Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V EXAMINATION - WINTER 2015

	•	t Code: 151303 Date:08/12/2015 t Name: Physico-Chemical Treatment Technologies	
Ti	-	10:30am to 1:00pm Total Marks: 70	
	2	Attempt all questions.Make suitable assumptions wherever necessary.Figures to the right indicate full marks.	
Q.1	(a) (b)	What is screen? Explain purposes and types of screens. Draw neat sketch and explain Conventional Waste-water Treatment Plant.	07 07
Q.2	(a) (b)	Explain various physical and chemical characteristics of water and waste-water. Differentiate between Primary and Secondary treatment.	07 07
	(b)	OR Write a short note on 'Grit chamber'.	07
Q.3	(a) (b)	Enlist the mechanism of coagulation and describe any two. Explain various types of settling phenomena in water and waste-water treatment.	07 07
Q.3	(a) (b)	OR Differentiate between coagulation and flocculation. Write a short note on operational difficulties in Rapid Sand filter.	07 07
Q.4	(a) (b)	Explain the construction and working of Slow sand filter with neat sketch. Write a short note on 'Tube Settlers'.	07 07
Q.4	` ′	OR Derive the Stokes law for determining settling velocity of discrete particles. Explain the construction and working of Rapid sand filter with neat sketch.	07 07
Q.5	(a) (b)	Enlist the factors which affect chlorination. Describe the sources and characteristics of sludge generated in conventional waste-water treatment plant.	07 07
Q.5	(a) (b)	Enlist and explain the disinfectants used for water treatment. Describe the methods normally used to process the sludge before its final disposal.	07 07
