

Ex/SC/GEOG/UG/MAJOR/TH/21/204/2025

BACHELOR OF SCIENCE EXAMINATION, 2025

(2nd Year, 1st Semester)

GEOGRAPHY

PAPER : SC/GEOG/UG/MAJOR/TH/21/206

[Soil and Ecosystem]

Time : Two Hours

Full Marks : 50

Answer *any one* question from each unit

Unit-I

(Fundamental Concepts in Pedology)

1. Define soil from the edaphological point of view. Discuss the impact of interplay between topographic and climatic factors on the development of soil profile. 2+8=10
2. How does organic matter influence soil fertility? Explain why loamy soil is more fertile than sandy soil and clayey soil. 5+5=10

Unit-II

(Soil classification, Characteristics, Profile and Management)

10×1=10

3. Classify soil based on the pattern of aggregations. Discuss with proper illustrations. 10
4. Elucidate the development and characteristics of podzol soil profile with a diagram. 10

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[Turn Over]

(2)

Unit-III

(Elements of Biosphere)

5. State Lindeman's Law. Explain the flow of energy in the ecosystem in relation to the laws of thermodynamics. Give a brief account of the role of keystone species. 2+4+4=10
6. Why is the biosphere a global ecosystem? Explain the significance of the nitrogen cycle. 3+7=10

Unit-IV

(Biodiversity, Global Biomes and Management)

7. Discuss in situ conservation of biodiversity with reference to protected areas. What is an anthrome? 7+3=10
8. How has human interaction impacted the Savannah grasslands? Explain the role of social forestry in forest management in India. 4+6=10

Internal Assessment

10

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