Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code:1218015

B.E. / B.Tech. DEGREE EXAMINATIONS, NOV/ DEC 2024
Eight Semester
Biomedical Engineering
CS8081 – INTERNET OF THINGS
(Regulation 2017)

Time: Three Hours   Maximum: 100 Marks

Answer ALL questions

PART – A (10 x 2 = 20 marks)

1. List the applications of IoT.

2. Classify the different types of Sensors.

3. Define IEEE 802.15.4.

4. Demonstrate the use of MQTT.

5. List the steps involved in IoT design methodology.

6. Differentiate functional view and operational view of IoT design methodology.

7. Compare Data in motion vs Data at Rest.

8. Discuss on Apache spark.

9. Classify the key features of IBM Watson platform.

10. Brief the sub layers of security in IoT systems.

PART – B (5 x 16 = 80 marks)

11. (a) Illustrate the oneM2M IoT standardized architecture and explain the layers with neat diagram. 16

(OR)

(b) Analyze in detail the Hierarchy followed in Edge, Fog and Cloud with suitable illustration. 16

12. (a) i) Tabulate the protocol stacks utilizing IEEE 802.15.4. (8+8)
ii) Describe on IEEE 802.15.4g and IEEE 802.15.4e.

(OR)

(b) Summarize the Application Transport Methods: Supervisory Control and Data acquisition. 16

13. (a) Illustrate the arduino board details and explain the steps for installing the board. 16

(OR)

(b) Define IoT device and give a detailed narration of IoT device example in real world applications with Raspberry Pi. 16

14. (a) Express in detail Edge streaming analytics and compare it with data analytics. Also give the functions of Edge analytics. 16

(OR)

(b) Analyze the use of
(i) Python Web Application Framework – Django. (8+8)
(ii) AWS for IoT.

15. (a) Discuss the features of Cisco IoT System and explain the components and security involved in it. 16

(OR)

(b) Summarize on the solution for smart lighting and explain street lighting architecture in detail. 16

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