

Enrolment No./Seat No \_\_\_\_\_

# GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V EXAMINATION – SUMMER 2025

Subject Code:2150603

Date:20-05-2025

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.

- Q.1** (a) Give the classification of microorganisms. **03**  
(b) Enlist and explain different sources of surface water. **04**  
(c) Explain different type of water demands in brief. **07**
- Q.2** (a) Write short note on sewage sickness. **03**  
(b) The 5 days 20°C BOD of sewage is 160mg/litre. Calculate its 2 days 30°C BOD. Assume the deoxygenation constant at 20°C  $K_D(20^\circ)$  as 0.1/day. **04**  
(c) Explain the factors affecting self purification capacity of the river. **07**
- OR**
- (c) Explain with sketch DO Sag curve. **07**
- Q.3** (a) What is pH? How is pH measured? **03**  
(b) Write short note on water borne diseases. **04**  
(c) What do you mean by temporary and permanent hardness. Explain in detail. **07**
- OR**
- Q.3** (a) Explain different types of solids found in wastewater **03**  
(b) Give sanitary significance of following parameters, with reference to drinking water: 1. Nitrate 2. Fluoride 3. Mercury **04**  
(c) Explain different physical and chemical characteristics of wastewater. **07**
- Q.4** (a) Define: 1. Sullage 2. Soil pipe 3. Nahni trap **03**  
(b) Explain land fill method used for disposal of solid waste. **04**  
(c) Enlist the principles of house drainage system. **07**
- OR**
- Q.4** (a) Define composting method for disposal of solid waste. **03**  
(b) What is solid waste management. Explain in detail. **04**  
(c) Explain different types of plumbing systems used for house drainage. **07**
- Q.5** (a) How is noise measured? Describe method of controlling noise pollution. **03**  
(b) What is Primary and secondary pollutants. **04**  
(c) Enumerate different air pollution control devices and functioning cyclone precipitator. **07**
- OR**
- Q.5** (a) State the sources of noise pollution. **03**  
(b) Explain different equipments used for control of particulate matter. **04**  
(c) What is the Environmental (Protection) Act-1986, what are its objectives? **07**

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