GUJARAT TECHNOLOGICAL UNIVERSI	TV
Seat No.: Enrolment No.	).

BE - SEMESTER-III(New) • EXAMINATION – WINTER 2016 Subject Code:2133505 Date:06/01/2017

**Subject Name: Chemistry for Environmental Science and Technology** 

Time:10:30 AM to 01:00 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		Define the followings:	14
	1	Environment	
	2	Atmosphere	
	3	Transpiration	
	4	Sublimation	
	5	Acid rain	
	6	Air pollution	
	7	Ozone layer	
	8	Spectrophotometry	
	9	Total solids	
	10	Conductivity	
	11	Disinfection	
	12	Coagulation	
	13	Global warming	
	14	Oxidation process	
<b>Q.2</b>	(a)	Write a short note on wastewater treatment.	03
	<b>(b)</b>	Enlist all the physical, chemical and biological characteristics of	04
		wastewater.	
	<b>(c)</b>	Explain the solids with respect to its types and nature in wastewater.	07
		OR	
	(c)	Explain the hydrological cycle with a suitable diagram in brief.	07
Q.3	(a)		03
	<b>(b)</b>	Discuss the taste &odour and temperature characteristic of	04
		wastewater.	0=
	(c)	What do you understand by colour in wastewater? Discuss it	07
		sources, objection and measurementin a given sample of	
		wastewater.	
0.2	(0)	OR	02
Q.3	(a)	1 0	03
	<b>(b)</b>	depletion of ozone layer.  Explain the working principle and various components of a flame	04
	(D)	photometer?	V <del>1</del>
	(c)	What do you mean by turbidity in solution? Discuss the working	07
	(C)	principle and uses of turbidity meter.	U7
<b>Q.4</b>	(a)	Explain the working of TOC analyzer.	03
ų.	(b)	•	04
	(6)	wastewater analysis.	04
	(c)	Discuss the basic concept of spectrophotometer and its uses in	07
	(-)	water/wastewater analysis.	<b>V</b> ,
		OR	
Q.4	(a)		03
	(·-)	down the effects of photochemical smog.	

	<b>(b)</b>	Explain the structure of atmosphere.	04
	<b>(c)</b>	What are the factors that affect the conductivity of a water sample?	07
		Explain the principle of conductivity and its measurement.	
Q.5	(a)	Why defluoridation is required. Explain any one method of	03
	` ,	defluorodation.	
	<b>(b)</b>	<i>C</i> ;	04
		environmental toxicology? Explain briefly.	
	<b>(c)</b>	Why coagulant are used in the sewage treatment? Name a few	07
		coagulant used. Explain the coagulation process in wastewater	
		treatment.	
		OR	
Q.5	(a)	Explain the bioaccumulation and bio magnification with example.	03
_	<b>(b)</b>	Enlist the various methods of disinfection. Explain chlorination in	04
	(-)	brief.	
	<b>(c)</b>	Define soil. Explain the structure and components of the soil.	07

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