

U.S.N.

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

Autonomous Institute Affiliated to VTU

June 2025 Semester End Main Examinations**Programme: B.E.****Semester: IV****Branch: Chemical Engineering****Duration: 3 hrs.****Course Code: 23CH4PCPCM / 22CH4PCPCM****Max Marks: 100****Course: Pollution Control and 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)	Explain the importance of water management & challenges associated with it.	CO1	PO6	10
		b)	Discuss the physical & chemical characteristics of waste water.	CO2	PO2	10
			OR			
	2	a)	Write about guidelines and key aspects for ensuring drinking water is safe for human consumption as per IS 10500 specifications.	CO3	PO6	08
		b)	How water pollutants are classified? What are the types of pollutants and source of water pollution?	CO2	PO2	12
			UNIT - II			
	3	a)	Explain various physical and biological unit operations in waste water treatment.	CO7	PO2	10
		b)	Explain the working of activated sludge process with a neat diagram.	CO2	PO2	10
			OR			
	4	a)	What is Secondary waste water Treatment? Explain.	CO4	PO7	10
		b)	Discuss on thickening, digestion and dewatering methods for treatment of sewage sludge.	CO6	PO3	10
			UNIT - III			
	5	a)	What is ultrafiltration? Explain the significance of ultrafiltration processes in wastewater treatment?	CO4	PO7	10
		b)	Explain the working of reverse osmosis and enlist the benefits.	CO5	PO12	10

			OR			
6	a)	Elucidate on membrane filtration and particle filtration methods applied during waste water reuse.		CO3	PO6	10
	b)	Explain biological nutrient removal (BNR) along with a diagram.		CO4	PO7	10
		UNIT - IV				
7	a)	Explain about sound level meter, dosimeter and smartphone used for noise level measuring instruments.		CO1	PO6	10
	b)	Write on the hazardous effects of air pollution for the environment.		CO4	PO7	10
		OR				
8	a)	Elucidate the impacts of noise pollution for human health and wild life.		CO1	PO6	10
	b)	Discuss briefly any five active air sampling methods.		CO5	PO12	10
		UNIT - V				
9	a)	Discuss the classification of solid waste.		CO5	PO12	10
	b)	Explain the impact of hazardous substances (e-waste) on health and environment.		CO5	PO12	10
		OR				
10	a)	Explain the electrical and electronics industries e-waste generation scenario in India.		CO5	PO12	10
	b)	Write on the hazardous waste rules, 2003 for the purpose of management and handling e-waste.		CO5	PO12	10
