)

Time : 3 hours]

[Full Marks : 250

Please read each of the following instructions carefully before attempting the questions :

- (i) There are **eight** questions divided in **two Sections**.
- (ii) Candidate has to attempt **five** questions in all.
- (iii) Question Nos. **1** and **5** are compulsory and out of the remaining, **three** are to be attempted choosing at least **one** question from each Section.
- (iv) The number of marks carried by a question/part is indicated against it.
- (v) Word limit in questions, wherever specified, should be adhered to.
- (vi) Attempts of questions shall be counted in sequential order. Unless struck off, attempt of a question shall be counted even if attempted partly. Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.
- (vii) Illustrate your answer with suitable maps, diagrams and examples, wherever required.



1. Answer any five of the following questions :

10×5=50

- (a) Discuss the environmental challenges posed by tourism in the Himalayas.
- (b) Differentiate between climate change and climate variability. How do both impact long-term weather patterns?
- (c) Write a short note on the uniqueness of fauna in the Notogaea realm.
- (d) Explain the difference between environmental lapse rate and adiabatic lapse rate and their significance in determining atmospheric stability.
- (e) Explain the factors influencing the salinity distribution in the world's oceans.
- (f) Discuss the role of keystone species in ecosystem stability.
- (g) Explain the concept of base level in geomorphology.

2. Answer the following questions :

- (a) How does atmospheric circulation influence regional climate patterns? Discuss the role of phenomena like El Niño, La Niña and the Indian Ocean Dipole in shaping global climatic variability. 8+12=20
- (b) Compare and contrast Köppen's and Trewartha's climate classification. Analyze their effectiveness in representing regional climate variations. 15
- (c) Discuss the formation and characteristics of coral reefs and their ecological importance. 8+7=15

3. Answer the following questions :

- (a) Critically examine Wegener's Continental Drift Theory and its significance in modern geology. 15+5=20
- (b) How can applied climatology contribute to mitigating Urban Heat Islands (UHIs) and enhancing air quality in rapidly expanding metropolitan areas affected by anthropogenic activities? 10+5=15
- (c) Human degradation of tropical forests is much greater in recent past. Discuss its causes and impact. 10+5=15

4. Answer the following questions :

- (a) Explain the mechanism of earthquake generation and assess the significance of seismic hazard mapping. 10+10=20
- (b) Evaluate the effectiveness of Marine Protected Areas (MPAs) and their role in mitigating and preventing marine pollution. 8+7=15
- (c) Discuss the factors affecting ocean currents with special reference to the Indian Ocean. 15

SECTION—B

5. Answer *any five* of the following questions :

10×5=50

- (a) Analyze the concept of dichotomy and dualism in geographical studies, citing suitable examples.
- (b) Discuss the challenges of urban sprawl in megacities.
- (c) "Energy mix is a step towards sustainability." Discuss.
- (d) Discuss the role of urban morphology in city planning.

- (e) Examine the role of economic corridors in regional development.
- (f) Write a short note on Rural-Urban Fringe.
- (g) Discuss the concept of threshold population in Christaller's Central Place Theory.

6. Answer the following questions :

- (a) Examine the relationship between cultural diffusion and geographical space. Illustrate with examples how cultural traits spread and adapt in different regions. 10+10=20
- (b) Examine the relevance of the 'heartland theory' in the emerging geopolitical dynamics of 21st Century. 15
- (c) Examine Malthusian and Neo-Malthusian perspectives on population growth. 15

7. Answer the following questions :

- (a) Critically examine the applicability of Rostow's model in contemporary development contexts. Discuss how changes in technology, globalisation and the dynamics of the global economy have influenced the development trajectories of countries. 10+10=20
- (b) Why is ageing more prevalent in developed countries? Explain this in context of Demographic Transition Theory. 10+5=15
- (c) Discuss the role of geopolitics in shaping international boundaries and frontiers. 15

8. Answer the following questions :

- (a) Assess the role of knowledge-based industries in the evolution of quaternary activities. How are emerging trends like artificial intelligence, digital economies and remote work reshaping their spatial distribution and global significance? 10+10=20
- (b) Discuss the key approaches to the study of behavioural geography and analyze the role of humanistic perspectives in shaping spatial behaviour. 15
- (c) Analyze the factors responsible for regional disparities in India and suggest measures for balanced regional development. 15

