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VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 9012

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – MAY / JUNE 2024

Sixth Semester

Electrical and Electronics Engineering
U19BTOE6 - WASTE MANAGEMENT
(Common to ECE & IT)
(Regulation 2019)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	Outline the 7R strategy followed in the solid waste management.	2	K1	CO1
2.	Identify the difficulties associated with the waste management logistics process.	2	K2	CO1
3.	Brief on the importance of segregation at point.	2	K2	CO2
4.	Differentiate between landfill and sanitary landfill.	2	K2	CO2
5.	Write notes on the color code system being followed in the collection of Biomedical waste.	2	K1	CO3
6.	How is the radioactive waste generated in hospitals treated?	2	K1	CO3
7.	Write notes on the application of bioleaching in the treatment of E- waste.	2	K2	CO4
8.	List the various drawbacks associated with the treatment of plastics.	2	K2	CO4
9.	How many times can glass be recycled?	2	K2	CO5
10.	List any 3 general safety precautions in a plastic industry.	2	K2	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11.	i. Highlight the social aspects of waste treatment and its impact on the environment.	6	K4	CO1
	ii. Outline the steps involved in the waste management logistics process.	7	K2	CO1
	(OR)			
	b) Explain the various technological components involved in the collection of waste.	13	K2	CO1
12.	a) Illustrate the different types of landfill.	13	K2	CO2
	(OR)			
	i. List the factors to be considered prior to the construction of a landfill.	6	K2	CO2
	ii. Explain the various problems associated with leachate and the steps taken to control it.	7	K3	CO2
13.	a) Write notes on the following:			
	i. Autoclave	6	K1	CO3
	ii. Encapsulation	7	K1	CO3
	(OR)			
	b) Elaborate the working of an incinerator with a neat diagram. Add notes on its pros and cons.	13	K2	CO3
14.	a) i. Summarize the current status of E-waste management in India.	6	K4	CO4
	ii. How are precious metals recycled from E-waste?	7	K2	CO4
	(OR)			
	b) i. Explain the strategies used in the recycle of plastic.	6	K3	CO4
	ii. Brief on the steps taken by the government to control the generation of plastic waste.	7	K2	CO4
15.	a) Explain the general recycling process of paper waste.	13	K3	CO5
	(OR)			
	b) Explain the general recycling process of aluminium.	13	K3	CO5

PART – C

Q.No.	Questions	(1 x 15 = 15 Marks)		
		Marks	KL	CO
16. a)	i. Describe the importance of public involvement in the treatment of solid waste.	6	K4	CO1
	ii. Write notes on the steps that has to be taken and implemented by the government to ensure the safety of the personnel handling waste.	9	K4	CO1
	(OR)			
b)	Describe any three methods used in the generation of power from solid waste.	15	K3	CO5
