2013

M.A/M.Sc.

1st Semester Examination

GEOGRAPHY

PAPER—GEO-102

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

Write the answer Questions of each Unit in separate books

Unit–III

(Oceanography)

Group—A

1. Answer any *one* questions : 8×1

(a) Discuss how the coastal geomorphology is influenced by dynamic processes along the shores dominated by alluviums.

(b) Explain the geomorphological perspectives of Mangrove ecology with special reference to deltaic region of the tropics.

Group—B

2. Answer any *two* questions : 4×2

(a) Identify the chemical composition of ocean water mentioning its significance.

(b) Explain how wave height and length change as the waves approach shallow water.

(c) Briefly explain the mechanism of air-sea interactions.

(d) Explain how coastal cells play a significant role in near-shore sediment movement.

Group—C

3. Answer any *two* questions : 4×2

(a) What is tidal prism ?

(b) Define T-S diagram.

(c) What is coral bleaching ?

(d) Why do waves propagate in the sea ?

Unit–IV

(Hydrology)

Group—A

1. Answer any *one* question : 8×1

(a) Discuss with illustration, the methods of estimating runoff in a river basin with special reference to SCS Curve Number Technique.

(b) Discuss the properties of different types of sub-surface water with special reference to capillary water and its rise.

Group—B

2. Answer any *two* questions : 4×2

(a) How does the shape of hydrograph depend on rainfall character and waterhead configuration.

(b) Explain with illustration the methods for base-flow separation.

(c) Explain the various phases of run-off cycle.

(d) Explain hydraulic conductivity and transmissivity for both uncofined and bounded aquifer.

Group—C

3. Answer any *two* questions : 2×2

(a) Discuss the relevance of 'inflection point' on basin hydrology.

(b) What is Virtual water?

(c) Briefly mention the limitation of using infiltrometer.

(d) Mention the steps for calculating depth of direct runnoff over a watershed.

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