

U.G. 4th Semester Examination - 2025

GEOGRAPHY

[MAJOR]

Course Code : GEOG-MJ-T-4

(Climatology, Soil and Biogeography)

[NEP-2020]

Full Marks : 60

Time : $2\frac{1}{2}$ Hours*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 **ten** of the following: $2 \times 10 = 20$

- i) Define Climatology.
- ii) Define lapse rate.
- iii) What is meant by front?
- iv) What is MONEX?
- v) What is dew point?
- vi) Distinguish between condensation and precipitation.
- vii) What is meant by climate change?
- viii) What are greenhouse gases?
- ix) Distinguish between eluviation and illuviation.

[Turn over]

- ii) Evaluate the Bergeron-Findeisen Theory in the formation of precipitation.
 - iii) Bring out the properties of soil with reference to texture and organic matter.
 - iv) Analyse the mechanism with diagram and significance of nitrogen cycle.
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- x) What is soil pH?
- xi) Mention the objectives of soil classification.
- xii) What is the significance of energy flow in an ecosystem?
- xiii) Differentiate biome from biosphere.
- xiv) State the location of Taiga biome.
- xv) Why is biogeochemical cycle significant?

2. Answer any **four** of the following: $5 \times 4 = 20$

- i) Explain the mechanism of inversion of temperature.
- ii) Explore the earth's heat budget with a schematic diagram.
- iii) Evaluate the role of jet stream in monsoon circulation.
- iv) How is podzol soil formed?
- v) State the climate and vegetation characteristics of Tropical rain forest biome.
- vi) Define biodiversity and specify the threats to biodiversity.

3. Answer any **two** of the following: $10 \times 2 = 20$

- i) Discuss planetary wind system with a diagram and state its significance.