

Fifth Semester

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

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.

Max. Marks: 75**Marks BL CO**

| | | | |
|---|---|---|---|
| 1. Which of the following component of climate system specify the glaciers, sea ice and permafrost? | 1 | 1 | 1 |
| (A) Atmosphere | | | |
| (B) Biosphere | | | |
| (C) Cryosphere | | | |
| (D) Lithosphere | | | |
| 2. Large quantities of can be released to the atmosphere through geologic processes | 1 | 2 | 1 |
| (A) Carbon | | | |
| (B) Nitrogen | | | |
| (C) Argon | | | |
| (D) Chlorine | | | |
| 3. Identify the element, which is composed of 21% and 78% were present in earth atmosphere. | 1 | 1 | 1 |
| (A) Nitrogen and Oxygen | | | |
| (B) Oxygen and Nitrogen | | | |
| (C) Argon and Nitrogen | | | |
| (D) Trace gases and Argon | | | |
| 4. Gravity pulls the gas molecules in the atmosphere toward the earth's surface which causing | 1 | 2 | 1 |
| (A) Radiation increases | | | |
| (B) Radiation decreases | | | |
| (C) Air pressure decreases | | | |
| (D) Air pressure increases | | | |
| 5. Climate can be defined as | 1 | 1 | 2 |
| (A) Long term changes in atmosphere | | | |
| (B) Short term changes in atmosphere | | | |
| (C) Long term changes in earth | | | |
| (D) Short term changes in earth | | | |
| 6. Hadley cell flow is located in | 1 | 2 | 2 |
| (A) South Pole | | | |
| (B) North pole | | | |
| (C) Temperate zone | | | |
| (D) Near equator | | | |
| 7. Lapse rate is related to | 1 | 1 | 2 |
| (A) Temperature | | | |
| (B) Pressure | | | |
| (C) Density | | | |
| (D) Wind | | | |
| 8. A stable atmosphere means | 1 | 1 | 2 |
| (A) Encourages vertical motion | | | |
| (B) Discourages vertical motion | | | |
| (C) Encourages horizontal motion | | | |
| (D) Discourages horizontal motion | | | |
| 9. The Indian tourism industry which commonly depends on | 1 | 1 | 3 |
| (A) Agriculture | | | |
| (B) Forest | | | |
| (C) Industry | | | |
| (D) Culture & Heritage | | | |
| 10. In agriculture, which can alter crop yield? | 1 | 2 | 3 |
| (A) Increases in temperature and CO | | | |
| (B) Decreases in temperature and CO | | | |
| (C) Increases in temperature and CO ₂ | | | |
| (D) Decreases in temperature and CO ₂ | | | |

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| 11. Albedo value is to measure amount of solar radiation absorbed by the surface, which range from (A) 0.0 - 1.0 (C) 3.0 to 2.0 | (B) 2.0 to 1.0 (D) 4.0 to 3.0 | 1 | 1 | 4 |
| 12. The action of climate change mitigation involves (A) Increase emission (C) Stabilize greenhouse gas level | (B) Increase greenhouse gas level (D) Decrease greenhouse gas level | 1 | 2 | 3 |
| 13. When and where the first UNFCCC Conference of Parties (COP) was took place? (A) April 1995 in Berlin, Germany (C) August 1997 in Kyoto, Japan | (B) June 1992 in Paris, France (D) Dec 1995 in Geneva, Switzerland | 1 | 1 | 4 |
| 14. The First Assessment Report of the IPCC was completed in the year (A) 1985 (C) 1992 | (B) 1990 (D) 1996 | 1 | 1 | 4 |
| 15. The United Nations Framework Convention on Climate Change (UNFCCC or FCCC) is also known as: (A) Kyoto protocol (C) Earth summit | (B) Vienna convention (D) COP | 1 | 1 | 4 |
| 16. In anthropogenic forcing of climate change, which one will be a important contributor. (A) No bold (C) Nitrous Oxide | (B) Methane (D) Oxygen | 1 | 2 | 4 |
| 17. Choose the False statement. (A) An industry standard is an accepted practice within an industry. (C) Green building practices do not include using recycled materials. | (B) High-performance building is an energy-efficient building. (D) Seismic standards ensure that buildings are structurally sound. | 1 | 2 | 5 |
| 18. Identify the sources of energy which does not require any fuel to run. (A) Fossil fuels (C) Tidal energy | (B) Natural gas (D) Nuclear energy | 1 | 2 | 5 |
| 19. Carbon sequestration is a natural process of _____. (A) Carbon release (C) Carbon floats | (B) Carbon storage (D) Carbon decoration | 1 | 1 | 5 |
| 20. Choose the correct statement related to Biodiesel (A) Biodiesel requires some modifications to a diesel engine to be used. (C) Biodiesel is intended to be used as a replacement for petroleum diesel fuel | (B) Biodiesel increases exhaust emissions compared to petroleum diesel fuel (D) Biodiesel has higher toxicity compared to petroleum diesel fuel. | 1 | 2 | 5 |

PART - B (5 × 8 = 40 Marks)

Answer **all** Questions

| | | | |
|---|---|---|---|
| 21. (a) What are the importance of the earth system and explain with a suitable diagram. (OR) (b) Explain the hydrology cycle and carbon cycle with a suitable diagram. | 8 | 2 | 1 |
| 22. (a) Discuss the Paleoclimatology with proxies examples. (OR) (b) Explain the Milankovitch theory. | 8 | 2 | 2 |

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|-----|---|---|---|---|
| 23. | (a) Discuss the impact of climate change on the tourism sector. | 8 | 1 | 3 |
| | (OR) | | | |
| | (b) Discuss a short note on the impact of climate change on human health. | | | |
| 24. | (a) Discuss mitigations and adaptations to climate change. | 8 | 2 | 4 |
| | (OR) | | | |
| | (b) Explain carbon credit and clean development mechanism. | | | |
| 25. | (a) Elaborate list of renewable and alternative energy resources. | 8 | 2 | 5 |
| | (OR) | | | |
| | (b) What are the benefits of green buildings? Explain. | | | |

PART - C (1 × 15 = 15 Marks)

Marks BL CO

Answer **any 1** Questions

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|-----|--|----|---|---|
| 26. | Write a case study, discuss on Acid rain causes, effects and solutions with suitable diagrams and equations. | 15 | 2 | 3 |
| 27. | Highlights the important points of clean technology, biodiesel, compost, and biodegradable plastics. | 15 | 2 | 5 |

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