Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III • EXAMINATION – WINTER 2013

Su Tir	bject	Code: 133505 Name: Chemistry for Environmental Science & Technology 2.30 pm - 05.00 pm Total Marks: 70 ns:	
	1. 2. 3.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	Explain the importance of determination of solid in sewage. How do you determine the suspended solids in a given sample of waste water?	07
	(b)	Define environment? Describe the four major layers of the atmosphere with suitable diagram.	07
Q.2	(a)	Define distilled and dematerialized water. Discuss the various methods of preparing distilled water.	07
	(b)	Define- Atomic, molecular and equivalent weight with their relationship. Discuss the standardization of solution with primary standards. OR	07
	(b)	What is sustainable development? Briefly describe the key aspects of sustainable development.	07
Q.3	(a)	What do you mean by volumetric and gravimetric analysis? Discuss the basic requirements and procedure for volumetric and gravimetric analysis.	07
	(b)	Briefly discuss the concept of neutralization in chemical reaction. Also give its applications in environmental chemistry. OR	07
Q.3	(a)	Why do you estimate the purity of chemicals? Discuss any two methods to estimate the purity of chemicals.	07
	(b)	Briefly describe the measurement of NO_x in ambient air.	07
Q.4	(a)	Define conductivity? Briefly explain the working principle of conductivity meter.	07
	(b)	Write short notes on: i) BOD	02
		ii) Apparent & True color	02
		iii) Cause of color in water OR	03
Q.4	(a)	Discuss the physical, chemical and biological characteristics of waste water in brief.	07
	(b)	Define Air pollution? Describe the measurement of particulate matter in ambient air.	07
Q.5	(a)	What is used as the standard unit of color? How will you measure color in waste water sample?	07
	(b)	What do you mean by hard water? Discuss its types and measurement of hardness in water.	07
0.5		OR	Δ.
Q.5	(a)	Define the term pH. Also give its basic concept and measurement in sample of water	07
	(b)	Discuss the Winkler test for measurement of dissolved oxygen in a sample of water.	07
