10. Write notes on the following: 5+5+4=14

a) Classification of carbonate rocks.

b) Minor constituents of siliciclastic rocks.

c) Composition of sand stone from craton interior.

★★★

PG ODD SEMESTER EXAMINATION, 2022
held in MARCH, 2023

EARTH SCIENCE

1st Semester

COURSE NO. ESCC - 503

(Geomorphology and Sedimentology)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer any five questions, taking one from each unit

UNIT-I

1. a) Define Weathering. Write a detailed note on different types of chemical weather with suitable example. 1+7=8

   b) Discuss in detail the structural lithological and climatic controls on geomorphological features. 6

2. a) Define soil texture. Write a descriptive note on the soil profile with a neat sketch. 1+7=8

(Turn Over)

b) Write a brief note on the following: 2x3=6

i) Saprolites
ii) Mollisols and oxisols
iii) Onion skin weathering.

UNIT-II

3. a) Discuss in detail the geomorphic features associated with fluvial environment with neat sketches. 7

b) Write a descriptive note on Pneck's model of landform evolution with neat sketch. 7

4. a) Write a detailed account on geomorphic markers for identification of different geomorphological features. 8

b) Write a descriptive note on the depositional landforms of gracial environment. 6

UNIT-III

5. a) What are the slope elements of a longitudinal profile of hillslope. Add a note on the genetic classification of hillslope. 3+3=6

b) Illustrate the classification of mass movements with their characteristics features. 8

6. a) Discuss in detail the linear aspects of morphometric analysis of a region. 8

b) Write short note on the following: 3x2=6

i) Landslide
ii) Aerial aspects of morphometric analysis.

UNIT-IV

7 Write short notes on the following: 3+3+2+3+3=14

i) Flute
ii) Grooves
iii) Muderacks
iv) Reef
v) Ripple Mark

8. a) Write a note on different palaeocureunt indicator sedimentary structure. 5

b) Write an explanatory note on 'Flow-regime' 4

c) Define 'effective porosity'. Explain Darey's Law. $1^1/_2+3^1/_2=5$

UNIT-V

9. a) Write about different major constituent of Carbonate sedimentary rocks. 6

b) How can clay mineral be used for palacelineate interpretation. 3

c) Write about petrogenesis of conglomerate. 4

(Turn Over)