FUTURE VISION BIE

By K B Hemanth Raj

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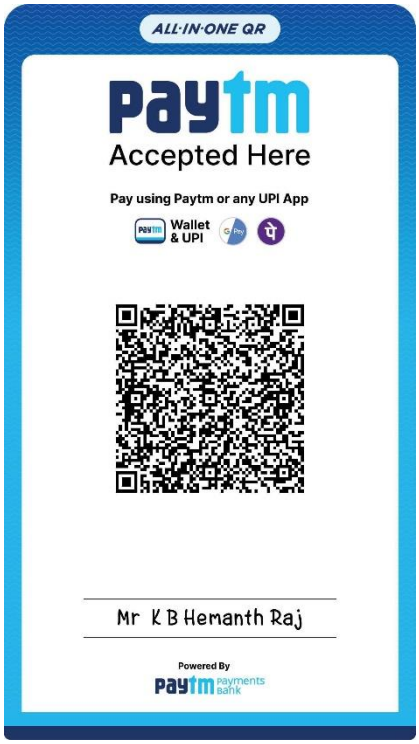

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CBCS SCHEME

USN | | | | | | | | | | |

15CS81

Eighth Semester B.E. Degree Examination, November 2020
Internet of Things

Time: 3 hrs. Max. Marks: 80

Note: Answer any FIVE full questions irrespective of modules.

Module-1

1 a. Define IoT. Explain the different evolutionary phases of internet. (06 Marks)
b. Explain the concept of Intersection Movement Assist (IMA) with graphical representation. (05 Marks)
c. What are the different challenges of IoT? (05 Marks)

2 a. Explain with diagram the one M2M IoT standardized architecture. (08 Marks)
b. Explain IoT Data Management and compute stack. (08 Marks)

Module-2

3 a. Define sensors and actuators. Explain how they interact with the physical world. (05 Marks)
b. Define smart objects. Explain its characteristics. (05 Marks)
c. Explain briefly the Wireless Sensor Networks (WSN). (06 Marks)

4 a. What are Constrained Devices and constrained node networks? Classify them. (06 Marks)
b. Explain Zigbee protocol stack using IEEE 802.15.4. (10 Marks)

Module-3

5 a. Explain in detail the 6LOWPAN. (10 Marks)
b. Explain the different schedule management and packet forwarding models of 6TiSCH. (06 Marks)

6 a. Explain the raw socket tunneling of SCADA using different scenarios. (06 Marks)
b. What is COAP? Draw COAP Message Format. Explain its fields. (06 Marks)
c. Compare between COAP and MQTT. (04 Marks)

Module-4

7 a. Explain in detail the core functions of edge analytics with necessary diagrams. (08 Marks)
b. Explain the different components of Flexible Net flow Architecture (FNF). (08 Marks)

8 a. Explain the different steps and phases of OCTAVE Allegro methodology. (08 Marks)
b. Explain Secured Network Infrastructure by using process control hierarchy model. (08 Marks)

Module-5

9 a. Explain the different pins/parts of Arduino Uno Board. (08 Marks)
b. Write a program to record the current room temperature using Raspberry pi. (08 Marks)

10 a. Explain the different layers of IoT Smart city layered architecture. (08 Marks)
b. Explain Smart parking architecture with advantages and disadvantages. (08 Marks)

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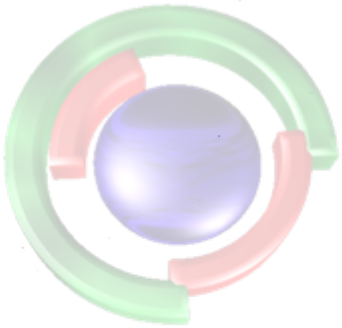

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8th Semester CSE - TEXTBOOK - NOTES - QP - SCANNER & MORE

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