

Roll No.

Total Pages : 03

CMCS/M-24

24547

CLOUD COMPUTING AND IoT

Paper : MS-20-44(iii)

Time : Three Hours]

[Maximum Marks : 75

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

1. Answer the following questions in brief : **5×3=15**

- (a) What is cloud computing ? Discuss downside of cloud computing.
- (b) What is DB engine ? Explain in brief.
- (c) What are threats to information in cloud computing ? Explain.
- (d) Distinguish between IoT and M2M.
- (e) What are IoT communication model ? Explain publish-subscribe model.

Unit I

- 2.** (a) What are different service models of cloud computing ? Explain each with suitable examples.

7

- (b) Explain hardware and software enabling technologies of cloud computing. **8**
- 3. (a) What is full virtualization ? Explain its working with suitable diagram along with its advantages and disadvantages. **8**
- (b) Explain CPU and network virtualization in detail. **7**

Unit II

- 4. (a) What is EC2 service ? Explain the key features of EC2. **8**
- (b) What are media services ? Explain any one such service in detail. **7**
- 5. (a) What are identity and access management services ? Explain any one such service in detail. **7**
- (b) What are email services ? Explain any one such service in detail. **8**

Unit III

- 6. (a) What do you mean by IoT ? Explain characteristics of IoT with suitable examples. **7**

- (b) What is IBM's architecture of IoT ? Explain conceptual framework of IoT based on this architecture. **8**
- 7. (a) What is Bluetooth LE ? Explain its working with suitable diagram. **8**
- (b) What are different functions of Gateway at data adaption layer ? Explain them. **7**

Unit IV

- 8. (a) What is constrained environment ? Explain CoAP protocol in detail. **7**
- (b) What is CoAP-MQ protocol ? Explain its working with suitable diagram. **8**
- 9. Write short notes on the following :
 - (a) MQTT Protocol **7**
 - (b) Security issues in IoT. **8**