Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII • EXAMINATION – SUMMER • 2014

Subject Code: 171303 **Date: 05-06-2014**

Subject Name: Industrial Water Pollution and Control

Time: 02.30 pm - 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.**

Q-1 (a) Write a note on "Waste Management Hierarchy". **07**

(b) Explain how industrial waste water differs from domestic waste water. **07**

Q-2 (a) Write a note on causes and effects of 'Oil Pollution'. **07**

(b) Explain the phenomena of Stratification and overturn of lakes. **07**

OR

(b) Highlight the secondary and tertiary benefits of pollution control along with appropriate examples. **07**

Q-3 (a) Justify "Why there are different discharge standards for different environmental sinks?" **07**

(b) What is volume reduction? Enlist the different techniques of volume reduction and explain any one in detail. **07**

OR

Q-3 (a) Give the classification of lakes based on productivity and biological zones. **07**

(b) What is strength reduction? Prepare a list of strength reduction Techniques and explain any two. **07**

Q-4 (a) Highlight the concept, significance and advantages of Common Effluent Treatment Plants. **07**

(b) Explain the importance of Equalizations & neutralization in treatment of industrial Waste water. **07**

OR

Q-4 (a)Enlist the Different Steps for Conservation of water in industries. **07**

(b) (i) Explain the term "Proportioning". **07**

(ii) Explain with the help of an example "Population Equivalent".

Q-5 (a) Enlist the different processes and equipments to remove oil and grease from wastewater. Explain any one with the help of neat sketch. **07**

(b) Write a Short note on: **07**

(i) Self Purification of Stream.

(ii) DO sag Curve.

OR

Q-5 (a) Write down the manufacturing process, sources and treatment of wastewater for any one of the following industries: **07**

(i) Starch (ii) Fertilizer (iii) Sugar

(b) Differentiate between 'Stream standards' and 'Effluent Standards' giving the advantages and disadvantages of both. **07**

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