

2021

GEOGRAPHY

PAPER-I

Time Allowed — 3 Hours

Full Marks — 200

If the questions attempted are in excess of the prescribed number, only the questions attempted first up to the prescribed number shall be valued and the remaining ones ignored.

*Answers may be given either in **English** or in **Bengali** but all answers must be in one and the same language.*

Illustrate your answers with suitable diagrams/ sketches.

Answer any five questions, taking at least two from each group.

Group-A

1. Examine the various processes involved in chemical weathering. Indicate their role in bringing about topographic changes. Discuss the differences between 'cyclic' and 'non-cyclic' concepts of landform evolution. 10+10+20=40
2. Discuss the basis of classification of world climate after Köppen. Comment on the merits and demerits of this classification. What is the importance of the ozone layer? Explain the processes of its formation and depletion. 10+10+5+15=40
3. Give a detailed account of the Mid Oceanic Ridge System. What are the major solutes in sea water? Explain the characteristics of biogenous ocean sediments. 15+10+15=40
4. Explain biogeochemical cycle with the help of nitrogen cycle as an example. Analyse the impact of deforestation on the slopes of semi-arid area and on mangrove-covered delta region. 20+20=40
5. What are the principle, properties and uses of polar zenithal projections? Discuss in detail how the electromagnetic radiation (EMR) interacts with the atmosphere. How can RS and GIS be used for hazard management? 20+10+10=40

Group-B

6. Elucidate the major characteristics of intensive subsistence agriculture focussing on the physical and cultural elements, crop pattern and farm layout. Examine the role of physical and economic factors in the development of commercial fishing with particular reference to their areas of concentration. 20+20=40

7. Discuss the factors that determine the population density of a region. How does literacy affect the birth rate of a country? What do you mean by 'population composition'? 20+15+5=40
 8. Explain the social process of adaptation and assimilation with examples. How are the tribes vulnerable to social discrimination? Differentiate frontiers from boundaries. 15+15+10=40
 9. Critically analyse the theory of urban growth as put forward by Homer Hoyte. What is meant by the term "urban hierarchy"? State the assumptions on the basis of which Christaller formulated the "Central Place Theory." 20+5+15=40
 10. Elaborate the concept of region. Distinguish between formal and functional region. Explain the characteristics of "State" as a planning region. 10+10+20=40
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