

M. SC. IN GEOGRAPHY

(MSCGG)

Term-End Examination

December, 2025

MGG-005 : CLIMATOLOGY

Time : 3 Hours

Maximum Marks : 100

Note : (i) *All Sections are compulsory.*

(ii) *Marks are indicated against each question.*

Section—A

1. Answer any *five* of the following questions in about **150** words each : 5×4=20

(i) Differentiate between 'Climatology' and 'Meteorology'.

- (ii) Give *two* differences between heat and temperature.
- (iii) Define the terms 'Condensation' and 'Normal Lapse Rate'.
- (iv) Explain the bases of climatic classification.
- (v) Explain 'Cw' and 'Cs' types of climate with *one* example of each.
- (vi) Discuss briefly any *two* anthropogenic sources of air pollution.
- (vii) Briefly explain the 'Sunspot theory' of climate change.

Section—B

2. Answer any *five* of the following questions in about **250** words each : 5×6=30

- (i) Discuss any *three* elements of weather.

- (ii) Define Coriolis force. Explain how it influences the movement of prevailing winds. Support your answer with a neat sketch.
- (iii) What are 'El-Nino' and La-Nina ? Write *two* effects each of these.
- (iv) Define air mass. List the *four* major source regions of air masses. Discuss the characteristics of continental tropical and maritime tropical air masses.
- (v) Discuss the spatial distribution and climatic characteristics of Savanna type of climate.
- (vi) Discuss time scale based different types of weather forecasting.

- (vii) Briefly discuss the effects of climate on human health.

Section—C

Note : Answer any *five* of the following questions in about **500** words each.

$$5 \times 10 = 50$$

3. Discuss briefly the vertical layers of atmosphere based on thermal properties with suitable diagram.
4. Discuss insolation. Explain the *four* factors affecting insolation.
5. What is the difference between planetary winds and local winds ? Discuss any *four* warm local winds and any *four* cold local winds.
6. Explain cloud and its types with illustration.

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7. Discuss Polar Front Theory regarding the different stages of a temperate cyclone.
8. What is the significance of climatic classification ? Briefly discuss any *two* approaches of climatic classification.
9. What is weather forecasting ? Discuss any *four* methods of weather forecasting.

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