Seat No.: _____   Enrolment No._____

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
Q.1	(a)	What is duct? Mention factors affecting the duct Designing.	03
	(b)	Explain about different types of renewable energy systems.	04
	(c)	Explain RFID architecture with its application.	07
Q.2	(a)	What is power modulator?	03
	(b)	Explain the types of UPS.	04
	(c)	Explain different types of Hydro Power Plants with diagrams.	07
Q.3	(a)	Safety measures while using Escalators	03
	(b)	Explain various types of heat gains in a space from internal and external sources using graphical representation.	04
	(c)	Write a short note on installation requirement of firefighting system for buildings.	07
Q.4	(a)	write any three: Dry bulb temperature, Wet bulb temperature, Dew point temperature, Relative humidity, specific humidity	03
	(b)	Explain water sprinkler system for firefighting.	04
	(c)	What is Air conditioning? Explain Vapor compression cycle with sketch.	07
Q.5	(a)	Define Double Pipe Stack System	03
	(b)	Explain the difference between the Single Stack System and Single Pipe System.	04
	(c)	Enlist Water Distribution system and explain any one in detail with sketch.	07
Q.6	(a)	Enlist different types of pipe system being used for plumbing of house	03
	(b)	Describe Dead End System of pipe network distribution system for water supply with its advantages and dis-advantages.	04
	(c)	Explain typical house plumbing system with neat sketch	07
Q.7	(a)	Differentiate between switch and hub.	03

	(b)	Give Comparison among Circuit switching, Packet switching and Message Switching.	**04**
	(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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