

Ex/SC/GEOG/UG/CORE/TH/01/2025

BACHELOR OF SCIENCE EXAMINATION, 2025

(1st Year, 1st Semester)

GEOGRAPHY

PAPER : SC/GEOG/UG/CORE/TH/01

[Geotectonics and Geomorphology]

Time : Two Hours

Full Marks : 50

*Answer **one** question from each Unit.*

UNIT—I

(Key Concepts of Geotectonics and Geomorphology)

1. What is cascading system? Give an example of steady state condition within a river reach. Classify temporal scales and describe how it can be associated with different equilibrium conditions with proper examples. 2+2+6=10
2. Define geomorphic feedback. Distinguish between open and closed systems. Write about the different types of equilibrium in geomorphology. 2+2+6=10

UNIT—II

(Geotectonics and Landforms)

3. Discuss the concept of palaeomagnetism and how it can be considered as a tool to prove sea floor spreading. What is isostatic equilibrium? 6+4=10

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[Turn Over]

(2)

4. Differentiate between continental crust and oceanic crust. Elucidate the theory of isostasy by Pratt and Airy with suitable sketches. 2+8=10

UNIT—III

(Fundamental Principles and Theories of Geomorphology)

5. Write a comparison between the fundamental understanding of Davis and Penck's model of landscape evolution. Do you think landscape evolution is time-independent phenomenon? Justify your claim. 7+3=10
6. Write the principle of uniformitarianism. 'Complexity in geomorphic evolution is more common than simplicity' — elaborate on this statement by W. D. Thornbury. 4+6=10

UNIT—IV

(Geomorphological Processes and Landforms)

7. What is aggradation? Distinguish between slump and slide. Discuss the factors that affect weathering in humid tropical regions. 2+2+6=10
8. What is vale and ridge topography? Discuss the formation of drainage system on uniclinal structure. What is composite fault-line scarp? 3+5+2=10

[Internal Assessment – 10]

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