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

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV (OLD) - EXAMINATION – SUMMER 2017

Subject Code:141304 **Date: 12/06/2017**

Subject Name: Water Pollution & Control

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)**	Draw a neat sketch of conventional Wastewater Treatment Plant and state function/s of each unit.	**07**
	(b)	Give Consequences of overusing ground water and surface Water.	**07**
Q.2	**(a)**	Explain with a neat sketch, construction and working of Slow Sand Filter	**07**
	(b)	(i) Explain the difference between secondary treatment and advanced waste Water treatment. (ii) Differentiate between discrete settling and flocculant settling	**07**
		OR	
	(b)	(i) Enlist and explain the functional zones of sedimentation tank. (ii) Give the classification of screens.	**07**
Q.3	**(a)**	What is 'equalization'? Explain its significance in waste water Treatment.	**07**
	(b)	What is the purpose of Biological treatment of waste water? Differentiate Between suspended and attached growth process.	**07**
		OR	
Q.3	**(a)**	What is Softening Process? Explain its Application on Water pollution	**07**
	(b)	Draw a neat sketch of Activated Sludge Process and draw a neat sketch of it.	**07**
Q.4	**(a)**	(i) Explain single stage and two stage trickling filter with sketch. (ii) Explain when anaerobic conditions are developed in a trickling filter.	**07**
	(b)	Describe the Jar test method to determine the optimum dose of coagulant.	**07**
		OR	
Q.4	**(a)**	Explain the principle and working of rotating biological contactor reactor with neat sketch.	**07**
	(b)	What is disinfection? Explain chlorination as a method of disinfection.	**07**
Q.5	**(a)**	How can thermal pollution be prevented and controlled?	**07**
	(b)	Enlist and explain the effects of water pollution.	**07**
		OR	
Q.5	**(a)**	Write a note on "Control of Oil pollution".	**07**
	(b)	Define 'Absorption'. Explain factors affecting absorption used in waste water treatment.	**07**

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