

**GUJARAT TECHNOLOGICAL UNIVERSITY****ME – SEMESTER – II (New)– EXAMINATION – WINTER-2019****Subject Code: 3722320****Date: 21-11-2019****Subject Name: IoT Application and Communication Protocol****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.

- Q.1** (a) Explain different Characteristics of IoT. **07**  
(b) Explain TCP/IP vs IoT protocol stack. **07**
- Q.2** (a) Explain layered architecture of IoT. **07**  
(b) Discuss IoT Application layer Protocols with suitable example. **07**
- OR**
- (b) Explain oneM2M IoT Standardized Architecture with suitable diagram **07**
- Q.3** (a) What is Internet of Things (IoT)? What are components required to design IoT Device and which device we called IoT device explain with example. **07**  
(b) Discuss WirelessHART Architecture with suitable diagram. **07**
- OR**
- Q.3** (a) What is relation between WSN and IoT. Explain with example. **07**  
(b) Discuss IoT Data Link layer Protocol with suitable example. **07**
- Q.4** (a) Discuss Micro-Electro-Mechanical Systems with suitable example. **07**  
(b) Explain MQTT Architecture with suitable diagram. **07**
- OR**
- Q.4** (a) Discuss Security in IoT Protocol. **07**  
(b) Develop City Automation small Application. **07**
- Q.5** (a) Discuss IoT Challenges with suitable example. **07**  
(b) Explain working of Raspberry Pi. **07**
- OR**
- Q.5** (a) Develop Home Automation small Application. **07**  
(b) What are different business and research opportunities for IoT? **07**

\*\*\*\*\*