

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER- V EXAMINATION-SUMMER 2023****Subject Code: 3154012****Date: 23/06/2023****Subject Name: Infrastrucure Utilities****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Briefly describe 'Double Pipe Stack System'.	03
	(b) Describe Power Modulator.	04
	(c) Explain fire triangle and different firefighting system for buildings.	07
Q.2	(a) What are the advantages of computer network?	03
	(b) Differentiate between open loop and closed loop system.	04
	(c) Explain different types of Hydro Electric Power Plants with diagrams.	07
	OR	
	(c) Define air-conditioning. Explain vapor compression refrigeration system.	07
Q.3	(a) State various safety measures required while using Escalators.	03
	(b) Discuss the types of heat gains of building.	04
	(c) Write a short note on Mechanical Ventilation System in buildings.	07
	OR	
Q.3	(a) State the types of ducts.	03
	(b) Discuss the cost estimation of firefighting system.	04
	(c) Write a short note on (i) Building Lifts, (ii) Escalators.	07
Q.4	(a) What are the functions & types of distribution reservoirs?	03
	(b) Describe Dead End System of pipe network distribution system for water supply with its advantages and disadvantages.	04
	(c) Draw pipe network system & sewer system of ground floor plus first floor of a bungalow. Discuss the important points to be executed.	07
	OR	
Q.4	(a) Briefly explain peer-to-peer and client server network.	03
	(b) Describe basic Home automation system.	04
	(c) Explain RFID architecture in detail.	07
Q.5	(a) What is the difference between AC & DC power supply?	03
	(b) Explain circuit switching and message switching.	04
	(c) Explain GPS and different GPS segment in detail.	07
	OR	
Q.5	(a) How would you estimate the power requirement of residential building?	03
	(b) Describe different methods of underground power distribution.	04
	(c) With diagram explain different types of UPS systems.	07
