

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1810

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Unique Paper Code : 2192012401

Name of the Paper : Geomorphology

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

Semester : IV

Duration : 3 Hours

Maximum Marks : 90

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
 2. Answer any **five** questions.
 3. All Questions carry equal marks unless mentioned.
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1. Discuss the significance of the geoid and global hypsometric curve in understanding Earth's surface configuration. How do these concepts reflect the distribution of continental and oceanic crust, and what implications do they have for plate tectonics and large-scale geomorphology?
 2. Answer *any three* :
 - (a) What is a ventifact? How does it form?
 - (b) Define recurrence interval with an example.
 - (c) What is loess and why is it important?
 - (d) Explain why most deserts occur around 30° latitude.

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3. Discuss the coupling between hillslopes and fluvial systems. How sediment supply from slopes influence the channel morphology?
4. (a) Describe the formation of river terraces and their significance.
(b) Explain how drainage-patterns reflect lithology and structure with examples.
5. Compare and contrast radiocarbon dating and luminescence dating techniques in terms of:
(a) Principle, (b) Materials dated, (c) Time range, and (d) Limitations.
6. Explain the Davisian and Penck models of landscape evolution. Critically evaluate their relevance in modern geomorphology.
7. Discuss the role of tectonics in controlling landscape evolution, with emphasis on :
(a) Drainage organization
(b) Stream gradient index
(c) Interaction of uplift and erosion
8. Explain the causes of sea level change and critically evaluate their impact on coastal geomorphic landforms.

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