

14 JUL 2023

Reg. No.

Question Paper Code

12004

M.E. / M.Tech. - DEGREE EXAMINATIONS, APRIL/MAY 2023

Second Semester

M.E. - Embedded Systems and Technology

20PESPC204 - INTERNET OF THINGS

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,
K-Level, CO</i> |
|---|-------------------------------|
| 1. List the three components of IoT. | 2,K1,CO1 |
| 2. What are the components of WSN? Give some applications of WSN. | 2,K1,CO1 |
| 3. State the key feature of IoT Gateway. | 2,K1,CO2 |
| 4. List out the characteristics of cloud computing. | 2,K1,CO2 |
| 5. What is the use of neighbor discovery in node? | 2,K1,CO4 |
| 6. List the two network elements used in GPRS. | 2,K1,CO4 |
| 7. Compare predictive and prescriptive analytics. | 2,K1,CO5 |
| 8. Bring out the importance of Business intelligence. | 2,K1,CO5 |
| 9. Interpret Internet of Things diagrammatically. | 2,K1,CO6 |
| 10. Bring out the best applications of IoT. | 2,K1,CO6 |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11. a) Explain in detail the different protocols used in IoT. 13,K2,CO1
- OR**
- b) Explain the block diagram of IoT and discuss communication model of the same. 13,K2,CO1
12. a) With the neat diagram explain in detail the Bluetooth Architecture and its application. 13,K2,CO2
- OR**
- b) Explain the key standards and technologies used in IoT. 13,K2,CO2
13. a) Explain in detail the establishment and the principle of operation of smart grid in detail. 13,K2,CO4

OR

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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- b) Write short notes on UWB communication along with its pros and cons. *13,K2,CO4*
14. a) Infer the importance of data visualization in Data analytics. List some of the tools for the same. *13,K2,CO5*
- OR**
- b) In your view identify the role of IoT to implement Electric vehicle charging. *13,K2,CO5*
15. a) The industry 4.0 helps in enhanced productivity. Justify the statement with few case studies and discussions. *13,K2,CO6*
- OR**
- b) Discuss on security and privacy risk in IoT applications. *13,K2,CO6*

PART - C (1 × 15 = 15 Marks)

16. a) Explain the operation of RFID in detail and state its application. *15,K2,CO3*
- OR**
- b) Explain the topology supported in zigbee along with the application. *15,K2,CO3*