2021

Geography

[Third Semester]

Paper - GEO 303

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.

Unit-29

Process-Form Relationship in Fluvial System

Group - A

1. Answer any one question within 200 words   1×8=8

    a. What are the factors for deposition of sediments? Illustrate various types of instream depositional landforms.   2+6

(Turn Over)

(2)

b. Explain the impacts of different types of channel resistance on channel flow.

Group - B

2. **Answer any two questions each within 100 words** 2×4=8

   a. How does river channel shifting affect the socio-econonic condition of people?

   b. Discuss the factors which influence the bank erosion along a river.

   c. Briefly elucidate the role of sediment properties in sediment entrainment.

   d. Describe different types of bars commonly found in sandy alluvial river bed.

Group - C

3. **Answer any two questions** 2×2=4

   a. How are critical and available shear stress associated with sediment transport?

   b. What is meant by valley-scale resistance?

   c. Discuss the concept of uniformitarianism.

   d. What is the importance of unit stream power in channel flow?

(3)

Unit-30

Applied Techniques in Fluvial Geomorphology

Group - A

1. **Answer any one question.**   **1×8=8**

   a. Illustrate different methods of estimating river discharge.

   b. Describe different morphometric techniques for assessing areal properties of a drainage basin.

Group - B

2. **Answer any two questions**   **2×4=8**

   a. Describe the techniques for analysing shape of a drainage basin.

   b. Describe the procedures of estimating suspended load of a river.

   c. How do you estimate bed-load of a stream?

   d. How does Horton's scheme of stream ordering differ from that of Strahler?

(4)

Group - C

3. Answer any two questions $\qquad$ 2×2=4

   a. Define amplitude of relief.

   b. How do we get idea about phase of evolution from length of overland flow?

   c. What do '$R_F=1$' and '$R_F=0$' mean?