BOARD DIPLOMA EXAMINATION (Inst.), (C-20)

JULY—2023

DCME – FIFTH SEMESTER EXAMINATION

INTERNET OF THINGS

Time : 3 hours]   [*Total Marks* : 80

PART—A   3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. State the purpose of RFID in IoT.

2. Write any three features of 6LoWPAN.

3. List out the message types of CoAP.

4. Write any three applications of XMPP.

5. List out the variants of IEEE802.15.4.

6. Write any three features of ZigBee.

7. List out any three applications of wireless sensor networks.

8. List the features of M2M network.

9. What are the differences between a private cloud and a public cloud?

* 10. List different types of cloud simulators.

Instructions :   (1) Answer **all** questions.

(2) Each question carries **eight** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. *(a)* Explain 6LoWPAN protocol stack architecture.

(OR)

(b) Explain LOADng routing protocol.

12. *(a)* Explain the components of MQTT architecture.

(OR)

(b) Explain AMQP for IoT.

13. *(a)* Explain the different types of ZigBee protocol.

(OR)

(b) Explain bluetooth technology in detail.

14. *(a)* Explain the IoT in smart classrooms and smart cities.

(OR)

(b) Explain the stationary wireless sensor networks.

15. *(a)* Explain the components of cloud computing.

(OR)

(b) Explain the evolution of cloud computing.

PART—C

10×1=10

Instructions : (1) Answer the following question.

(2) The question carries **ten** marks.

(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

16. Assume an IoT application is using CoAP protocol for communication. Explain with a neat sketch, the CoAP request/response model for confirmable messages when the client sends a request to server with a token OX07 and message id OX88AA for the following scenarios :

    (a) When the server responds immediately to client's request

    (b) When the server doesn't respond immediately to the client's request

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