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SPACE FOR ROUGH WORK



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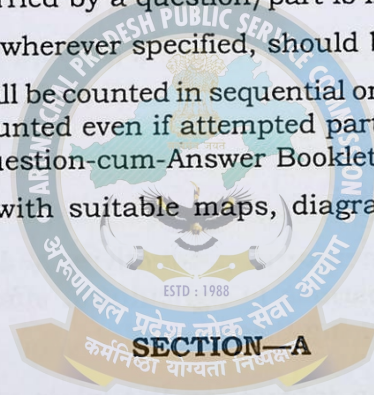
(PAPER—II)

Time : 3 hours]

[Full Marks : 250

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- (vii) Illustrate your answer with suitable maps, diagrams and examples, wherever required.



1. Answer *any five* of the following questions :

10×5=50

- (a) Examine the impacts of lithium extraction on fragile ecosystems in India.
- (b) Discuss the role of India's space programme in disaster management and environmental monitoring.
- (c) Analyze the causes and consequences of river bank erosion in the Brahmaputra valley.
- (d) Examine the challenges of infrastructure development in Arunachal Pradesh.
- (e) Analyze the role of coal reserves in India's energy security.
- (f) Discuss the implications of the shrinking groundwater table on India's agricultural productivity.
- (g) Evaluate the spatial patterns of extreme heat events and their socioeconomic consequences in India.

2. Answer the following questions :

- (a) Discuss the key characteristics of the structure, relief and drainage system of the Himalayas and their geographical significance. 8+12=20
- (b) Discuss the role of deforestation and shifting cultivation in soil erosion and land degradation in Arunachal Pradesh. 15
- (c) Explain the causes and impact of Glacial Lake Outburst Floods (GLOFs) in the Himalayan region. 15

3. Answer the following questions :

- (a) Analyze the impact of deep-sea mining on marine biodiversity and India's Blue Economy prospects. 15+5=20
- (b) "India will prosper when tribal communities will prosper, the welfare of tribal communities is foremost priority." Comment. 5+10=15
- (c) Discuss the impact of increasing cyclonic activity on India's eastern coastline. 10+5=15

4. Answer the following questions :

- (a) Differentiate between agricultural productivity and agricultural efficiency. Analyze the regional disparities in agricultural efficiency across India and discuss the factors influencing them. 10+10=20
- (b) Examine the challenges in integrating floodplain management with urban planning in North-East India. 15
- (c) Analyze the role of India's Act East Policy in the development of North-Eastern States. 15

SECTION—B

5. Answer *any five* of the following questions :

10×5=50

- (a) Assess the role of artificial intelligence and geospatial technologies in urban planning.
- (b) Discuss the spatial inequalities in healthcare accessibility in India.
- (c) Evaluate the challenges and opportunities of green hydrogen as an alternative energy source.
- (d) Explain the geopolitical and economic implications of India's deep-sea mining initiatives.

- (e) Examine the impact of India's space missions on global climate monitoring initiatives.
- (f) Explain the socioeconomic impact of smart cities on urban-rural migration patterns in India.
- (g) Examine the sociocultural impact of demographic shifts in India's border regions.
6. Answer the following questions :
- (a) Discuss the growth of India's pharmaceutical industry in achieving healthcare accessibility and self-reliance under 'Atmanirbhar Bharat.' 20
- (b) Analyze the potential of circular economies in India's waste management sector. 15
- (c) Discuss the impact of changing monsoon patterns on India's water security. 15
7. Answer the following questions :
- (a) Evaluate the potential of agro-climatic regional planning in mitigating agricultural distress in India. 20
- (b) Discuss the major Regional Rapid Transit Systems (RRTS) developed in India. How do these systems contribute to addressing urban challenges? 15
- (c) Explain the concept of watershed management and its utility in land-resource management. 15
8. Answer the following questions :
- (a) Examine the geomorphological evolution of Peninsular India. How do ancient tectonic processes and denudational forces contribute to the present landform characteristics? 10+10=20
- (b) Critically evaluate the role of Special Economic Zones (SEZs) in India's industrialization and spatial economic growth. 15
- (c) Examine the geological rationale for including Meghalaya in Peninsular India and discuss its vegetation and soil types. 15

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SPACE FOR ROUGH WORK

