2010

M.Sc

1st Semester Examination

GEOGRAPHY AND E.M.

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.

Write the answers of each Unit in separate books.

Unit—III

(*Oceanography*)

[Marks : 20]

Group—A

1. Answer any *one* question : 1×8

(a) Discuss the dynamics of Waves in the shallow water environment. 8

(b) Classify marine sediments on the basis of their mode of origin and analyse their distribution, texture and transport methods. 8

Group—B

2. Answer any *two* questions : 2×4

(a) Explain the method of Air-Sea interactions. 4

(b) Discuss the origin of Oceanic ridgeos and trenches. 4

(c) What are the characteristics of coral reef morphology ? 4

(d) Explain how human interference affects the mangroves. 4

Group—C

3. Answer any *two* questions : 2×2

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

(b) What are turbidites ?

(c) What is tidal prism ?

(d) What is beach drifting ?

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Unit—IV

(*Hydrology*)

[Marks : 20]

Group—A

1. Answer any *one* question : 1×8

(a) Discuss the processes for estimating rate of infiltration in the field for using the input in the theory of Horton (1939) for calculating basin infiltration. 8

(b) State the steps of drawing unit hydrograph and assess the application to analyse basin hydrology.

Group—B

2. Answer any *two* questions : 2×4

(a) Discuss the base flow separation techniques of hydrograph. 4

(b) Discuss the hydrological impact of 'basin lagtime'. 4

(c) Assess the importance of rain water harvesting in managing water scarcity. 4

(d) Discuss the importance of preparing basin-wise hydrological budget. 4

Group—C

3. Answer any *two* questions :

(a) Define 'inflection point'.

(b) What is initial obstruction ?

(c) What is piezometric surface ?

(d) What is base flow ?