2026

M.A./M.Sc. 2nd Semester Examination

GEOGRAPHY

Paper : GEOC452X1

(Hydrology and Oceanography)

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Full Marks : 35 Time : Two Hours

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

Group - A

Answer any ***five*** questions : 2×5=10

1. Define phreatic zone.
2. Define adsorbed moisture.
3. What is 'Curve Number'?
4. What is meant by magnitude-frequency of hydrological events?
5. What is algal bloom?
6. Where do corals get their colour from?
7. What is meant by 'rules of constant proportion'?
8. Define thermocline.

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Group - B

Answer any ***three*** questions : 4×3=12

9. Examine the importance of hydrological frequency analysis with special reference to Gumbel's model.
10. Describe the energy balance approach in estimating evaporation.
11. Analyze the role of ambient relative humidity and wind speed in evapotranspiration from the water-soil-vegetation continuum.
12. Briefly illustrate the stages of Wilson Cycle in relation to plate tectonics.
13. Classify ocean sediments based on their origin (source), composition, and particle size.
14. Briefly assess the significance of T-S diagram.

Group - C

Answer any ***one*** question : 8×1=8

15. Describe the techniques of monitoring hydrological parameters mentioning their application in preparing hydrological budget.
16. Explain the significance of land-ocean-atmosphere interactions in particular reference to its role in global climate change.

[Internal Assessment - 5 marks]