

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL/MAY 2026***Third Semester**Civil Engineering***UCET24301 / CE3303 - Water Supply and Wastewater Engineering***Regulations - 2024 & 2021**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.	Write short note on "surface water".	L1	1	2
2.	List out the any four water-borne diseases.	L1	1	2
3.	Give the types of aerators.	L1	2	2
4.	What is defluorination?	L1	2	2
5.	Write the requirements of a good water distribution system with suitable reasons.	L2	3	2
6.	Explain the components of a service connection pipe with their functions.	L2	3	2
7.	Enlist the materials used for constructing sewer pipes.	L1	4	2
8.	Define self-cleansing velocity.	L2	4	2
9.	What is sludge?	L1	5	2
10.	State any two aspects of maintenance in sewage treatment plants.	L2	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 Explain the various methods of estimation of surface and subsurface water resources.	L3	1	16
	Or			
	b Describe the intake structures used in water supply systems with neat sketches.	L3	1	16
12.	a Explain the working principle and design features of a Clari flocculator with a neat diagram.	L4	2	16
	Or			
	b Describe the importance and techniques of residue management in water treatment plant units.	L4	2	16
13.	a Discuss the different distribution system layouts with their merits and demerits.	L3	3	16
	Or			
	b Explain the construction, components, and operation of pumping stations.	L3	3	16

14.	a	Determine the diameter of a separate sewer section running 0.7 times full at maximum discharge for a population of 50,000 persons. Water is supplied at a rate of 140 liters per capita per day. Mannings constant $N=0.013$ at all depths of flow. The slope of the sewer is 1 in 700.	L3	4	16
		Or			
	b	Explain the different methods of storm runoff estimation and design of storm drainage systems.	L3	4	16
15.	a	Briefly explain the recent advances in sewage treatment technologies With examples.	L4	5	16
		Or			
	b	Discuss the Up flow Anaerobic Sludge Blanket (UASB) process and its advantages.	L4	5	16