

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE- SEMESTER-VI (NEW) EXAMINATION – WINTER 2024**

**Subject Code: 3160611**

**Date: 25-11-2024**

**Subject Name: Environmental Engineering**

**Time: 02:30 PM TO 05:00 PM**

**Total Marks: 70**

**Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
<b>Q.1</b>	(a) Enlist components of water supply scheme.	03
	(b) Define seasonal fluctuation and design period in water supply scheme.	04
	(c) Define Intake structure, enlist type of intake structure and explain any one in detail.	07
<b>Q.2</b>	(a) What is turbidity and enlist various methods to determine turbidity.	03
	(b) Define spigot and socket joint and Reflux valve.	04
	(c) Draw layout of water treatment plant and briefly explain the different treatment unit.	07
	<b>OR</b>	
	(c) What is aeration, enlist different type of aeration, explain any one in detail.	07
<b>Q.3</b>	(a) Differentiate between BOD and COD.	03
	(b) Explain Oxygen sag curve with diagram.	04
	(c) Explain the process of sludge digestion and discuss the factors that affect its efficiency in wastewater treatment.	07
	<b>OR</b>	
<b>Q.3</b>	(a) Explain sewage sickness.	03
	(b) Write short note on screening in waste water treatment,	04
	(c) What is a trickling filter? Explain its working principle, components, and applications in wastewater treatment.	07
<b>Q.4</b>	(a) Define soil pipe and vent pipe.	03
	(b) Differentiate between one pipe system and two pipe system.	04
	(c) Define sewer and explain different type of sewer.	07
	<b>OR</b>	
<b>Q.4</b>	(a) Define sewage and sullage.	03
	(b) Write short note on Intercepting trap and catch basin.	04
	(c) Explain methods of collection of sewage with their merits and demits.	07
<b>Q.5</b>	(a) Write short note on EIA.	03
	(b) Define Bio medical waste and enlist the sources of Biomedical waste.	04
	(c) Enlist different methods of solid waste disposal and explain any one in detail	07
	<b>OR</b>	
<b>Q.5</b>	(a) Explain how Noise pollution affect working efficiency of human being.	03
	(b) Explain effects of air pollutant on human health.	04
	(c) Enlist different air pollutants and explain any two in detail.	07

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