

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2023****Subject Code:3161312****Date:10-07-2023****Subject Name:Global Warming and Climate Change****Time:10:30 AM TO 01:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Give the statistical contribution of greenhouse gases in the atmosphere.	03
	(b) Differentiate between Weather and Climate. Explain any one element of weather.	04
	(c) Explain the significance of Global warming and Climate change in Environmental Engineering field.	07
Q.2	(a) Explain natural and enhanced green house effect?	03
	(b) What are the 5 greenhouse gases that contributes to climate change? How greenhouse gases affect the climate?	04
	(c) What are Climate Change and Climate Variability? Explain with examples.	07
	OR	
	(c) How does Methane can contribute in climate change? What are the sources and impacts?	07
Q.3	(a) State the objectives of IPCC.	03
	(b) How does CFCs can contribute in climate change? What are the sources and impacts?	04
	(c) What is meant by carbon capture and sequestration? What processes are involved in carbon capture and sequestration CCS? Explain one process of Carbon Capture adopted by Cement manufacture.	07
	OR	
Q.3	(a) What are the benefits of climate change models?	03
	(b) What is EOR and how does it work? Why is EOR important?	04
	(c) Define and discuss the pathways for Carbon Dioxide Removal (CDR) and Negative Emissions.	07
Q.4	(a) What are the geological storage options for CO ₂ ?	03
	(b) What are the advantages of storing carbon dioxide in geological reservoirs?	04
	(c) Discuss Global Latitudinal Wind Pattern in detail.	07
	OR	
Q.4	(a) What is CDM of Kyoto Protocol? How does CDM work?	03
	(b) What is the Kyoto Protocol? On which mechanism it works?	04
	(c) What is the UNFCCC and what does it do? What does IPCC stand for? What does the IPCC say about climate change?	07
Q.5	(a) What is COP and MOP? What is the purpose of the COP Conference?	03
	(b) What is the difference between joint implementation and Clean Development Mechanism?	04
	(c) Explain in detail How does economic system help to solve economic issues and problems in an economy?	07
	OR	
Q.5	(a) How is economics related to environmental policy?	03
	(b) What is environmental economics how it is beneficial in environmental management?	04
	(c) Explain how environmental policies to deal with air and water pollution.	07
