

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER- V (New) EXAMINATION – WINTER 2019****Subject Code: 2153508****Date: 21/11/2019****Subject Name: Environmental Management-I****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
<b>Q.1</b>	(a) Define: Hazardous Waste, Manifest and Osmosis.	<b>03</b>
	(b) What are the five P's required in implementing Integrated Waste management.	<b>04</b>
	(c) How ISO 14001-2004 can be a good tool for EMS?	<b>07</b>
<b>Q.2</b>	(a) Write a note on Illegal Traffic.	<b>03</b>
	(b) What are the characteristics of hazardous waste?	<b>04</b>
	(c) Write a Note on "Environmental Audit".	<b>07</b>
	<b>OR</b>	
	(c) Explain in detail the Objective and Scope of Environmental Audit.	<b>07</b>
<b>Q.3</b>	(a) Discuss Activity & Liability audit.	<b>03</b>
	(b) Write Note on REACH.	<b>04</b>
	(c) Describe basic mechanism of Bio-Remediation with chart.	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) With a help of neat sketch explain hydrological cycle in brief.	<b>03</b>
	(b) What do you mean by Osmosis? Explain the phenomena of Reverse osmosis in brief.	<b>04</b>
	(c) Explain physical & chemical Treatment of Hazardous waste.	<b>07</b>
<b>Q.4</b>	(a) What is third party environmental audit?	<b>03</b>
	(b) Write any five differences between ISO 14001 & OHSAS 18001.	<b>04</b>
	(c) Explain "Life Cycle Assessment" in detail.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) Explain PDCA.	<b>03</b>
	(b) Explain water audit.	<b>04</b>
	(c) What do you understand by term ZLD? Explain ZLD for Thermal power station with a neat flow sheet.	<b>07</b>
<b>Q.5</b>	(a) Explain energy audit.	<b>03</b>
	(b) List out the types of evaporators. Explain any one in detail.	<b>04</b>
	(c) Explain the hazardous waste management techniques in detail.	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) What is blue angle program in Germany?	<b>03</b>
	(b) Explain In-situ Bioremediation.	<b>04</b>
	(c) What do you mean by precipitation? List out the types of precipitation and explain any one in brief.	<b>07</b>

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