U.S.N.										

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

February / March 2025 Semester End Main Examinations

Programme: B.E. **Semester: I / II**
Branch: Civil Engineering **Duration: 3 hrs.**
Course Code: 23CV1ESWMT / 23CV2ESWMT **Max Marks: 100**
Course: Waste Management

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

		UNIT - I	CO	PO	Marks
1	a)	Classify solid wastes based on its source and types.	CO1	PO6	**10**
	b)	With the help of neat flow diagram, explain the functional elements in a typical solid waste management system.	CO1	PO6	**10**
		OR			
2	a)	Identify and elucidate the factors influencing the solid waste management.	CO1	PO7	**10**
	b)	Discuss the followings: i. Environmental Sound Technologies (EST) ii. Environmentally Sound Solid Waste Management (ESSWM)	CO1	PO6	**10**
		UNIT - II			
3	a)	Perform comparative analysis of waste generation and composition of developing and developed nations.	CO2	PO7	**10**
	b)	Evaluate physical and chemical characteristics of waste, emphasizing their importance in effective waste management practices.	CO2	PO7	**10**
		OR			
4	a)	Examine the diverse effects of solid waste on human health and the environment.	CO2	PO7	**10**
	b)	Evaluate the approach to solid waste management in Indian cities.	CO2	PO7	**10**
		UNIT - III			
5	a)	Discuss on the solid waste management scenario in Bangalore city with respect to the significance of waste segregation, recycling and recovery initiatives	CO3	PO7	**10**
	b)	Elucidate the environmental effects of landfill and its control measures.	CO3	PO6	**10**

			OR			
	6	a)	Evaluate different options available for disposal of solid waste.	CO2	PO6	**10**
		b)	Differentiate between the various types of waste collection system based on their operation.	CO3	PO6	**10**
			UNIT - IV			
	7	a)	Examine various techniques available for recycling and recovery of waste.	CO3	PO7	**10**
		b)	Explain the following (i) Mechanical size and volume reduction (ii) Component separation	CO2	PO6	**10**
			OR			
	8	a)	What is the significance of recycling and how is the recycling program planned.	CO3	PO6	**10**
		b)	Discuss commonly recycled material and their process.	CO2	PO7	**10**
			UNIT - V			
	9	a)	Elucidate the challenges and initiatives with respect to hazardous waste management in India.	CO4	PO7	**10**
		b)	Identify the characteristics of hazardous waste and classify the hazardous waste.	CO4	PO7	**10**
			OR			
	10	a)	Examine different methods available for treatment of hazardous waste.	CO4	PO7	**10**
		b)	Outline strategies for preventing hazardous waste pollution and minimizing waste generation.	CO4	PO7	**10**

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