

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV/DEC 2025***Third Semester**Civil Engineering***CE3303 / UCET24301 - Water Supply and Wastewater Engineering***Regulations - 2021 & 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.	Define design period.	L1	1	2
2.	List the various factors affecting the selection of location for intake structures.	L2	1	2
3.	What are the chemicals used for coagulation process?	L2	2	2
4.	Write the various desalination methods adopted in practice.	L1	2	2
5.	Distinguish between check valves and pressure distribution valves.	L2	3	2
6.	Name list the various methods used for leakage detection in water supply network.	L2	3	2
7.	Differentiate between dry weather flow and wet weather flow.	L3	4	2
8.	Write down the various sewage appurtenances in sewage systems.	L2	4	2
9.	Differentiate between suspended growth process and attached growth process.	L3	5	2
10.	List the various disposal methods adopted for sewage disposal.	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 various demands of water along with factors affecting the per capita demand.	L2	1	16
	Or			
	b Brief about physical and chemical characteristics of water for drinking supply.	L2	1	16
12.	a Briefly explain the working principle of the rapid sand filter with neat sketches.	L2	2	16
	Or			
	b Explain the different water softening methods used for drinking water supply.	L2	2	16
13.	a State the different types of water distribution layout systems with neat sketches.	L2	3	16
	Or			
	b Write down the step by step procedure for pipe network analysis by Hardy cross method.	L3	3	16

14.	a	Calculate the combined flow discharge of sewage for the given data. Area to be served is 150 hectares. Population density is 50,000. Time of entry is 5 minutes. Time of flow is 20 minutes. Rate of water supply is 135 LPCD. Impermeability factor = 0.45. Assume 80% of water supplied turns into sewer and peak factor as 1.5.	L3	4	16
		Or			
	b	Brief about corrosion in sewage systems along with its preventive methods.	L2	4	16
15.	a	Brief about working principle of the trickling filter with sketches.	L2	5	16
		Or			
	b	Briefly explain the recent advancements in sewage treatment and disposal.	L3	5	16