

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**ME SEMESTER – I EXAMINATION – SUMMER 2017**

**Subject Code: 2711702**

**Date: 08/05/2017**

**Subject Name: Environmental Chemistry & Microbiology**

**Time: 02:30 p.m. to 05:00 p.m.**

**Total Marks: 70**

**Instructions:**

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

- Q.1** (a) Write a short note on pH meter and its application in environmental engineering field. **07**  
(b) Give various classifications of microbes in details. **07**
- Q.2** (a) What is adsorption? Briefly explain Freundlich and Langmuir isotherm. **07**  
(b) Discuss determination of COD test of wastewater sample. **07**
- OR**
- (b) Discuss Mohr method for chloride determination. State applications of chloride data. **07**
- Q.3** (a) Give the detail steps of media preparation. Explain various types of media. **07**  
(b) What is MPN & explain its procedure for MPN & SPC test? **07**
- OR**
- Q.3** (a) Name Various Staining technique. Discuss Gram Staining. **07**  
(b) Enlist various microscopes and explain any one in detail. **07**
- Q.4** (a) Write short note on Gas Chromatography with neat diagram. **07**  
(b) Write down the environmental significance of DO and BOD. **07**
- OR**
- Q.4** (a) Give the classification of solids and explain each term in detail. **07**  
(b) Write a short note on AAS with neat diagram. **07**
- Q.5** (a) Explain different sources of water pollution and the remedial measure to control the same with latest technology. **07**  
(b) Discuss with sketch replication of Bacterio Phages. **07**
- OR**
- Q.5** (a) Discuss the different modes of preservation of microorganisms. **07**  
(b) Explain different sources of water pollution and the remedial measure to control the same with latest technology. **07**

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