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(CBCS)

(5th Semester)

GEOGRAPHY

SIXTH PAPER

(Climatology)

(Revised)

Full Marks : 75

Time : 3 hours

The figures in the margin indicate full marks for the questions

(SECTION : A—OBJECTIVE)

(Marks : 10)

Tick (✓) the correct answer in the brackets provided :

1×10=10

1. What is the primary focus of climatology?

- (a) The study of landforms ()
- (b) The study of the distribution and patterns of weather and climate ()
- (c) The study of human-environment interactions ()
- (d) The study of natural vegetation ()

2. The layer in which the weather phenomena are confined is

- (a) troposphere ()
- (b) stratosphere ()
- (c) mesosphere ()
- (d) ionosphere ()

3. The precipitation associated with cold front is known as
 (a) convectional shower () (b) drizzle ()
 (c) snowing () (d) thunder shower ()
4. The winds blowing from sub-tropical high-pressure zone to sub-polar low-pressure zone are
 (a) westerlies () (b) easterlies ()
 (c) polar winds () (d) Arctic winds ()
5. Monsoon climate is characterized by
 (a) high temperature ()
 (b) low temperature ()
 (c) temperature variations ()
 (d) seasonal reversal of winds ()
6. Which of the following jet streams is associated with heating of Tibetan plateau?
 (a) Polar front jet stream ()
 (b) Subtropical jet stream ()
 (c) Tropical easterly jet stream ()
 (d) Polar night jet stream ()
7. In the Köppen's system, the Savanna is represented by which of the following letter symbols?
 (a) Am () (b) Aw ()
 (c) As () (d) Bs ()
8. Who among the following introduced the idea of 'precipitation-evaporation ratio' in climatic classification?
 (a) Köppen () (b) Thornthwaite ()
 (c) Critchfield () (d) Strahler ()
9. Greenhouse effect is caused by
 (a) the entrapment of green light ()
 (b) the entrapment of CO₂ within the troposphere ()
 (c) the entrapment of long-wave radiation by CO₂ ()
 (d) the passing of ultraviolet radiation through the atmospheric window ()

10. Which international convention aims to address global warming?

- (a) The United Nations Framework Convention on Climate Change ()
- (b) The Kyoto Protocol ()
- (c) The Convention on Biological Diversity ()
- (d) The Montreal Protocol ()

(SECTION : B—SHORT ANSWERS)

(Marks : 15)

Write on the following in short :

3×5=15

UNIT—I

1. Factors influencing insolation

OR

2. Heat budget

UNIT—II

3. Types of fronts

OR

4. Local winds

UNIT—III

5. Easterly jet streams

OR

6. La Niña

UNIT—IV

7. Basis of Thornthwaite's climatic classification

OR

8. Monsoon climate

UNIT—V

9. Kyoto protocol

OR

10. The earth summit

(SECTION : C—DESCRIPTIVE)

(Marks : 50)

Answer the following questions :

10×5=50

UNIT—I

1. Explain the meaning and scope of climatology.

3+7=10

OR

2. Define atmosphere. Briefly describe the structure of the atmosphere.

2+8=10

UNIT—II

3. What is an airmass? Explain the origin and classification of an airmass.

2+2+6=10

OR

4. What is cyclone? Bring out a detailed characteristic of temperate cyclone.

2+8=10

UNIT—III

5. What is monsoon? Discuss the origin and mechanism of the Indian monsoon.

2+3+5=10

OR

6. What is El Niño? How does El Niño affect the Indian monsoon?

3+7=10

UNIT—IV

7. Explain the classification of climate as proposed by Trewartha. What are the merits of his classification?

8+2=10

OR

8. What are the bases of Köppen's classification of climate? Explain, in detail, Köppen's classification of climate.

3+7=10

UNIT—V

9. Discuss the causes and effects of climate change.

5+5=10

OR

10. Define global warming. Discuss the causes and consequences of global warming.

10
