PG/IS/GR-1102/09

M.A./M.Sc 1st Semester Examination, 2009

GEOGRAPHY AND E.M.

PAPER—GR-1102

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*) Identify various onshore and offshore oceanic regions, and describe the geomorphology of coastal regions with reference to system analysis.

(*b*) Describe the basic ecological factors, trophic levels, and zonation pattern of benthos in rocky shores under marine ecosystem.

GROUP – B

2. Answer any *two* questions : 4 × 2

(*a*) Explain the nature of chemical composition of ocean water.

(*b*) Explain how the coastal sand dunes have evolved with transformation of vegetations in the tropical sandy shores.

(*c*) Explain the adaptive responses of mangroves in tidal life.

(*d*) Explain the geomorphological perspectives of coral ecology in the tropical transparent seas.

GROUP – C

3. Answer any *two* questions : 2 × 2

(*a*) Classify the major groups and subgroups of marine sediments.

(*b*) Identify the nature of ocean circulations.

(*c*) What is the difference between thermocline and thermohaline ?

(*d*) What is the significance of T-S diagram ?

UNIT – IV

(*Hydrology*)

[*Marks* : 20]

GROUP – A

1. Answer any *one* question : 8 × 1

(*a*) Discuss the sequential methods of runoff estimation following SCS-CN (Curve Number) technique.

(*b*) Explain the procedure for constructing regional water budget. How the evaporation estimated from water budget ?

GROUP – B

2. Answer any *two* questions : 4 × 2

(*a*) Describe the outline of cascading system in a basin unit.

(*b*) How does the area of a basin influence concentration of runoff (discharge) in a unit hydrograph ?

(*c*) Explain the effects of surface tension of water on capillary rise.

(*d*) Highlight the dynamic nature of water in connection to spatiotemporal differences in the availability of water.

GROUP – C

3. Answer any *two* questions : 2 × 2

(*a*) Define hydrostatics.

(*b*) What are the methods for measuring hygroscopic moisture ?

(*c*) Define perched aquifer.

(*d*) Mention the hydrological significance of basin lag time.