

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- SEMESTER-VII (NEW) EXAMINATION – WINTER 2020****Subject Code:2173513****Date:28/01/2021****Subject Name:Newer waste water treatment systems****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.

**MARKS**

<b>Q.1</b>	(a) Describe Microfiltration.	<b>03</b>
	(b) Describe four steps of Anaerobic Process.	<b>04</b>
	(c) Explain Hydrogen Peroxide/UV process to generate Hydroxyl Radical	<b>07</b>
<b>Q.2</b>	(a) Describe jar test for describing the dose of coagulant.	<b>03</b>
	(b) Explain Electro dialysis.	<b>04</b>
	(c) Describe Application of Ion Exchange for removal of Total Dissolved Solids.	<b>07</b>
<b>Q.3</b>	(a) Define coagulation, flocculation and filtration.	<b>03</b>
	(b) Define sewer, invert, garbage and sewerage.	<b>04</b>
	(c) Explain in details all the three methods of Equalization Tank.	<b>07</b>
<b>Q.4</b>	(a) Describe Imponded reservoir and Infiltration galleries.	<b>03</b>
	(b) Describe unit operations.	<b>04</b>
	(c) Explain in detail Neutralization Tank.	<b>07</b>
<b>Q.5</b>	(a) Describe curb inlets.	<b>03</b>
	(b) Describe Vortex grit chamber.	<b>04</b>
	(c) Explain in detail different types of disinfectants used for wastewater treatment.	<b>07</b>
<b>Q.6</b>	(a) Describe Need of Advanced wastewater Treatment.	<b>03</b>
	(b) Explain classification of screens.	<b>04</b>
	(c) Explain philosophy of wastewater treatment.	<b>07</b>
<b>Q.7</b>	(a) Explain functions of Primary Sedimentation Tank.	<b>03</b>
	(b) Describe filter operation.	<b>04</b>
	(c) Explain in detail adsorption for treatment of wastewater.	<b>07</b>
<b>Q.8</b>	(a) Describe gutter inlets.	<b>03</b>
	(b) Describe secondary treatment with flow chart.	<b>04</b>
	(c) Describe circular sedimentation tank.	<b>07</b>

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