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Reg. No. : | | | | | | | | | | |

Question Paper Code: 59210

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2019

Fourth Semester

Computer Science and Engineering

15UCS910- BUILDING INTERNET OF THINGS

(Regulation 2015)

Duration: Three hours | Maximum: 100 Marks

Answer ALL Questions

PART A - (5x 1 = 5 Marks)

1. A wi-fi enabled device can be — CO1- R

   (a) PC (b) Game console (c) Mobile phone (d) All of the above

2. Gyroscope is a sensor which measures the _____ — CO2- R

   (a) Acceleration (b) Velocity (c) Physical orientation (d) Pressure

3. Information about an objects history is called_____ — CO3- R

   (a) Object data (b) Event data (c) Security data (d) None of these

4. EURIDICE Context Model is represented within the _____ — CO4- R

   (a) Cyc Knowledge Base (b) Cyc Ontology Base

   (c) Cyc Context Base (d) All of the above

5. _____ is the feature of cloud computing that allows the service to change in size or volume in order to meet a user's needs. — CO5- R

   (a) Scalability (b) Virtualization (c) Security (d) Cost-savings

PART – B (5 x 3= 15 Marks)

6. Define smart gateway. — CO1-U

7. What is Software Agents? List out its properties. — CO2- U

8. Write short notes about Cluster Head election mechanism. — CO3- R

9. What is IoT Device integration? — CO4- R

10. Define Elderly monitoring system. CO5- R

PART – C (5 x 16= 80Marks)

11. (a) What is RFID and Explain its Applications. CO1- U (16)

Or

(b) Explain the following communication technologies: CO1- U (16)
(i) Rflink (ii) Zigbee (iii) Mobile Internet

12. (a) Write Arduino sketch to control the state of a temperature sensor and to print the reading in a serial monitor. CO2- U (16)

Or

(b) Write a sketch to encode an username for authenticating your Arduino using SHA algorithm CO2- U (16)

13. (a) Explain the design guidelines for an efficient clustering process. CO3- U (16)

Or

(b) Write the Evolution from the RFID based EPC Network using Agent based Internet of Things with examples**.** CO3- U (16)

14. (a) A trader has to deploy a DiY based WSAN for selling agricultural produce. Propose a suitable architecture for the same and describe the role of different elements of the network with neat diagrams CO4- U (16)

Or

(b) Discuss the Application of Ontology Engineering in the Internet of Things Used in the Context of EURIDICE. CO4- U (16)

15. (a) Assume that you are deploying a smart agricultural IoT. How are the devices resource constrained in your IoT? How will you web-enable them? Explain with suitable illustrations and sketches CO5- U (16)

Or

(b) Write the detail to Set up cloud environment and discuss about how to send data to cloud from microcontroller. CO5-U (16)