

[illegible]

B.Tech/M.Tech(Integrated) DEGREE EXAMINATION, DECEMBER 2023

Fifth Semester

21CEO310T - GLOBAL WARMING AND CLIMATE CHANGE

(For the candidates admitted during the academic year 2022-2023 onwards)

Note:

- i. **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.
- ii. **Part - B** and **Part - C** should be answered in answer booklet.

Time: 3 Hours

Max. Marks: 75

PART - A ($20 \times 1 = 20$ Marks)

Answer **all** Questions

PART - A (20 × 1 = 20 Marks)		Marks	BL	CO
Answer all Questions				
1.	Identify the climate system component, which determines the nature of rocks. (A) Atmosphere (B) Biosphere (C) Lithosphere (D) Cryosphere	1	1	1
2.	Which of the following determines amount of water vapour in the atmosphere? (A) Clouds (B) Humidity (C) Gas (D) Solar radiation	1	1	1
3.	Identify the type of rainfall, which frequently occurs near mountains beside the sea? (A) Relief (B) Convectional (C) Frontal (D) Snow	1	2	1
4.	Gravity pulls to the gas molecules in the atmosphere toward the Earth's surface which causes (A) Radiation increases (B) Air pressure increases (C) Air pressure decreases (D) Radiation decreases	1	2	2
5.	Wind blowing across the ocean surface push water away. Water then rises up from beneath the surface to replace the water that was pushed away. The process is (A) Upwelling (B) Downwelling (C) Surface current (D) Horizontal current	1	1	1
6.	Frontal inversion is (A) Sea breeze (B) Land breeze (C) Cold air blowing in under warmer air (D) Ozone protection	1	2	2
7.	A stable atmosphere is (A) Encourages vertical motion (B) Discourages vertical motion (C) Discourages horizontal motion (D) Encourages horizontal motion	1	2	2
8.	Lapse rate decreases _____ /km with increasing altitude (A) 12.5°C (B) 16.5°C (C) 10.5°C (D) 6.5°C	1	3	2
9.	The combined effect of _____ and _____ means less soil moisture available for crop growth and also less runoff in regions with marginal rainfall. (A) less rainfall & more evaporation (B) more rainfall & less evaporation (C) less evaporation & more rainfall (D) more evaporation & less rainfall	1	2	3
10.	From the following which has the pH value of 8.1. (A) Distilled water (B) Acid rain (C) Sea water (D) Liquid rain	1	2	3

11. Sea level rise is apparent in locations that are subsiding geologically and less apparent in locations subject to _____.	1	2	3
(A) Sediment covers			
(B) Industrial zones			
(C) Temperature change			
(D) Geologic uplift			
12. The _____ instrument measures relative humidity	1	3	4
(A) Barometer			
(B) Thermometer			
(C) Pedometer			
(D) Hygrometer			
13. The First Assessment Report (FAR) of the IPCC was completed in	1	1	4
(A) 1993			
(B) 1990			
(C) 1995			
(D) 1996			
14. Which of the following remains the most important contributor to anthropogenic forcing of climate change?	1	2	4
(A) Nitrous Oxide			
(B) Methane			
(C) Oxygen			
(D) Carbon dioxide			
15. Identify the psychosocial environmental health issues.	1	3	5
(A) Fungal infection			
(B) Yellow fever			
(C) Depression			
(D) Leukemia			
16. Which is not the manmade source of CO ₂ emission	1	2	5
(A) Soil cultivation			
(B) Transportation			
(C) Decomposition			
(D) Biomass burning			
17. Tropical deforestation is responsible for _____ % of world's annual CO ₂ emissions	1	3	5
(A) 30			
(B) 20			
(C) 35			
(D) 40			
18. Bio medical waste contain _____ percentage of non hazardous wastes	1	2	5
(A) 10-25%			
(B) 25-50%			
(C) 75-90%			
(D) 50-75%			
19. Identify the manmade sources of Carbon sequestration.	1	3	5
(A) Volcanoes			
(B) Wild fires			
(C) Decomposition			
(D) Biomass burning			
20. Biodiesel is made through a chemical process which converts oils and fats of natural Origin into	1	2	5
(A) Citric acid Ethyl esters			
(B) Citric acid methyl esters			
(C) Fatty acid methyl esters			
(D) Fatty acid Ethyl esters			

PART - B (5 × 8 = 40 Marks)

Answer **all** Questions

Marks BL CO

21. (a) What you understand from Coriolis effect? Discuss	8	1	1
(OR)			
(b) List out the different strata of atmosphere and discuss			
22. (a) Explain in brief about the frontal inversion?	8	2	2
(OR)			
(b) State the important gases in the earth's atmosphere.			
23. (a) Describe about types of flood and Its impacts.	8	2	3
(OR)			
(b) Write a short note on polar ice melting.			
24. (a) List out the objectives and functions of UNDP?	8	3	4
(OR)			
(b) Discuss on the impact of climate change on tourism?			

25. (a) Compare Kyoto protocol and Montreal protocol
(OR)
(b) What are the benefits of green buildings? Explain

8 2 5

PART - C (1 × 15 = 15 Marks)

Answer **any 1** Questions

Marks BL CO

26. Discuss the impact of temperature changes on marine species and ecosystems?
27. Explain in detail about climate change Mitigation and Adaptation in India.

15 3 3

15 3 3

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