

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

Autonomous Institute Affiliated to VTU

December 2023 Supplementary Examinations**Programme: B.E.****Semester: I/II****Branch: Common to all Branches****Duration: 3 hrs.****Course Code: 22CV1ESWMT/22CV2ESWMT****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)	With the help of flow diagram explain the functional elements of Solidwaste Management.	CO1	PO6	8
		b)	Classify different sources and types of waste generated from each source.	CO1	PO6	6
		c)	List the advantages and disadvantages of any three methods of present solidwaste disposal.	CO1	PO6	6
			UNIT - II			
	2	a)	Enumerate the factors affecting generation rate of solidwaste.	CO1	PO7	8
		b)	Explain the importance of identifying individual components, moisture, density of solid waste.	CO1	PO7	6
		c)	Briefly explain the importance of chemical characteristics of municipal solid waste.	CO1	PO7	6
			UNIT - III			
	3	a)	Define transfer station and Explain the need of transfer operation.	CO2	PO6	8
		b)	List and explain different waste collection services.	CO2	PO6	6
		c)	Enumerate the factors to be considered in laying out optimal route for waste collection system.	CO2	PO6	6
			OR			
	4	a)	Explain the factors to be considered in evaluating potential land fill site.	CO2	PO7	8
		b)	Illustrate with rough sketch, the suitability of different methods of landfill.	CO2	PO7	6
		c)	Enumerate the advantages and disadvantages of landfill.	CO2	PO7	6
			UNIT - IV			
	5	a)	List different component separation techniques. Explain the applications of any 3 techniques briefly.	CO2	PO3	8
		b)	Compare mechanical volume and size reduction with examples.	CO2	PO3	6
		c)	Enumerate the purpose of processing of solid waste	CO2	PO3	6

		OR			
6	a)	With the help of flow diagram explain recovery of resources and energy from solid waste.	CO3	PO3	8
	b)	Enumerate the factors to be considered in selection of drying equipment.	CO3	PO3	6
	c)	Illustrate with a case study of solid waste recycling.	CO3	PO3	6
		UNIT - V			
7	a)	Illustrate identification of hazardous waste with flow diagram of screening model.	CO4	PO7	8
	b)	List and explain classification of hazardous waste.	CO4	PO7	6
	c)	Write a note on hazardous waste management in India.	CO4	PO7	6
