Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

End - Term Examinations – MAY 2025

Date: 29 / 05/ 2025 **Time:** 09:30am – 12:30pm

School: SOD	**Program:** B. Des	
Course Code: CHE1020	**Course Name:** Environmental Studies and Sustainable Development	
Semester: VI	**Max Marks**: 100	**Weightage**: 50%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	24	24	26	26	

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.	What are decomposers? State their role in an ecosystem.	**2 Marks**	**L1**	**CO1**
2.	Define ecological pyramid and name its three types.	**2 Marks**	**L1**	**CO1**
3.	What is ex-situ conservation? Give one example.	**2 Marks**	**L1**	**CO2**
4.	Explain the importance of species richness in ecological balance.	**2 Marks**	**L2**	**CO2**
5.	Define product lifecycle and give one example of an open-loop system.	**2 Marks**	**L1**	**CO3**
6.	Explain two daily-use products that generate e-waste.	**2 Marks**	**L2**	**CO3**
7.	What are environmental hazards? List any two types.	**2 Marks**	**L1**	**CO3**
8.	Define water conservation. Why is it important?	**2 Marks**	**L1**	**CO4**
9.	Explain non-renewable energy sources? Mention two examples.	**2 Marks**	**L2**	**CO4**
10.	List two benefits of using solar energy.	**2 Marks**	**L1**	**CO4**

Part B

Answer the Questions. **Total Marks 80M**

11.	**a.**	Explain the functions of a desert ecosystem.	**3 Marks**	**L2**	**CO1**
	b.	Apply ecological knowledge to arid region design.	**3Marks**	**L3**	**CO1**
	c.	Analyze the vulnerability of deserts to climate change.	**4 Marks**	**L4**	**CO1**
Or					
12.	**a.**	Explain biogeochemical cycles using the nitrogen cycle as an example.	**3 Marks**	**L2**	**CO1**
	b.	Apply the food chain concept to aquatic systems.	**3Marks**	**L3**	**CO1**
	c.	Analyze the impact of industrialization on ecosystem services.	**4 Marks**	**L4**	**CO1**

13.	**a.**	Explain types of biodiversity.	**3 Marks**	**L2**	**CO2**
	b.	Apply eco-design principles to preserve biodiversity in campuses.	**3Marks**	**L3**	**CO2**
	c.	Analyze the role of wildlife corridors in species conservation.	**4 Marks**	**L4**	**CO2**
Or					
14.	**a.**	Explain key threats to biodiversity in India.	**3 Marks**	**L2**	**CO2**
	b.	Apply one strategy for protecting endangered species.	**3Marks**	**L3**	**CO2**
	c.	Analyze the effectiveness of India's Wildlife Protection Act.	**4 Marks**	**L4**	**CO2**

15.	**a.**	Explain how open-loop cycles increase environmental load.	**3 Marks**	**L2**	**CO3**
	b.	Apply 3R (Reduce, Reuse, Recycle) strategies to a gadget.	**3Marks**	**L3**	**CO3**
	c.	Analyze redesign approaches for making products circular.	**4 Marks**	**L4**	**CO3**
Or					
16.	**a.**	Explain any three urban environmental hazards.	**3 Marks**	**L2**	**CO3**
	b.	Apply design improvements to reduce chemical pollution in homes.	**3Marks**	**L3**	**CO3**
	c.	Analyze an example of e-waste management in an urban locality.	**4 Marks**	**L4**	**CO3**

17.	**a.**	Explain how energy-efficient design can support sustainability.	**3 Marks**	**L2**	**CO4**
	b.	Apply solar power planning to rural housing.	**3Marks**	**L3**	**CO4**
	c.	Analyze the role of policy in energy access equity.	**4 Marks**	**L4**	**CO4**
Or					
18.	**a.**	Explain the role of good hygiene in preventing waterborne diseases.	**3 Marks**	**L2**	**CO4**
	b.	Apply sanitation design ideas for rural schools.	**3Marks**	**L3**	**CO4**
	c.	Analyze the outcomes of Swachh Bharat Mission on community health.	**4 Marks**	**L4**	**CO4**

19.	**a.**	Define lifecycle design and its environmental importance.	**6 Marks**	**L1**	**CO3**
	b.	Explain the difference between open- and closed-loop cycles.	**6 Marks**	**L2**	**CO3**
	c.	Analyze a successful example of a circular product.	**8 Marks**	**L4**	**CO3**

		Or			
20.	**a.**	List the types of environmental hazards and examples.	**6 Marks**	**L1**	**CO3**
	b.	Explain how urban planning can help reduce hazard exposure.	**6 Marks**	**L2**	**CO3**
	c.	Analyze how poor waste management systems affect public health.	**8 Marks**	**L4**	**CO3**

21.	**a.**	List any three natural resources used in homes.	**6 Marks**	**L1**	**CO4**
	b.	Explain how smart design conserves these resources.	**6 Marks**	**L2**	**CO4**
	c.	Analyze the role of product designers in sustainable consumption.	**8 Marks**	**L4**	**CO4**
		Or			
22.	**a.**	Define desalination and state two methods.	**6 Marks**	**L1**	**CO4**
	b.	Explain benefits and limitations of desalination in India.	**6 Marks**	**L2**	**CO4**
	c.	Analyze the long-term sustainability of desalination infrastructure.	**8 Marks**	**L4**	**CO4**