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Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-III(New) EXAMINATION - SUMMER 2016** 

•		Code:2133505 Date:27/05	
Subj	ect	Name: Chemistry for Environmental Science and Technology	7
Time	e:10	0:30 AM to 01:00 PM Total Ma	rks: 70
Instru	ıctio	ns:	
		Attempt all questions.	
		Make suitable assumptions wherever necessary.	
	3.	Figures to the right indicate full marks.	MARKS
<b>Q.1</b>		Short Questions	14
	1	Define: Hydrological Cycle.	
	2	Name any two coagulants.	
	3	Write full form of TDS and TSS.	
	4	Name any one Greenhouse gas.	
	5	Write Stokes for the velocity of settling.	
	6	Name tests used for the estimation of Residual Chlorine.	
	7	List out the types of sedimentation tanks.	
	8	Define: Break point Chlorination	
	9	Rain is considered as acid rain if the pH of the rain water is less than	
		·	
	10	What do you mean by Photochemical smog?	
	11	Name the two types of hardness.	
	12	Define Biomagnification.	
	13	Estimation of heavy metals in waste water can be done by	
		Instrument.	
	14	To estimate Dissolved oxygen in wastewater sample test is	
		used.	
Q.2	(a)	What is acid rain? Explain the mechanism of formation of acid rain	03
<b>C</b>	(b)		04
	(c)	· · · · · · · · · · · · · · · · · · ·	07
	(-)	OR	
	<b>(c)</b>	The limit of Residual chlorine in wastewater sample is Also	07
	` ´	Explain the different types of test used for the estimation of residual	
		chlorine in wastewater sample.	
Q.3	(a)	List out the different sources of Environmental Toxicity.	03
	<b>(b)</b>	What do you understand by Biomagnification and bioaccumulation?	04
		Explain with an example.	
	<b>(c)</b>	Explain the terms Greenhouse effect & Global Warming in detail.	07
		OR	
<b>Q.3</b>	(a)	· · · · · · · · · · · · · · · · · · ·	03
		in an air sample.	
	<b>(b)</b>		04
		manganese form wastewater.	
	<b>(c)</b>	Flame photometer is used for the measurement of which particles?	07
		Explain its working.	
<b>Q.4</b>	(a)	Define: a) Sterilization b) Chlorination c) Pre chlorination	03
	<b>(b)</b>	Explain the method of measurement of Total Organic Carbon in a	04
	()	wastewater sample.	

	(c)	Explain the method of estimation of Dissolved oxygen in a wastewater sample.	07
		OR	
<b>Q.4</b>	(a)	Explain total count test for water sample.	03
	<b>(b)</b>	What is the unit of colour? Explain the method of estimation of colour in wastewater sample.	04
	<b>(c)</b>	Explain the method of estimation of Hardness in wastewater sample.	07
Q.5	(a)	Explain the mechanism of formation and depletion of ozone layer.	03
	<b>(b)</b>	Explain in brief "Zeolite" process for the removal of permanent hardness from wastewater sample.	04
	<b>(c)</b>	Explain the different types of impurities present in wastewater.	07
		OR	
Q.5	(a)	Define Temporary & Permanent Hardness	03
	<b>(b)</b>	Draw a neat sketch of a rectangular sedimentation tank.	04
	(c)	What is the scale of pH? Explain the construction and working of pH meter in detail.	07

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