

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER- V EXAMINATION – SUMMER 2026

Subject Code:2150603

Date:30-05-2026

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
Q.1	(a) State the role of microorganisms in the environment.	03
	(b) Differentiate quality wise surface water and ground water sources.	04
	(c) Explain different types of water demands that are to be considered while designing the water supply system of a town.	07
Q.2	(a) What is BOD/COD ratio? Give its significance	03
	(b) Explain chemicals parameters of drinking water in detail.	04
	(c) Give IS standards for drinking water in India.	07
	OR	
	(c) What is a waterborne disease? Discuss any one waterborne disease, its origin, spread and control in details	07
Q.3	(a) Explain the self-purification process of the stream.	03
	(b) Differentiate presumptive and confirmative test used for MPN?	04
	(c) Explain 1st stage BOD and derive its formula with usual notations $L_t = L_0 (1 - 10^{-Kt})$.	07
	OR	
Q.3	(a) Derive the first stage BOD equation with usual notations.	03
	(b) Define and differentiate de-oxygenation and re-oxygenation curve.	04
	(c) Explain the factors affecting self-purification capacity of the river.	07
Q.4	(a) Define (i) Sullage (ii) Refuse (iii) Garbage	03
	(b) Write short note on Composting.	04
	(c) Enumerate different types traps used in India and differentiate Interception trap and Gully trap showing their sketches.	07
	OR	
Q.4	(a) What are the objectives of solid waste management?	03
	(b) Define the following terms : (1)Sewage,(2) Rainwater pipe, (3)Waste pipe and (4) Traps	04
	(c) Explain the different components of houses drainage systems.	07
Q.5	(a) Write note on EIA.	03
	(b) Give the classification of air pollutants.	04
	(c) Enumerate different air pollution control devices and explain the function of electrostatic precipitator in detail.	07
	OR	
Q.5	(a) State the sources of noise pollution.	03
	(b) What is the Environmental (Protection) Act-1986, what are its objectives?	04
	(c) Explain the different control measures for noise pollution.	07
