

**Duration: 3Hrs**

**Marks:80**

**Note**

- 1. Question No. 1 is compulsory**
- 2. Attempt any 3 questions from remaining five question**
- 3. Figures to the right indicate full marks**

**Q.1 Solve any 4 out of 6**

**(20)**

- 1) Explain features (constraints) of REST Architectural style of designing Software components. (5)
- 2) Compare HTTP and CoAP protocol. (5)
- 3) Features of SQL (5)
- 4) Explain different types of OLTP (5)
- 5) Compare Iot and M2M with suitable examples (5)
- 6) What are characteristics of IoT? (5)

**Q.2 a) Explain various sensors and actuators in IoT based systems**

**(10)**

- b) Design and Draw process and domain model for IoT based car parking system. (10)

**Q.3 a) What are data stores and different ways of organizing data?**

**(10)**

- b) What is cloud computing? Explain various features of cloud computing. (10)

**Q.4 a) List the main features of Beaglebone and PcDUINO**

**(10)**

- b) Explain various types of transactions processing with an example? (10)

**Q.5 a) Explain the MQTT protocol with an example highlighting the functions Of broker.**

**(10)**

- b) Draw and explain level 1 IOT design with an example? (10)

**Q.6 Write Short notes on any 4 out of 5**

**(20)**

- a. LoRA
- b. Various applications of IOT with example
- c. Various cloud models
- d. AMQP protocol
- e. Tomography and layered attacker model in IoT

\*\*\*\*\*