



PRESIDENCY UNIVERSITY

BENGALURU

Roll No.																				
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End - Term Examinations – MAY 2025

Date: 24-05-2025

Time: 09:30 am – 12:30 pm

School: SOE/SOCSE	Program: B. Tech CAI\CBC\CBD\CCS\CDV\CIT\COM\CSD\CSE\CSG\ISE\IST\MEC		
Course Code: CIV2001	Course Name: Sustainability Concepts in Engineering		
Semester: VI	Max Marks: 100	Weightage: 50%	

CO - Levels	C01	C02	C03	C04	C05
Marks	24	30	46		

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

10Q x 2M=20M

1.	List the aims of CDM.	2 Marks	L1	C01
2.	What is the objective of the Ramsar Convention	2 Marks	L1	C01
3.	List four ozone-depleting substances	2 Marks	L1	C02
4.	Describe the concept of ocean acidification and its impact on marine life	2 Marks	L1	C02
5.	Define carbon sequestration	2 Marks	L1	C02
6.	What is a carbon credit?	2 Marks	L1	C02
7.	Explain how the environment acts both as cradle and grave.	2 Marks	L2	C02
8.	What is a photovoltaic cell?	2 Marks	L1	C03
9.	Define rainwater harvesting.	2 Marks	L1	C03
10.	Mention any two environmental benefits of biofuels.	2 Marks	L1	C03

Part B

Answer the Questions.

Total Marks 80M

11.	a.	Describe any ten Sustainable Development Goals (SDGs) and explain the challenges in implementing sustainability development.	10 Marks	L2	C01
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	b.	Write a short note on the objectives and key features of I. Water Act (1974) II. Air Act (1981)	10 Marks	L2	CO1
Or					
12.	a.	Explain the 3Rs with examples and their importance in sustainability	5 Marks	L2	CO1
	b.	Illustrate the Economic-social and environmental matrix for food, water, and energy needs.	5 Marks	L2	CO1
	c.	Describe the key features and process of Multilateral Environmental Agreements (MEAs) and protocols. Mention any four MEAs and protocols, highlighting their purpose and significance.	10 Marks	L2	CO1
13.	a.	Explain the major causes contributing to water pollution in the Ganga River.	5 Marks	L2	CO2
	b.	Define biomimicry and give 2 examples explaining how it inspires innovation in engineering and design.	5 Marks	L2	CO2
	b.	Explain in detail about ISO 9001 and ISO 14001 standards	10 Marks	L2	CO2
Or					
14.	a.	Define Life Cycle Assessment (LCA). Explain the four key phases of the LCA methodology with an example.	15 Marks	L2	CO2
	b.	Discuss the key factors contributing to air pollution in Delhi.	5 Marks	L2	CO2
15.	a.	Explain in detail the difference between conventional and non-conventional energy sources. Give examples and discuss their advantages and limitations.	10 Marks	L2	CO3
	b.	Discuss how energy derived from the ocean, geothermal energy, and biofuels contributes to sustainable energy solutions.	10 Marks	L2	CO3
Or					
16.	a.	Explain the impact of climate change on sustainable development. Describe both causes and mitigation strategies.	10 Marks	L2	CO3
	b.	Describe the causes and consequences of the greenhouse effect. How does it contribute to crop failure? Suggest measures to prevent crop failure.	10 Marks	L2	CO3
17.	a.	What is Industrial Ecology? Explain its principles and benefits with real-world examples.	10 Marks	L2	CO3
	b.	Explain the concept of Industrial Symbiosis. How does it contribute to sustainability? Provide examples.	10 Marks	L2	CO3
Or					
18.	a.	Discuss the ways the oil and gas industry is adopting sustainable practices with examples.	10 Marks	L2	CO3
	b.	Discuss about industries' implementation of pollution prevention and material selection strategies. Support your answer with recent case studies.	10 Marks	L2	CO3