

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL/MAY 2026***Fourth Semester**Civil Engineering***UESST24401 / GE3451 - Environmental Sciences and Sustainability****(Common to all Branches)***Regulations – 2024 & 2021**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.	Define biodiversity.	L1	1	2
2.	Predict any two impacts of habitat loss on biodiversity.	L2	1	2
3.	List the primary causes of water pollution.	L1	2	2
4.	Outline the importance of managing e-waste for environmental sustainability.	L2	2	2
5.	What is geothermal energy?	L2	3	2
6.	Provide any two advantages tidal energy.	L2	3	2
7.	Define sustainability.	L1	4	2
8.	How do carbon credits help in environmental management?	L2	4	2
9.	Discuss the principles of zero-waste practices.	L2	5	2
10.	List any two benefits of Non-conventional energy sources.	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 Describe the structure and functions of an ecosystem, emphasizing the roles of producers, consumers, and decomposers.	L2	1	16
	Or			
	b i Explain the concept of ecological succession and its stages, and evaluate its role in ecosystem stability and resilience.	L2	1	8
	ii Assess the impact of human activities on wildlife, particularly focusing on man-wildlife conflicts.	L2	1	8
12.	a Discuss the causes, effects, and control measures for soil pollution, emphasizing its impact on agriculture and human health.	L2	2	16
	Or			
	b Explain noise pollution, its sources, effects on human health, and methods for controlling it in urban areas.	L2	2	16
13.	a i Discuss the advantages and challenges associated with hydrogen energy as a renewable energy source.	L3	3	8
	ii Compare renewable energy sources with non-renewable sources in terms of sustainability, efficiency, and environmental impact.	L3	3	8
	Or			

	b	Describe the conversion of biomass into energy and discuss its applications and environmental impact.	L3	3	16
14.	a i	Outline sustainable development goals (SDGs) and analyze their significance in the context of global challenges.	L4	4	8
	ii	Describe the causes and consequences of climate change on a global scale, providing examples of mitigation strategies.	L4	4	8
		Or			
	b	Assess carbon footprint reduction strategies at individual and organizational levels, with examples.	L4	4	16
15.	a	Outline the steps involved in conducting an Environmental Impact Assessment (EIA) and its role in sustainable development.	L2	5	16
		Or			
	b i	Explain the principles and benefits of green buildings, focusing on energy efficiency and resource conservation.	L2	5	8
	ii	Describe sustainable urbanization and its importance in promoting socio-economic and environmental sustainability.	L2	5	8