

**M.A./M.Sc. 1st Semester Examination, 2012**

**GEOGRAPHY**

*(Oceanography and Hydrology)*

PAPER – GEO-102 (Unit- III & IV)

*Full Marks : 40*

*Time : 2 hours*

*The figures in the right hand margin indicate marks  
Candidates are required to give their answers in their  
own words as far as practicable*

*Illustrate the answers wherever necessary*

**Write the answers to questions of each Unit  
in separate books**

UNIT – III

*(Oceanography)*

*[ Marks : 20 ]*

GROUP – A

1. Answer any *one* question : 8 × 1
- (a) Explain the origin and characteristics of major relief features of the ocean basins.
  - (b) Discuss the ecology of coastal sand dunes and explain their successive growth stages with transformation of vegetations in the alluvium coast.

GROUP – B

2. Answer any *two* questions : 4 × 2
- (a) Explain the differences between *Thermocline* and *Thermohaline*.
  - (b) Discuss the ecology of Mangroves with reference to their geologic roles.
  - (c) Identify major geomorphological features of the Rocky coast's highlighting their characters.
  - (d) Analyse the significance of tides in Geomorphology.

GROUP – C

3. Answer any *two* questions : 2 × 2
- (a) Explain the significance of turbidity current in brief.
  - (b) Identify the textural characters of continental shelf sediments.
  - (c) What is the chemical composition of sea water ?
  - (d) Define *T-S* diagram.

UNIT – IV

( *Hydrology* )

[ *Marks : 20* ]

GROUP – A

1. Answer any *one* question : 8 × 1
- (a) Assess the relevance to study hydrological systems at global as well as basin scale.
  - (b) Explain, with illustrations, the time-dimensions of hydrograph and discuss the hydrological importance of basin-lag-time.

GROUP— B

2. Answer any *two* questions : 4 × 2
- (a) Outline the processes of estimating infiltration in field.
  - (b) Identify and discuss the factors of evapo transpiration.
  - (c) Explain the method for estimating capillary rise.
  - (d) Explain storage coefficient for both confined and unconfined aquifer.

GROUP — C

3. Answer any *two* questions : 2 × 2
- (a) Define hydrological soil group.
  - (b) What is the connotation of piezometric surface ?
  - (c) Define specific yield of an aquifer.
  - (d) Give an outline of the composition of "Zone of Aeration".
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