

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– III (New) EXAMINATION – WINTER 2019****Subject Code: 2133505****Date: 3/12/2019****Subject Name: Chemistry for Environmental Science and Technology****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Define the molecular polarity	03
	(b) Explain Le-Chatelier's principle with example.	04
	(c) Discuss the segments of Environment.	07
Q.2	(a) Define pH value. Explain the working principle of pH meter.	03
	(b) Classify and enlist the characteristics of wastewater.	04
	(c) Define atmosphere. Draw and explain temperature Vs altitude profile of atmosphere.	07
	OR	
	(c) Explain working principle of flame photometer with suitable diagram	07
Q.3	(a) Write a short note on defluoridation.	03
	(b) What basic aspects an environmental engineer should know about biological? Enlist types of pathogens found in wastewater.	04
	(c) Discuss the indicator organisms for the measurement of biological characteristics.	07
	OR	
Q.3	(a) Write down the name of greenhouse gases.	03
	(b) Discuss the measurement of SO _x in air sample.	04
	(c) Explain the working of TOC analyzer.	07
Q.4	(a) Explain the working principle of spectrophotometer.	03
	(b) Write a short note on photochemical smog.	04
	(c) Explain the formation and depletion of ozone layer.	07
	OR	
Q.4	(a) Define hardness. Discuss its classification.	03
	(b) Explain the working principle of conductivity meter.	04
	(c) Explain the greenhouse gas effect with suitable diagram.	07
Q.5	(a) What are the sources of environmental toxicity?	03
	(b) Write a short note on water softening.	04
	(c) Discuss the measurement of SPM.	07
	OR	
Q.5	(a) Define coagulation. Enlist coagulant used in wastewater treatment.	03
	(b) Discuss the nitrate content in wastewater.	04
	(c) Explain the measurement of suspended solids in wastewater sample.	07
