

West Bengal State University
B.A./B.Sc./B.Com (Honours, Major, General) Examinations, 2015
Part - I

GEOGRAPHY - HONOURS
PAPER - I

Duration : 4 Hours]

[Full Marks : 100

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

GROUP - A

(Geotectonics)

Category - A

Answer any *one* question within 600 words.

1 × 10 = 10

1. Classify the Palaeozoic era into different periods mentioning the major geologic events. What is 'Benioff' zone ? 8 + 2
2. What is the concept of Sea Floor spreading ? Mention the various evidences supporting this concept. 4 + 6

Category - B

Answer any *four* questions within 150 words each.

4 × 5 = 20

3. Discuss in detail about the composition of the mantle. 5
4. What are the main points of difference between Pratt and Airy's concept of isostasy ? 5
5. Discuss the varying nature of earthquakes associated with different types of plate boundaries. 5
6. What are the differences between aa and pahoehoe lava ? 5
7. How do hot spots originate ? How are they related to plate movements ? 2 + 3
8. Mention the characteristics of triple junction. 5
9. What do you understand by 'polar wandering' ? 5

GROUP - B
(**Geomorphology**)

Category - A

Answer any *two* questions within 600 words each. 2 × 10 = 20

10. What are the different processes of mechanical weathering ? Mention the resultant landforms. 5 + 5
11. Explain Penck's concept of landscape evolution. How does it vary from Davis' cycle of erosion ? 6 + 4
12. Describe with sketches the evolution of landforms in an area of faulted structure. 10
13. Give an account of the landforms formed due to coastal erosion with suitable sketches. 7 + 3

Category - B

Answer any *four* questions within 150 words each. 4 × 5 = 20

14. Differentiate between earth flow and mud flow. 5
15. Explain the development of annular and trellis drainage patterns. $2\frac{1}{2} + 2\frac{1}{2}$
16. Describe the major landforms developed over granitic rock. 5
17. Differentiate between hogbacks and cuestas. 5
18. How did Hack attempt to explain the accordance of summit levels ? 5
19. Explain the formation of eskers and kame. $2\frac{1}{2} + 2\frac{1}{2}$
20. Describe the topographic features of a flood plain with suitable diagrams. 5

GROUP - C

(Hydrology and Oceanography)

Category - A

Answer any *one* question within 600 words. 1 × 10 = 10

21. Elaborate upon the factors influencing the recharge and discharge of ground water. 10
22. Discuss the factors influencing the temperature and salinity of ocean water. 10

Category - B

Answer any *four* questions within 150 words each.

4 × 5 = 20

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| 23. | What are the different sources of ground water ? | 5 |
| 24. | How do slope and soil characteristics influence surface run-off ? | $2\frac{1}{2} + 2\frac{1}{2}$ |
| 25. | Differentiate between phreatic zone and vadose zone. | 5 |
| 26. | Distinguish between porosity and permeability. | 5 |
| 27. | What type of deposits are found on the continental shelves ? | 5 |
| 28. | Why is the water of Arabian Sea more saline than that of Bay of Bengal ? | 5 |
| 29. | Distinguish between pycnocline and thermocline. | 5 |
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