

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE – SEMESTER- VII EXAMINATION-SUMMER 2023****Subject Code: 3171108****Date: 23/06/2023****Subject Name: Internet of Things****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.

- Q.1** (a) Define IOT. Write the Applications of IOT. **03**  
 (b) Explain IOT Protocols. **04**  
 (c) Explain End to End IOT Architecture in detail. **07**
- Q.2** (a) Describe Bluetooth and BLE. **03**  
 (b) Write Various characteristics of IOT. **04**  
 (c) Write about IOT Level – 3 and IOT Level – 4. **07**
- OR**
- (b) Discuss Difference between IOT and M2M. **07**
- Q.3** (a) Write functionality of XMPP. **03**  
 (b) Define types and configuration of gateways. **04**  
 (c) Explain Message Queue Telemetry Transport Protocol (MQTT). **07**
- OR**
- Q.3** (a) Write the difference between private cloud and public cloud. **03**  
 (b) What is REST? Write various methods of REST. **04**  
 (c) Explain SDN (Software Define Networking). **07**
- Q.4** (a) Define Sensors, Actuators, and Transducers. **03**  
 (b) Write Names of Protocols that are used at Transport layer protocols of IOT. **04**  
 (c) Explain Constrained Application Protocol (COAP) in detail. **07**
- OR**
- Q.4** (a) What is Raspberry Pi? **03**  
 (b) Write Names of Protocols that are used at Link Layer of IOT. **04**  
 (c) Discuss DDS protocol in Detail. **07**
- Q.5** (a) Define Cloud Computing. **03**  
 (b) Discuss Zigbee. **04**  
 (c) Explain Challenges in IOT Security. **07**
- OR**
- Q.5** (a) Write the difference between private cloud and public cloud. **03**  
 (b) Explain Architecture, Layout and Interface of Raspberry Pi. **04**  
 (c) Explain Service Models of Cloud Computing in detail. **07**

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