Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

End - Term Examinations – December 2025

Date: 05-12-2025 **Time:** 01:00pm – 04:00pm

School: SOC,SOIS	**Program:** BCA/B.COM	
Course Code : CIV2045	**Course Name:** Environmental Meteorology	
Semester: III ,V	**Max Marks**: 100	**Weightage**: 50%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	16	16	22	24	22

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks. **10Q x 2M=20M**

1.	What is ensemble forecasting?	**2 Marks**	**L1**	**CO1**
2.	Define Local Climate Zones (LCZ).	**2 Marks**	**L1**	**CO1**
3.	Define earth energy budget.	**2 Marks**	**L1**	**CO1**
4.	Write the formula to convert Celsius to Fahrenheit.	**2 Marks**	**L1**	**CO2**
5.	Define absolute humidity.	**2 Marks**	**L1**	**CO2**
6.	What are permanent winds?	**2 Marks**	**L1**	**CO2**
7.	What is block carbon?	**2 Marks**	**L1**	**CO3**
8.	What is orographic rainfall?	**2 Marks**	**L1**	**CO4**
9.	Define carbon credit.	**2 Marks**	**L1**	**CO4**
10.	What are aerosols?	**2 Marks**	**L1**	**CO5**

Part B

Answer the Questions. **Total Marks 80M**

11.	**a.**	Weather and climate are crucial in influencing agriculture, water resources, human health, the economy, and ecosystems. Differentiate weather and climate with their Elements.	**10 Marks**	**L2**	**CO1**
		Or			
12.	**a.**	Climatic systems interact atmosphere, hydrosphere, cryosphere, lithosphere, and biosphere. Enlist and explain three different climatic systems.	**10 Marks**	**L2**	**CO1**
13.	**a.**	Depict the working principle of most common type of automatic recording rain gauge adopted by United States meteorological department with neat sketch.	**10 Marks**	**L3**	**CO2**
		Or			
14.	**a.**	Wind speed is measured using an anemometer. Depict the working principle of any three types of anemometer.	**10 Marks**	**L3**	**CO2**
15.	**a.**	The significance of a temperature inversion deteriorates as it traps pollutants like smog and smoke near the ground. Differentiate between radiation and subsidence inversions with figure.	**10 Marks**	**L2**	**CO3**
		Or			
16.	**a.**	Controlling air pollution involves a multi-faceted approach. Discuss the measure to control industrial and vehicular air pollution.	**10 Marks**	**L2**	**CO3**
17.	**a.**	The adiabatic lapse rate is the rate at which a rising or falling parcel of air cools or warms without heat exchange with its surroundings. Illustrate the different types of adiabatic lapse rate with figures.	**10 Marks**	**L3**	**CO3**
		Or			
18.	**a.**	A temperature inversion is a weather phenomenon where a layer of warm air traps cooler air near the Earth's surface. Demonstrate the types of temperature inversion with figure.	**10 Marks**	**L3**	**CO3**
19.	**a.**	Plume can be a smoke from a chimney or a column of gas from a volcanic eruption. Depict the plume types which occurs in stable unstable and neutral atmospheric conditions with rough sketch.	**20 Marks**	**L3**	**CO4**
		Or			
20.	**a.**	Acid rain is a type of precipitation that contains unusually high levels of acids. Illustrate the pathways, sources and formation of Acid rain	**20 Marks**	**L3**	**CO4**

21.	**a.**	Both photochemical smog and PAN particles are harmful secondary air pollutants. Distinguish the formation process, sources and health effects of photochemical smog and PAN particles.	**20 Marks**	**L3**	**CO5**
		Or			
22.	**a.**	The global warming potential (GWP) is the heat absorbed by any greenhouse gas in the atmosphere expressed as a multiple of the heat absorbed by the same mass of carbon dioxide (CO2). Infer the major indices for quantifying the impact of greenhouse gases.	**20 Marks**	**L3**	**CO5**