Seat No: _____ Enrolment No_____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- IVth SEMESTER–EXAMINATION – MAY/JUNE- 2012

Subject code: 141304 **Date: 31/05/2012**

Subject Name: Water Pollution & Control

Time: 10:30 am – 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)** What is coagulation process and explain its important in waste water treatment. **07**

(b) Give the detailed classification of filtration processes & explain depth filtration. **07**

Q.2 **(a)** Draw a neat sketch of conventional Waste water treatment plant and explain the different units. **07**

(b) (i) Explain the difference between secondary treatment and advanced waste water treatment. **07**
(ii) Differentiate between discrete settling and flocculant settling.

OR

(b) (i) Enlist and explain the functional zones of sedimentation tank. **07**
(ii) Give the classification of screens.

Q.3 **(a)** Explain the sources and effects of following parameters in water and waste water: (1) Colour (2) Solids (3) Organic matter **07**

(b) (i) Explain the mechanism of removal of organic matter in a Trickling Filter. **07**
(ii) Draw a neat sketch of conventional Activated sludge process and explain its different components

OR

(a) Explain the different Sources of Water Pollution and also gives idea about Pathological and Toxic Effect. **07**

(b) Explain aerobic and anaerobic treatment processes. Highlight the advantages of anaerobic processes over aerobic processes. **07**

Q.4 **(a)** Enlist and explain the effects of water pollution. **07**

(b) What is the Equalization? What is its importance in wastewater treatment? **07**

OR

(a) What is Softening Process. Explain its Application on Water pollution **07**

(b) Explain with a neat sketch, construction and working of Slow Sand Filter. **07**

Q.5 **(a)**What is Disinfection Process. Explain its Application on Water pollution **07**

(b) What is Thermal pollution? What are the methods to prevent the thermal pollution. **07**

OR

(a) Explain the Sources and Effect related to Oil pollution **07**

(b) Explain the Working Principle of Rotating Biological Filter.

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