U.S.N.										

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

Autonomous Institute Affiliated to VTU

September / October 2023 Semester End Main Examinations

Programme: B.E. **Semester: IV**
Branch: Chemical Engineering **Duration: 3 hrs.**
Course Code: 22CH4HSESP **Max Marks: 100**
Course: Environmental Studies and Pollution Control

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)		Discuss the characteristics of different atmosphere segments.	*CO1*	*PO6*	**10**
	b)		Explain water pollution control Act.	*CO5*	*PO12*	**05**
	c)		What are the benefits of forest conservation Act? Which conservation Act prevents deforestation?	*CO5*	*PO12*	**05**
			UNIT - II			
2	a)		Discuss the various mechanisms involved in the formation and depletion of ozone in atmosphere.	*CO2*	*PO2*	**10**
	b)		Discuss in detail the process of rain water harvesting and ground water recharging.	*CO4*	*PO7*	**10**
			OR			
3	a)		How are water pollutants classified? Explain the quality standards for industrial waste water.	*CO2*	*PO2*	**10**
	b)		Discuss the important characteristics of waste water.	*CO2*	*PO2*	**10**
			UNIT - III			
4	a)		With a neat flow diagram, explain the activated sludge process in biological treatment process.	*CO3*	*PO 6*	**10**
	b)		Discuss on municipal waste water treatment processes and sludge treatment process.	*CO3*	*PO 6*	**10**
			OR			
5	a)		With the help of diagram, discuss the trickling filtration process for waste water treatment. What arte its merits and limitations.	*CO 3*	*PO 6*	**12**
	b)		Explain the textile waste water treatment process and its management.	*CO3*	*PO6*	**08**

			UNIT - IV			
	6	a)	How are air pollutants classified? State five common air pollutants, their sources and effects on human & animal health and building materials.	*CO2*	*PO2*	**10**
		b)	Explain the working principle of electrostatic precipitator with a neat labeled diagram. Discuss its merits and application.	*CO3*	*PO6*	**10**
			UNIT - IV			
	7	a)	Discuss the various measures needed for effective noise control in industrial establishment.	*CO3*	*PO6*	**10**
		b)	Discuss the different sources, classification, and properties of solid waste.	*CO4*	*PO7*	**10**

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