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Question Paper Code: U9472

B.E. / B.Tech. DEGREE EXAMINATION, APRIL/MAY 2025

Open Elective

Electronics And Communication Engineering

21UEC972-IOT CONCEPTS AND APPLICATIONS

(Common To All Branches)

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (5 x 1 = 5 Marks)

1. The IPV6 has a _____ notation for addressing CO1-U
(a) Dotted decimals (b) Hexadecimal (c) Both a and b (d) None of the above
2. UDP and TCP are called _____ protocols CO1-U
(a) Network (b) Transport (c) Session (d) Application
3. Which of the following is the way in which an IoT device is associated with data? CO1-U
(a) Internet (b) Cloud (c) Automation (d) Network
4. The _____ layer provides a security based connection: CO1-U
(a) Transport (b) Application (c) Session (d) Network
5. The Network layer protocol is present in the _____. CO1-U
(a) Bridges (b) Packets (c) Switches (d) Host

PART – B (5 x 3= 15 Marks)

6. Define the layers of IoT protocol. CO1-U
7. Define about the benefits of IoT in Smart Cities CO1-U
8. Mention the benefits of SoC. CO1-U

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|-----|--|-------|--|
| 9. | Write about the Hash Functions in IoT. | CO1-U | |
| 10. | Identify the use cases of IoT. | CO1-U | |

PART – C (5 x 16= 80 Marks)

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| 11. | (a) Discuss about the basic properties of IoT with Real Time Application. | CO1-U | (16) |
| | Or | | |
| | (b) Discuss about the Architecture of IoT with need diagrams | CO1-U | (16) |
| 12. | (a) Examine the features and applications of several network infrastructures to determine which is the most beneficial to use. In your response, justify. | CO5-Ana | (16) |
| | Or | | |
| | (b) Study how the various network topologies are connected to one another and then clarify each one in terms of performance. | CO5-Ana | (16) |
| 13. | (a) How Network Securities are developed and managed in IoT Applications. Illustrate with Specific Cases | CO3-App | (16) |
| | Or | | |
| | (b) How does latency affect the internet of things? Describe the problems caused by latency and give a clear solution for solving them. | CO3-App | (16) |
| 14. | (a) Provide an IoT solution for smart light and illustrate the design. | CO3-App | (16) |
| | Or | | |
| | (b) Give a detailed note on Advantage of GUI in building the IoT systems. | CO3-App | (16) |
| 15. | (a) Describe in detail about evolution of IoT Paradigms. | CO1-U | (16) |
| | Or | | |
| | (b) Describe about the four emerging pillars of IoT. | CO1-U | (16) |