Seat No.:	Enrolment No
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GUJARAT TECHNOLOGICAL UNIVERSITY ME- SEMESTER II— EXAMINATION – SUMMER 2015

Su	bject	Code: 2721702 Date: 28/05/20	15
Subject Name: Industrial Water and Wastewater Treatment Time: 2:30 PM - 5:00 PM Instructions: Total Marks		70	
	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	Explain treatment of water for cooling . Explain what do you understand by cost of Pollution Control	07 07
Q.2	(a)	What do you understand by waste volume reduction and waste strength	07
	(b)	reduction? Explain in detail. What do you understand by equalization and proportioning of industrial wastewater in context with industrial wastewater treatment. OR	07
	(b)	Write a short note on neutralization.	07
Q.3	(a) (b)	Define Blow down and explain internal treatment for wastewater from boiler. Explain the difference between criteria and standards for disposal into different sinks. Enlist standards of any five pollutants in two different sinks. OR	07 07
Q.3	(a)	What do you understand by zero discharge for Industrial wastewaters? Explain in detail.	07
	(b)	Write a short note on Reverse Osmosis.	07
Q.4	(a)	Enlist various methods for conversion of saline Water. With a neat diagram explain Electro dialysis.	07
	(b)	Write various design considerations for CETP. OR	07
Q.4	(a) (b)	Write a short note on treatment and disposal of Sludge solids. Write short note on joint treatment of industrial and domestic waste.	07 07
Q.5	(a)	Explain in detail origin, characteristics and treatment of pharmaceutical wastewater.	07
	(b)	Explain in detail origin, characteristics and treatment of Textile Industry wastewater.	07
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Q.5	(a)	Explain in detail origin, characteristics and treatment of dairy Industry wastewater.	07
	(b)	Explain in detail origin, characteristics and treatment of pulp and paper Industry wastewater.	07
