

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***M.E DEGREE END SEMESTER THEORY EXAMINATIONS, NOV/DEC 2025***Third Semester**Environmental Engineering***PEVE2414 - Climate Change and Modelling***Regulations - 2024**Duration : 3 Hrs**Maximum : 100 Marks****PART - A (ANSWER ALL QUESTIONS) (Marks 10*2=20)***

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	What are the equations governing the atmosphere?	L1	1	2
2.	Classify the climate parameters.	L2	1	2
3.	Compare RCP 2.6, RCP 4.5.	L2	2	2
4.	Define 5 scenarios of IPCC.	L1	2	2
5.	Discuss general circulation models (GCM).	L3	3	2
6.	Write the different types of climate model.	L1	3	2
7.	List the model domain.	L1	4	2
8.	Tell about methods of downscaling.	L1	4	2
9.	Outline the climate change impact.	L2	5	2
10.	Name the analysis tools.	L1	5	2

PART - B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a i Identify the causes of climate change and consequences of climate change.	L3	1	10
	ii Construct applications in climate change projections.	L3	1	6
	Or			
	b i Build the structure of atmosphere.	L3	1	10
	ii Identify the constituents of atmosphere.	L3	1	6
12.	a Develop Intergovernmental PANEL on Climate Change (IPCC).	L3	2	16
	Or			
	b Make use of Representative Concentration Pathways (RCP 2.6, 4.5, 6.0, 8.5) in climate scenarios.	L3	2	16
13.	a i Explain in detail about the types of model.	L2	3	10
	ii Summarize the issues with General Circulation Models (GCM).	L2	3	6
	Or			
	b i Outline the RCMs modellers.	L2	3	10
	ii Interpret advantages and disadvantages of GCMs and RCMs.	L2	3	6

14.	a	Build the lateral boundary conditions.	L3	4	16
		Or			
	b	Construct the methods of downscaling (Statistical and Dynamical) and examples from each and their limitations.	L3	4	16
15.	a	Analyze a case study on climate change impact assessment and vulnerability assessment.	L4	5	16
		Or			
	b	Analyze the components of vulnerability assessment (exposure, sensitivity, adaptive capacity).	L4	5	16