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

GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma Engineering Semester –VI Examination Dec. - 2011

Subject code: 360607 **Date: 09/12/2011**

Subject Name: Environmental Engineering

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.**
4. **English version is considered Authentic.**

Q.1		Write short note on	**14**
	(1)	Requirement of wholesome water.	
	(2)	Reverse osmosis process for desalination of water.	
	(3)	Sources of solid waste.	
	(4)	Collection and Handling of Bio-chemical waste.	
Q.2			
	(a)	State the purpose of screenings. Explain bar screen with neat sketch.	**07**
	(b)	Explain requirements of good disinfection.	**07**
		OR	
	(b)	State methods of disinfection and explain any one method in details.	**07**
Q.3			
	(a)	What is purpose of sedimentation tanks? Where are they located?	**07**
	(b)	Explain the method of jar test for determining the optimum dosage of coagulant in raw water.	**07**
		OR	
Q.3	(a)	State types of sedimentation tanks. Explain Hopper bottom tank with neat sketch.	**07**
	(b)	Explain various devices used to mix raw water with the coagulant.	**07**
Q.4			
	(a)	State various methods of sludge disposal. Explain any one method with neat sketch.	**07**
	(b)	State various methods of dewatering and gives suitability of them.	**07**
		OR	
Q. 4	(a)	Write short note on the factors affecting sludge digestion.	**07**
	(b)	Write short note on (i) Gravity thickening. (ii) Sources of sludge.	**07**
Q.5			
	(a)	Compare Slow sand filter and Rapid sand filter	**07**
	(b)	Write short note on the softening of water.	**07**
		OR	
Q.5	(a)	Write short note on pressure filter.	**07**
	(b)	State the advantages and disadvantages of Lime-soda method.	**07**

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