Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV(OLD)• EXAMINATION – WINTER 2016

Subject Code:141304 **Date:24/11/2016**

Subject Name:Water Pollution & Control

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.**

Q.1	**(a)**	Discuss the sources and consequences of ground water contamination	**07**
	(b)	Write a short note on sources and impacts of impurities.	**07**
Q.2	**(a)**	Enlist the sources and effects of following parameters in water: (i) Total dissolved solids (ii) Permanent Hardness (iii) organic matter	**07**
	(b)	With the help of neat sketch explain conventional water treatment plant.	**07**
		OR	
	(b)	Explain the phenomenon of water softening.	**07**
Q.3	**(a)**	Explain the treatment process of up-flow anaerobic sludge blanket reactor with diagram.	**07**
	(b)	Differentiate between Slow sand and rapid sand filter with their diagram.	**07**
		OR	
Q.3	**(a)**	Explain the process of disinfection using chlorine and its compound.	**07**
	(b)	Explain the different types of screens used in waste water treatment plants.	**07**
Q.4	**(a)**	Explain the working of Activated sludge process with diagram. Also list out its advantages and disadvantages.	**07**
	(b)	Discuss the phenomenon of sedimentation highlighting features of various settling zone.	**07**
		OR	
Q.4	**(a)**	Differentiate primary, secondary and tertiary treatment of waste water.	**07**
	(b)	Discuss working of sedimentation tank with diagram.	**07**
Q.5	**(a)**	Explain the working of Trickling filter with diagram. Also list out its advantages and disadvantages.	**07**
	(b)	Write down the sources, effects and control strategy of oil pollution.	**07**
		OR	
Q.5	**(a)**	Discuss about the concept of coagulation and flocculation.	**07**
	(b)	Write down the sources, effects and control strategy of thermal pollution.	**07**

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