

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2026*****Second Semester******Environmental Engineering*****PEVT2421- BIOLOGICAL TREATMENT PROCESS FOR WASTE WATER*****Regulations - 2024******Duration: 3 Hrs.******Maximum: 100 Marks******PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)***

<i>Q.No</i>	<i>Questions</i>	<i>BTL</i>	<i>CO</i>	<i>Marks</i>
1.	Compare attached and suspended growth.	L2	1	2
2.	Compare aerobic and anaerobic treatment.	L2	1	2
3.	What are the operational troubles in trickling filter?	L1	2	2
4.	Compare HRT and SRT.	L2	2	2
5.	Explain briefly the membrane bioreactor.	L2	3	2
6.	Explain the importance of nutrient removal in a wastewater treatment.	L2	3	2
7.	Define Facultative process.	L1	4	2
8.	What are the methods of disposal of septic tank effluent?	L1	4	2
9.	List the stages of sludge digestion process.	L1	5	2
10.	Write a short on biogas generation.	L1	5	2

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

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11. a	Describe the application of microbial growth kinetics in estimating substrate removal in a biological reactor.	L2	1	16
	Or			
b	Explain the selection criteria for biological treatment processes under varying wastewater characteristics.	L2	1	16
12. a	Explain the basic operation of an activated sludge process with a flow diagram. Also mention its operating troubles with remedial suggestions.	L2	2	16
	Or			
b	Explain the working of an aerobic type waste stabilization pond.	L2	2	16
13. a	Explain in detail the process involved in a Sequencing Batch Reactor.	L2	3	16

Or

	b	Explain the reclamation and reuse of sewage.	L2	3	16
14.	a	Explain in detail the working of an UASB with neat sketch.	L2	4	16
		Or			
	b	Describe with neat sketch component parts, functioning advantages and disadvantages of septic tank. Also discuss various methods of disposal of septic tank effluent.	L2	4	16
15.	a	With the help of a diagram, Demonstrate the working of a standard rate sludge digester.	L3	5	16
		Or			
	b	Apply suitable sludge dewatering techniques for a municipal wastewater treatment plant and justify your selection based on sludge characteristics.	L3	5	16
