

**B.Sc. Semester-VI Examination, 2022-23****GEOLOGY [Honours]****Course ID : 62016 Course Code : SH/GEL/603/DSE-3(T)****Course Title : River Science**

Time : 1 Hour 15 Minutes

Full Marks : 25

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

1. Answer any **five** of the following questions:  $1 \times 5 = 5$
- What is superimposed drainage?
  - In which course of river, levees are abundant landforms?
  - What do you mean by critical tractive force?
  - Define order of a stream.
  - How does river discharge depend on the rock permeability?
  - What is drainage basin?
  - What is runoff cycle?
  - Define sinuosity of a river.

2. Answer any **two** of the following questions:

 $5 \times 2 = 10$ 

- Describe the significance of *Bradshaw model*.
- Compare between the following pairs:
  - stream competence and stream capacity
  - long profile and cross-profile of a river
- Briefly discuss the importance and application of paleohydrological study.
- Write a short note on sediment transport.

3. Answer any **one** of the following questions:

 $10 \times 1 = 10$ 

- Define drainage pattern. Describe the geometric classification of drainage pattern with suitable sketches.
- State the two parameters used in the classification of river based on plan-view morphology. With the help of neat sketch explain how these two parameters are responsible for change in river morphology.