

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2024**

**Subject Code:3160716**

**Date:20-05-2024**

**Subject Name:IOT and applications**

**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.**

	<b>MARKS</b>
<b>Q.1</b> (a) Explain Sensor interfacing.	<b>03</b>
(b) Explain the Characteristics of IoT.	<b>04</b>
(c) Explain challenges of IoT.	<b>07</b>
<b>Q.2</b> (a) What is IP addressing?	<b>03</b>
(b) Compare IPv4 and IPv6 in brief.	<b>04</b>
(c) Explain various levels of IoT.	<b>07</b>
<b>OR</b>	
(c) List security issues and needs in IoT. Justify the answer.	<b>07</b>
<b>Q.3</b> (a) Explain IoT and cyber physical system.	<b>03</b>
(b) Explain CoAP. List the key features of CoAP.	<b>04</b>
(c) Explain with diagram IPv6 header format	<b>07</b>
<b>OR</b>	
<b>Q.3</b> (a) List and explain cloud components.	<b>03</b>
(b) Explain the brain in an IoT device.	<b>04</b>
(c) Explain with diagram IPv4 header format	<b>07</b>
<b>Q.4</b> (a) What is Messaging protocols.	<b>03</b>
(b) Discuss Security in cloud.	<b>04</b>
(c) Compare IoT and cloud.	<b>07</b>
<b>OR</b>	
<b>Q.4</b> (a) Explain Warehouse application with IoT.	<b>03</b>
(b) Explain CSPR in ARM.	<b>04</b>
(c) Discuss various application of IoT.	<b>07</b>
<b>Q.5</b> (a) Explain Arduino in brief.	<b>03</b>
(b) What does the future hold for smart home technology?	<b>04</b>
(c) Draw and explain IoT based collision impact measuring system architecture.	<b>07</b>
<b>OR</b>	
<b>Q.5</b> (a) Explain in brief future factory concepts	<b>03</b>
(b) Explain Raspberry Pi.	<b>04</b>
(c) What risks do insecure IoT devices bring to privacy and security?	<b>07</b>

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