

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2023****Subject Code:3163212****Date:10-07-2023****Subject Name:IT Infrastructure and Utilities****Time:10:30 AM TO 01:00 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) Explain IOT Standards in Details.	03
	(b) What is Real Time Operating Systems ((RTOS)? Explain in Details.	04
	(c) Which are the characteristics of IoT based application? List and Explain it.	07
Q.2	(a) Discuss Augmented reality with its applications.	03
	(b) Explain smoke sensor in Details.	04
	(c) Explain different type of output devices required in AR and VR.	07
OR		
	(c) Discuss AR applications in navigation.	07
Q.3	(a) Define Following: 1.DAS 2.NAS 3.SAN	03
	(b) What is Tier-1, Tier-2, and Tier 3 types of data center?	04
	(c) Discuss the case study on “The Cisco Virtualized Multi-tenant Data Center (CVD)”.	07
OR		
Q.3	(a) Define IoT. How it can be helpful in healthcare sector?	03
	(b) Explain different types of pressure sensor.	04
	(c) Which are the different components of IoT? Explain each Component in detail.	07
Q.4	(a) Write about role of artificial intelligence in IoT based applications.	03
	(b) Explain Smart grid infrastructure in detail.	04
	(c) What is MQTT? Explain its components with suitable example.	07
OR		
Q.4	(a) Differentiate between augmented reality and virtual reality.	03
	(b) Discuss the case study on Smart Traffic System.	04
	(c) Explain Application of VR in Digital Entertainment.	07
Q.5	(a) What are the design issues of real time operating systems?	03
	(b) State the difference between Marker-based and Marker-less Augmented Reality.	04
	(c) What are the challenges in IoT? Explain each of them in detail.	07
OR		
Q.5	(a) Draw IoT protocol stack with different layers.	03
	(b) Explain motion trackers and motion capture technologies for tracking?	04
	(c) Discuss case study on IoT in Indian Scenario: Aadhaar	07
