

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2020****Subject Code:2150603****Date:03/02/2021****Subject Name:Environmental Engineering****Time:10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		<b>MARKS</b>
<b>Q.1</b>	(a) What is potable water? What are the properties of potable water?	<b>03</b>
	(b) Give the characteristics of water obtain from ground and surface water sources.	<b>04</b>
	(c) Give IS standards for drinking water in India.	<b>07</b>
<b>Q.2</b>	(a) Explain in brief “Eutrophication”.	<b>03</b>
	(b) Write short note on “Indicator organism”.	<b>04</b>
	(c) Explain the different zones of pollution of a polluted stream.	<b>07</b>
<b>Q.3</b>	(a) Explain working of bell type flushing cistern with sketch.	<b>03</b>
	(b) Define the following terms : (1)Sewage,(2) Rainwater pipe, (3)Waste pipe and (4) Traps.	<b>04</b>
	(c) State the principles of house drainage system.	<b>07</b>
<b>Q.4</b>	(a) Explain growth pattern of bacteria based upon the number.	<b>03</b>
	(b) Write a short note on sewage sickness.	<b>04</b>
	(c) Describe sanitary land filling on low lying areas.	<b>07</b>
<b>Q.5</b>	(a) Give the sanitary significance of turbidity and fluoride in water.	<b>03</b>
	(b) Give the composition of air and explain the structure of atmosphere.	<b>04</b>
	(c) Explain the different control measures for noise pollution.	<b>07</b>
<b>Q.6</b>	(a) State and explain classification of solid waste.	<b>03</b>
	(b) Define(i) Rubbish (ii) Composting (iii) COD (iv) Aerosol	<b>04</b>
	(c) The 5 days 30°C BOD of sewage is 250mg/litre. Calculate its 5 days 20°C BOD. Assume the deoxygenation constant at 20°C $K_{D(20^\circ)}$ as 0.1	<b>07</b>
<b>Q.7</b>	(a) Explain with sketch “Two pipe plumbing system”	<b>03</b>
	(b) Write short note on “Plasma Pyrolysis”	<b>04</b>
	(c) Explain the different physical water quality parameter of water.	<b>07</b>
<b>Q.8</b>	(a) Explain the different steps involved in conducting the environmental audits.	<b>03</b>
	(b) What is the role of EIA in sustainable development? Write goals of EIA.	<b>04</b>
	(c) Discuss in brie the different measures which can be used to control air pollution.	<b>07</b>

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