

U.G. 4th Semester Examination - 2026

GEOGRAPHY

[MAJOR-IV]

Course Code : GEOG-MJ-T-4

(Climatology, Soil and Biogeography)

[NEP-2020]

Full Marks : 60

Time : 2½ 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: 2×10=20
- i) What is *inversion of temperature*?
 - ii) State the characteristics of Polar Easterlies.
 - iii) Define *front*.
 - iv) What is *jet stream*?
 - v) Why is low pressure observed over the equator?
 - vi) What do you understand by *retreating monsoon*?
 - vii) Differentiate *rain* from *drizzle*.
 - viii) Where are tropical cyclones observed?

[Turn over]

- ix) Mention the characteristics of Chernozem soil.
- x) What is meant by NPK?
- xi) What is *loamy soil*?
- xii) Define *ecology*.
- xiii) What is meant by *terrestrial biome*?
- xiv) Define *ecotone*.
- xv) Where are grasslands formed?

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

- i) Differentiate dry *adiabatic lapse rate* from wet *adiabatic lapse rate*.
- ii) Highlight the major climatic groups as postulated by Köppen (1931).
- iii) How does climate influence the soil formation?
- iv) Bring out the concept of soil profile.
- v) What are the salient features of *ecosystem*?
- vi) Distinguish between *energy flow* and *biogeochemical cycle*.

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

- i) Discuss the types of air masses along with their characteristics.
- ii) Analyse the properties of soil pH and organic matter with necessary illustrations.

iii) Write a detailed account on Taiga Biome.

iv) Elucidate the controlling factors and types of biodiversity.