B.E / B.Tech (FULL TIME) END SEMESTER EXAMS April/ May 2025

COLLEGE OF ENGINEERING

B.E (GEOINFORMATICS) - 6TH SEMESTER

GI 5001 CLIMATE CHANGE STUDIES

Duration: 3 hrs | Total marks: 100

PART A (10 x 2 = 20)

Sl . NO	Questions	marks	CO	BL
1	What are external and internal forcing of climate change? Give one example for each.	2	1	2
2	Outline the mechanism of ocean circulation.	2	3	3
3	How GHG gases are increasing the global temperature?	2	2	3
4	What is C40 city initiative?	2	1	1
5	What is inferred from the Keeling curve?	2	2	4
6	List four key aspects of paleoclimatology.	2	3	3
7	Describe fire triangle.	2	2	4
8	What is hind casting?	2	2	3
9	What are representative concentration pathways?	2	2	2
10	List four remote sensing based essential parameters used for climate modeling.	2	3	4

PART B (5 x 13 = 65)

Sl . NO	Questions	marks	CO	BL
11 a.	i)Discuss the influence of the Earth-Sun's relative movement on the climate.	6	2	2
	ii)Make a flowchart of categories of wind and describe each of them.	7	1	2
	(OR)			
11 b.	i)Discuss the major oceanic circulation of earth and their influence on the global and local climate.	7	1	2
	ii)Outline the Indian Dipole and its relevance on Indian monsoon.	6	2	2
12 a	i)Critically analyze the relationship of transportation and land use change.	8	4	5
	ii)Appraise the climate forcing and climate feed backs	5	3	5

	and their significance in climate studies.			
	(OR)			
12 b.	i)Propose an action plan for solid waste management removal at an institutional level.	8	4	5
	ii)Interpret the effect of flood and drought on the agriculture and economic system.	5	3	5
13 a.	Make a detailed note on the use of ice cores for climate reconstruction.	13	2	3
	(OR)			
13 b.	How are tree rings and pollen make a good case for understanding past climate?	13	2	3
14 a.	Appraise the nexus between the Green House Gas emissions and climate related hazards, vulnerability and management.	13	4	5
	(OR)			
14 b.	Dissect the ecological services of coastal wetlands and the impact of climate change on them.	13	4	5
15 a.	i)Explain the climate tipping points and their sequence, if any.	7	3	4
	ii) Throw light on essential parameters for climate studies with respect to land, ocean and atmosphere and role of satellite based proxies in representing them.	6	2	5
	(OR)			
15 b.	i)Enumerate the types of climate models in practice and their relevance for a particular situation.	6	2	5
	ii) Explain the significance of downscaling in climate models.	7	3	4

PART C (1 x 15 = 15)

16	i)Introspect the types of scenarios in climate research and assessment	6	4	5
	ii) Evaluate the climate vulnerability and resilience of the people and the essential principle to be framed for scientifically addressing this.	7	3	4