

[This question paper contains 2 printed pages.]

**Sr. No. of Question Paper : 896**

**E**

**Your Roll No.....**

Unique Paper Code : 219601

Name of the Course : **B.Sc. (Hons.) Geology**

Name of the Paper : Applied River Science [ET-1]

Semester : VI

Duration : 3 Hours

Maximum Marks : 75

**Instructions for Candidates**

1. Write your Roll No. on the top immediately on receipt of this question paper.
  2. Draw labelled diagrams wherever necessary.
  3. All questions carry equal marks.
  4. Answer any five questions.
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1. Consider you are moving in a upstream part of a catchment and you observe thick valley fill deposit. What are the possible processes that can lead to deposition of these sediments ? Explain in detail.
  2. Write short notes on **any two** :
    - (a) Unit Hydrograph
    - (b) Reynolds number
  3. Explain why interpretation of flood (or low flow) frequency analysis may be filled with difficulty.
  4. Write short notes on :
    - (a) Direct and indirect forms of human disturbances caused to rivers
    - (b) Change in river behaviour with change in climate

*P.T.O.*

5. With suitable diagram explain the continuum of river diversity along a hypothetical longitudinal profile.
6. Describe qualitatively how runoff from a landscape will differ under these circumstances: steady rainfall, increasing rainfall through time during the storm, and different starting moisture content.
7. Explain Hydraulic Rating Methods.
8. What are three basic assumptions of Environmental Flows Assessment ?