Seat Enrolment No: No:----

GUJARAT TECHNOLOGICAL UNIVERSITY BE SEMESTER- 7th EXAMINATION - SUMMER 2015

Subject code: 171301 Date: 01/05/2015 Subject Name: Advanced Waste Water Treatment Technology Time: 02.30PM-05.00PM Total Marks: 70

Instructions:

2. Mal	empt all questions. The second of the secon	
Q-1	(a) Enlist & Explain under which Circumstances, under which Advanced Waste Water treatment becomes necessary.	07
	(b) Enlist & Explain the Factors Affecting Adsorption.	07
Q-2	(a) Write a short note on Gravity Thickener.	07
	(b) Write a short note on Wet Lands.	07
	OR	
	(b) Explain the Applications of membrane Technologies in Waste Water Treatment.	07
Q-3	(a) Enlist the Advantages & Disadvantages of "Ultra filtration" & "Microfiltration".	07
	(b) With the help of neat sketch Explain the Process of Resin regeneration.	07
	OR	
Q-3	(a) With the help of neat Sketch Explain the concept of "RO" & Electro Dialysis.	07
	(b) Enlist the Sludge Dewatering Methods & Explain any one.	07
Q-4	(a) Explain the difference between 'Tertiary Treatment' & Advanced Waste Water Treatment' with the help of a net Sketch.	07
	(b) Highlight the importance of Adsorption Isotherms stating their application.	07
	OR	
Q-4	(a) Differentiate Between	07
	(1) Maintenance Cleaning & Recovery Cleaning	
	(2) External MBR & Immersed MBR (b) What is 'Advanced Oxidation' process? Enlist & Explain the	07
	different advanced oxidation processes for treatment of concentrated waste water.	07
Q-5	(a) Explain the Chemical Precipitation methods for Phosphorus method for the Phosphorus removal.	07

	(b) Explain the mechanism involved in the softening of Non carbonate hardness of magnesium.	07
	OR	
Q-5	(a) Enlist the Different Processes for biological nitrogen removal & Explain any one in detail.	07
	(b) Enlist & indicate the Suitability of different Chemical Precipitation Softening methods.	07