

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)
M.E DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2025

Second Semester

Environmental Engineering

EV4201/PEVT2421 - Biological Treatment Process for Wastewater

Regulations – 2021/2024

Duration : 3 Hrs

Maximum : 100 Marks

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

Q.No	Questions	BLT	CO	Marks
1.	Give the factors affecting growth of microorganisms in waste water.	L2	1	2
2.	Write the objectives of biological treatment.	L2	1	2
3.	What are the disadvantages of conventional wastewater treatment?	L2	2	2
4.	How do you understand the significance of waste stabilization ponds?	L2	2	2
5.	Mention the merits of sequencing batch reactors.	L2	3	2
6.	Give Short notes about membrane separation.	L2	3	2
7.	Discuss the merits of anaerobic filters.	L2	4	2
8.	Mention the process of anaerobic baffled reactor.	L2	4	2
9.	Give Short notes about sludge digestion.	L2	5	2
10.	List out the factors affecting the sludge thickening.	L2	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

Q.No	Questions	BLT	CO	Marks
11.	a i Discuss elaborately the aerobic and anaerobic treatment of waste water.	L3	1	10
	i Narrate batch reactor and continuous flow reactor.	L3	1	6
	Or			
	b i Discuss with examples of attached and suspended growth treatment systems.	L3	1	10
	i What is the conventional activated sludge treatment process?	L3	1	6
12.	a i Explain the principles and advantages of aerobic treatment process.	L3	2	10
	i Why the nutrient removal is important in aerobic treatment systems?	L3	2	6

Or

	b	i	Compare the conventional and extended aeration with suitable examples.	L3	2	8
		i	Explain the working principles of trickling filters with neat sketch.	L3	2	8
13.	a	i	Discuss the working principles and advantages of any two bio reactors.	L3	3	16
Or						
	b	i	How would you utilize the reclamation of waste water?	L3	3	8
		i	When would you apply tertiary treatment process in wastewater treatment? Explain it.	L3	3	8
14.	a	i	Analyze the significance of anaerobic treatment of wastewater over other methods.	L3	4	16
Or						
	b	i	Discuss the merits and demerits of oxidation process.	L3	4	8
		i	How would you use suspended growth process for gas recovery?	L3	4	8
15.	a	i	Discuss the relationship between Characteristics and disposable methods of sludge.	L3	5	8
		i	Distinguish between waste treatment and energy recovery.	L3	5	8
Or						
	b	i	Make use of the operational maintenance problems in STPs.	L3	5	8
		i	Make use of the residue disposal in efficient manner to meet the emerging trends.	L3	5	8