Seat No.:	Enrolment No

GUJARAT TECHNOLOGICAL UNIVERSITY

		BE - SEMESTER-III(OLD) • EXAMINATION – WINTER 2016	
Su	bject	Code:133505 Date:30/12/201	16
	-	Name: Chemistry for Environmental Science & Technology	
Tiı	me:10	2:30 AM to 01:00 PM Total Marks:	70
Inst	truction		
		Attempt all questions.	
	3.	Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	Define Solid. What is the environmental significance of solids in wastewater? What are the discharge limits of solids in waste water?	07
	(b)	Define Ecology? Briefly explain the various component of ecosystem	07
Q.2	(a)	Define environment. Briefly describe the components of atmosphere with suitable diagram	07
	(b)	Define Food Chain, Eco Web and Ecosystem? Explain any one method to evaluate energy flow in ecosystem	07
	(b)	What is sustainable development? Briefly describe the key aspects of sustainable development.	07
Q.3	(a)	Discuss the following: a) Volumetric Analysis b) Distilled and dematerialized waters c) Redox Titration d) Co-agulation 	1.5 1.5 02 02
	(b)	Briefly describe the measurement of SO_x in ambient air. 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)	Discuss the physical and chemical characteristics of waste water in brief.	07
Q.4	(a)	Define conductivity? Briefly explain the working principle and procedure of conductivity meter.	07
	(b)	Write short notes on: i) Measurement of Sodium concentration in wastewater ii) Apparent & True color iii) Nitrate	02 02 03

Q.4	(a)	Briefly discuss the concept of neutralization in chemical reaction. Also give its applications in environmental chemistry.	07
	(b)	What do you mean by hard water? Discuss its types and measurement of hardness in water.	07
Q.5	(a)	What is the importance of DO in water? Discuss any one method to measure dissolved oxygen in water.	07
	(b)	Define Air pollution? Explain the working of high volume sampler to collect the particulate matter in ambient air.	07
Q.5	(a)	OR Define the term pH. Also give its basic concept and measurement in sample of water	07
	(b)	How the sulfate and phosphate are measured in waste water. Explain with suitable diagram.	07
