

Roll No. ....

Total Pages : 3

CMTE/D-24

**24076**

## CLOUD COMPUTING AND IOT

Paper-MT-CSE-20-31(ii)

Time Allowed : 3 Hours]

[Maximum Marks : 75

**Note :** Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

### Compulsory Question

1. Answer the following questions :  $5 \times 3 = 15$ 
  - (a) Mention any three application of Cloud computing.
  - (b) Define the Virtual machine sizing.
  - (c) List any three differences between Public cloud and Private cloud.
  - (d) Which IoT technologies can be used for home automation?
  - (e) What is Hypervisor?

### UNIT-I

2. (a) Explain scalability in cloud computing. Describe the following strategy of scaling :  
  - (i) Proactive scaling.8

- (ii) Reactive scaling.
  - (b) Describe life cycle of SLA. 7
3. (a) Discuss the following Service Delivery Models of Cloud, with an example for each : 8
    - (i) Platform as a Service (PaaS).
    - (ii) Infrastructure as a Service (IaaS).
  - (b) Explain the various types of Virtualization in cloud computing. 7

### UNIT-II

4. (a) Explain the different Database services provided by various Cloud service providers. 8
  - (b) Describe various Security issues in Cloud computing. 7
5. (a) What is a CDN server? Explain the content delivery mechanism in Cloud computing. 8
  - (b) Write a short note on Deployment and Management services. 7

### UNIT-III

6. Explain the major components and applications of IoT. What are the technological issues in RFID IoT system design? 15
7. (a) Write a short note on RF transceiver and RF modules. 7

- (b) Explain four Pillars of IoT and how they are interconnected with each other? 8

#### **UNIT-IV**

8. (a) List the various message communication protocols used for connected devices. Explain any two of them.

8

- (b) How CoAP can be used between devices on the same constrained network? 7

9. (a) Describe the various IoT security vulnerabilities and how to harden your devices to prevent or mitigate them? 8

- (b) How does the MQTT protocol works? 7