Seat No.:	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER- V • EXAMINATION – WINTER 2016

Subject Name: Physico-chemical Treatment Technologies		Name: Physico-chemical Treatment Technologies	Date: 19/11/2016	
	me: 1 tructio	0:30AM - 01:00PM Total Marks: 7	70	
ms	1. 2. 3.			
Q.1	(a) (b)	Enlist the important contaminants and give its environmental significance With the help of a neat flow diagram explain conventional water treatment plant	07 07	
Q.2	(a) (b)	Explain the following terms: Sustained flow, Minimum hourly flow, Minimum daily flow, peak hourly flow, maximum daily flow, average daily flow Why grit chambers are used? Explain types of grit chambers	07 07	
	<b>(b)</b>	OR Write a short note: Screening	07	
Q.3	(a) (b)	Explain Jar test for optimum coagulant dosage Enlist the design steps involved for a flocculator with all the necessary equations	07 07	
Q.3	(a) (b)	OR With the help of a neat sketch explain interparticle bridging with polymers Explain coagulation theories in detail	07 07	
Q.4	(a) (b)	Write a short note: Settling column analysis for type – 1 suspension Explain the terms: Chemical conditioning, Elutriation <b>OR</b>	07 07	
Q.4	(a) (b)	Write a short note: Disinfection with Chlorine Derive the expression for stokes equation	07 07	
Q.5	(a) (b)	Enlist different types of filters and explain any one in detail with a neat sketch Explain design of sludge drying beds	07 07	
0.5	(a)	OR Write a short note: Sludge digestion	07	
Q.5	(a) (b)	Write a short note: Sludge digestion Explain the purpose of disinfection. Enlist the factors affecting disinfection	07	

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