

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2020****Subject Code:3154012****Date:22/01/2021****Subject Name:Infrastrucure Utilities****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) What is duct? Mention factors affecting the duct Designing.	<b>03</b>
	(b) Explain about different types of renewable energy systems.	<b>04</b>
	(c) Explain RFID architecture with its application.	<b>07</b>
<b>Q.2</b>	(a) What is power modulator?	<b>03</b>
	(b) Explain the types of UPS.	<b>04</b>
	(c) Explain different types of Hydro Power Plants with diagrams.	<b>07</b>
<b>Q.3</b>	(a) Safety measures while using Escalators	<b>03</b>
	(b) Explain various types of heat gains in a space from internal and external sources using graphical representation.	<b>04</b>
	(c) Write a short note on installation requirement of firefighting system for buildings.	<b>07</b>
<b>Q.4</b>	(a) write any three: Dry bulb temperature, Wet bulb temperature, Dew point temperature, Relative humidity, specific humidity	<b>03</b>
	(b) Explain water sprinkler system for firefighting.	<b>04</b>
	(c) What is Air conditioning? Explain Vapor compression cycle with sketch.	<b>07</b>
<b>Q.5</b>	(a) Define Double Pipe Stack System	<b>03</b>
	(b) Explain the difference between the Single Stack System and Single Pipe System.	<b>04</b>
	(c) Enlist Water Distribution system and explain any one in detail with sketch.	<b>07</b>
<b>Q.6</b>	(a) Enlist different types of pipe system being used for plumbing of house	<b>03</b>
	(b) Describe Dead End System of pipe network distribution system for water supply with its advantages and disadvantages.	<b>04</b>
	(c) Explain typical house plumbing system with neat sketch	<b>07</b>
<b>Q.7</b>	(a) Differentiate between switch and hub.	<b>03</b>

- (b) Give Comparison among Circuit switching, Packet switching and Message Switching. **04**  
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- (c) Describe five components of data communication with types of data flow in communication. **07**
- Q.8** (a) Define different type of wireless transmission **03**  
(b) Differentiate between star and ring network topology. **04**  
(c) Explain GPS in detail with its functionalities. **07**

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