

Reg. No.																			
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Question Paper Code	12592
---------------------	-------

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2024

Seventh Semester

Civil Engineering

20CYOE907 - GREEN TECHNOLOGY

Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

	Marks	K-Level	CO
1. Compare the advantage and disadvantages of Green Technology.	2	K2	CO1
2. What are the benefits and barriers in cleaner production?	2	K1	CO1
3. Show the cleaner production hierarchy.	2	K1	CO2
4. Define material balance in cleaner production.	2	K1	CO2
5. What is meant by Carbon offset?	2	K1	CO3
6. Define carbon credit and sequestration.	2	K1	CO3
7. List the elements of LCA.	2	K1	CO4
8. What is meant by Environmental Impact assessment?	2	K1	CO4
9. What are the indirect forms of solar energy?	2	K1	CO5
10. Classify the biomass resources.	2	K2	CO5

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11. a) Explain the role of government and industry in Cleaner Production technology implementation.	13	K2	CO1
OR			
b) Discuss the term Industrial Ecology and the role of industrial ecology in Green Technology with an example.	13	K2	CO1
12. a) Explain the methodology for assessment of a cleaner production in detail with neat flow diagram.	13	K2	CO2
OR			
b) Discuss the concepts, importance and benefits of ISO 14000 in detail.	13	K2	CO2
13. a) Discuss Environmental statement in pollution prevention with an example.	13	K2	CO3
OR			
b) Illustrate Eco labelling of a product and its advantages with an example.	13	K2	CO3

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

12592

14. a) Explain the term Life Cycle Assessment (LCA) in detail with suitable a case study. 13 K2 CO4

OR

b) Explain the term Life Cycle Costing (LCC) in detail. 13 K2 CO4

15. a) Illustrate the solar energy conversion technologies and devices in detail. 13 K2 CO5

OR

b) Discuss the characteristics and principles of any three types of solar collectors in detail. 13 K2 CO5

PART - C (1 × 15 = 15 Marks)

16. a) Explain Geothermal energy and the various methods of harnessing the geothermal energy in detail. 15 K2 CO5

OR

b) Explain the working principle of simple tidal energy conversion plant in world and India. 15 K2 CO5