

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER- V EXAMINATION-SUMMER 2023****Subject Code: 2150603****Date: 28/06/2023****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) Enlist different water borne diseases along with the agent causing them. **03**
(b) Explain types of microbes. **04**
(c) Explain physical and chemical characteristics of drinking water. **07**
- Q.2** (a) Distinguish between Rubbish and Garbage. **03**
(b) Explain with neat sketch of Gully trap and Intercepting trap **04**
(c) Explain different solid waste processing techniques. **07**
- OR**
- (c) Explain the BOD test with its significance and limitation. **07**
- Q.3** (a) Write a short note on sanitary fitting. **03**
(b) Discuss various factors considered in design of landfills. **04**
(c) Explain electrostatic precipitators. **07**
- OR**
- Q.3** (a) Write a short note on principles of house drainage. **03**
(b) Distinguish between Incineration and Pyrolysis. **04**
(c) Explain Gravitational settling chamber. **07**
- Q.4** (a) Distinguish between Noise and sound. **03**
(b) Explain different types of trap. **04**
(c) Explain self-purification of natural streams. **07**
- OR**
- Q.4** (a) Distinguish between primary pollutant and secondary pollutant. **03**
(b) Explain environmental Protection act 1986. **04**
(c) Explain system of plumbing for house drainage. **07**
- Q.5** (a) Explain BOD to COD ratio. **03**
(b) Explain salient features of Air Pollution Act. **04**
(c) Explain physical and chemical characteristics of waste water. **07**
- OR**
- Q.5** (a) Describe functional elements of solid Waste management system. **03**
(b) The 5 days 30°C BOD of sewage is 150 mg/litre. Calculate its 5 days 20°C BOD. Assume the deoxygenating constant at 20°C is $K_D(20^\circ)$ as 0.1 **04**
(c) Explain salient features of Water Pollution Act. **07**
