

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**ME – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016**

**Subject Code: 2721702**

**Date: 25/05/2016**

**Subject Name: Industrial water & Wastewater Treatment**

**Time: 10:30 am to 01:00 pm**

**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) Briefly discuss the industrial scenario of country, and explain why it is vital to control industrial water pollution. **07**  
(b) Discuss basic properties of water, and thereafter explain why it widely used for cooling in industries. **07**
- Q.2** (a) Explain the theory of steam generation in a boiler using neat diagram. **07**  
(b) Discriminate preventive and curative measures for control of water pollution. **07**
- OR**
- (b) Explain volume reduction and its importance. What is difference between classification and conservation? **07**
- Q.3** (a) What is sludge? Draw a simple layout of a conventional water treatment plant, with a sludge digester in it. **07**  
(b) With diagram, discuss the process of electrodialysis reversal (EDR). **07**
- OR**
- Q.3** (a) Explain the process of Reverse Osmosis. **07**  
(b) Explain the concept of joint treatment and its importance. **07**
- Q.4** (a) Discuss saline water conversation process as a boon for countries like Saudi Arabia. **07**  
(b) Explain design considerations for a CETP. **07**
- OR**
- Q.4** (a) Clearly list out the water pollutants, by various industrial sectors. **07**  
(b) Explain how the treatment of wastewater for petrochemicals and refineries is different from textiles and leather industry. Discuss in detail. **07**
- Q.5** (a) List out physical and chemical properties of water. Discuss any two physical properties. **07**  
(b) What is the difference between organic and inorganic industrial wastewater? List out three industries, producing each type. **07**
- OR**
- Q.5** (a) Short note – Neutralization. **07**  
(b) Discriminate – Distilled water and Pure water. **07**

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