

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.

			UNIT - I		
			CO	PO	Marks
1	a)	Explain the importance of water management & challenges associated with it.	<i>CO1</i>	<i>PO6</i>	10
	b)	Discuss the physical & chemical characteristics of waste water.	<i>CO2</i>	<i>PO2</i>	10
OR					
2	a)	Write about guidelines and key aspects for ensuring drinking water is safe for human consumption as per IS 10500 specifications.	<i>CO3</i>	<i>PO6</i>	08
	b)	How water pollutants are classified? What are the types of pollutants and source of water pollution?	<i>CO2</i>	<i>PO2</i>	12
UNIT - II					
3	a)	Explain various physical and biological unit operations in waste water treatment.	<i>CO7</i>	<i>PO2</i>	10
	b)	Explain the working of activated sludge process with a neat diagram.	<i>CO2</i>	<i>PO2</i>	10
OR					
4	a)	What is Secondary waste water Treatment? Explain.	<i>CO4</i>	<i>PO7</i>	10
	b)	Discuss on thickening, digestion and dewatering methods for treatment of sewage sludge.	<i>CO6</i>	<i>PO3</i>	10
UNIT - III					
5	a)	What is ultrafiltration? Explain the significance of ultrafiltration processes in wastewater treatment?	<i>CO4</i>	<i>PO7</i>	10
	b)	Explain the working of reverse osmosis and enlist the benefits.	<i>CO5</i>	<i>PO12</i>	10

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.

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