

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
Bachelor of Engineering - SEMESTER - VI EXAMINATION - SUMMER 2025

Subject Code: 116AI01

Date: 10-06-2025

Subject Name: IoT Networking technologies and Security

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.**

	Marks
Q.1 (a) List out 6 different application areas of IoT.	03
(b) Compare and contrast IoT with WSN.	04
(c) Describe the characteristics of IoT and discuss the challenges associated with securing IoT devices.	07
Q.2 (a) Differentiate between AMQP and MQTT protocol.	03
(b) Explain the architecture of a typical IoT system.	04
(c) List out various messaging protocols and explain any one in detail.	07
OR	
(c) List out various transport layer protocols and explain any one in detail.	07
Q.3 (a) Why is security needed in IoT systems?	03
(b) Discuss the concept of smart grid. Analyze various security issues related to the same.	04
(c) Explain the concept of smart home with their security and privacy issues.	07
OR	
(a) What is BYOD?	03
(b) What do you mean by connected vehicles? Analyze various security issues related to the same.	04
(c) Explain the concept of mobile healthcare with their security and privacy issues.	07
Q.4 (a) Explain in brief about privacy leakage issues in SDN.	03
(b) what are the merits and demerits of SDN?	04
(c) Draw and explain in detail SDN architecture.	07
OR	
(a) Explain in brief about security issues in SDN.	03
(b) Differentiate SDN and Traditional Networking.	04

(c) What is SDN? Why is it required? Explain Data Plane and Control Plane in SDN with suitable diagram. 07

Q.5 (a) Compare UDP with TCP. 03

(b) Give atleast 4 differences between the CPS and IoT. 04

(c) Explain in detail the concept of CPS including its platform components. 07

OR

(a) Analyze briefly the strategies for secure deployment of CPS. 03

(b) What do you mean by intelligent CPS? Explain in brief. 04

(c) What are various issues in the implementation of the CPS? Describe each one in brief. 07
