Reg. No.															

Question Paper Code	12745

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

Sixth Semester

Electronics and Communication Engineering

20CYOE913 - WASTE MANAGEMENT AND RECYCLING TECHNOLOGY

Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	List two examples of hazardous waste commonly found in municipal solid waste streams.	2	K1	CO1
2.	What is integrated solid waste management (ISWM)?	2	K1	CO1
3.	List two on-site storage methods for waste management and highlight their advantages.	2	K1	CO2
4.	What is meant by 3 R'S?	2	K1	CO2
5.	Identify two innovative technologies used in waste collection for improving efficiency and reducing environmental impact.	2	K2	CO3
6.	Identify two challenges commonly associated with waste collection systems in developing countries.	2	K2	CO3
7.	List out any four objectives of waste processing.	2	K1	CO4
8.	Mention any two applications of Biomethanation.	2	K1	CO4
9.	List two materials commonly used in landfill liners.	2	K1	CO5
10.	State two environmental concerns associated with open dumping of solid waste.	2	K1	CO5

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

			Marks	K – Level	CO
11.	a)	Describe the public health risks associated with improper disposal of solid wastes.	13	K2	CO1
		OR			
	b)	Describe the objectives of the Solid Waste Management Rules (2016) and their significance in addressing the challenges of waste management in India.	13	K2	CO1
12.	a)	Describe the importance of on-site storage methods in waste management systems.	13	K2	CO2
		OR			
	b)	Classify the various methods of sorting the solid waste. Describe it briefly.	13	K2	CO2

13. a) Discuss the role of manpower in waste collection operations, including tasks and responsibilities. *13 K2 CO3*

OR

b) Describe the role and function of transfer stations in the waste management process. *13 K2 CO3*

14. a) Explain the concept of composting as a method for resource recovery from organic waste. What types of equipment are commonly used for screening solid waste? *13 K2 CO4*

OR

b) Explain the working principle of a solid waste incinerator with suitable sketch. *13 K2 CO4*

15. a) Assess the environmental impacts of sanitary landfills on air, water, and soil quality. *13 K2 CO5*

OR

b) Explain why leach ate management is essential in maintaining the integrity of a landfill liner. *13 K2 CO5*

PART - C (1 × 15 = 15 Marks)

16. a) "Segregation of solid wastes at sources is the key to waste management" – Explain with the help of a case study. *15 K2 CO2*

OR

b) Briefly explain the analysis methods of solid waste collection system. *15 K2 CO3*