

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III (NEW) - EXAMINATION – SUMMER 2017****Subject Code: 2133505****Date: 05/06/2017****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	Short Questions	14
	1 Define Photochemical Smog.	
	2 Name any one greenhouse gas.	
	3 Write full form of TDS & TSS	
	4 List out the types of sedimentation tanks.	
	5 Define hydrological cycle.	
	6 Define Bioaccumulation.	
	7 Define permanent hardness.	
	8 Name tests used for the estimation of residual chlorine.	
	9 What should be the limit of DO in discharged effluent?	
	10 Write full form of AAS	
	11 Maximum permissible limit of fluoride in drinking water is _____ mg/l.	
	12 The pH of acid rain is below _____.	
	13 Name a coagulant which is added to wastewater if the pH of water is acidic.	
	14 What do you mean by pre chlorination?	
Q.2	(a) Write a note on photochemical smog.	03
	(b) Explain breakpoint chlorination and post chlorination.	04
	(c) Explain the method of measurement of heavy metals in a wastewater sample.	07
	OR	
	(c) What do you understand by bio accumulation and bio magnification? Explain in detail.	07
Q.3	(a) Explain the techniques for the removal of iron and manganese from the wastewater.	03
	(b) What do you mean by RSPM? Explain its measurement techniques.	04
	(c) Explain the method of measurement of hardness in a wastewater sample.	07
	OR	
Q.3	(a) Explain Most probable number test for a water sample.	03
	(b) Explain the different tests used for estimation of residual chlorine in water.	04
	(c) Explain the construction and working of TDS meter in detail.	07
Q.4	(a) What do you mean by acid rain? Explain its phenomena.	03
	(b) Explain the terms greenhouse effect.	04
	(c) Explain the different types of impurities present in wastewater	07
	OR	
Q.4	(a) Write a note on Global Warming along with its effects.	03
	(b) Explain hydrological cycle with a neat flow diagram.	04

- (c) Explain the method of measurement of Chloride in a wastewater sample. **07**
- Q.5** (a) Explain in brief the methods used to remove permanent hardness from wastewater. **03**
- (b) Draw a neat sketch of rectangular sedimentation tank. **04**
- (c) Explain the construction and working of flame photometer in detail. **07**
- OR**
- Q.5** (a) Write a note on Environmental toxicity. **03**
- (b) Write a note on different types of impurities present in soil. **04**
- (c) Explain the method of measurement of Color in a wastewater sample. **07**
