

**MASTER OF SCIENCE IN
GEOGRAPHY (MSCGG)**

Term-End Examination

December, 2024

MGG-005 : CLIMATOLOGY

Time : 3 Hours

Maximum Marks : 100

Note : *All Sections are compulsory. Marks are indicated against each question.*

Section—A

1. Answer any *five* of the following questions in about **150** words each : 5×4=20
 - (a) What are ‘dynamic climatology’ and ‘synoptic climatology’ ?
 - (b) Differentiate between ‘El-Nino’ and ‘La-Nina’.
 - (c) Differentiate between ‘BW’ and ‘BS’ climates of Koppen.

- (d) Cite any *four* historical evidences of climate change.
- (e) What is meant by 'Adaptation' and 'Mitigation' in case of climate change ?
- (f) Mention any *four* elements of weather and climate and any *four* controls of weather and climate.
- (g) What is Coriolis force ? Support your answer with diagram.

Section—B

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

- (a) Describe 'Ionosphere' and its different ionised layers.
- (b) Explain heat balance of atmosphere and earth with diagram.
- (c) Describe the *three* summer time air masses over Asia.
- (d) Describe the equatorial regions of the world.

- (e) Discuss briefly the impact of climate on tourism.
- (f) What is fog ? Explain any *two* types of fog.
- (g) Give an account of Tricellular Meridional Circulation.

Section—C

Note : Answer any *five* of the following questions in about **500** words each. 5×10=50

- 3. Differentiate between the terms 'Adiabatic Lapse Rate' and 'Normal Lapse Rate'. Explain how both of these affect the vertical distribution of temperature on the earth.
- 4. What is temperate cyclone ? Discuss any *four* stages of temperate cyclones.
- 5. Critically describe Thornthwaite's Second Scheme of Climatic Classification.
- 6. Explain climatic classification and its significance. Discuss the bases of climatic classification.
- 7. What is the significance of weather forecasting ? Discuss its types based on different time scales.

8. Define climatology. Briefly describe the development of climatology through different phases.
9. What are the different sources of collecting climatic data ? Discuss any *two* theories of climate change.

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