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Question Paper Code: 2437003

B.E. / B.Tech. DEGREE EXAMINATIONS, NOV/ DEC 2024

Seventh Semester

Artificial Intelligence and Data Science

U20AI702 /U20CS702 – INTERNET OF THINGS

(Common to Computer Science and Engineering)

(Regulation 2020)

Time: Three Hours

Maximum: 100 marks

Answer ALL Questions

PART – A

(10 x 2 = 20 Marks)

1. Define IoT and how it works?
2. Give the basic operations in IoT.
3. Differentiate M2M and IOT.
4. What are the key features of YANG as a data modeling language?
5. List out various IoT Protocol.
6. Where zigbee is used and point the zigbee addressing mode?
7. Differentiate Raspberry with Arduino.
8. What is cloud computing, and how is it used in IoT?
9. Point out main security requirements in IoT scenarios.
10. Illustrate few examples on home automation.

PART – B

(5 x 16 = 80 Marks)

11. (a) (i) Explain in detail about IoT levels and deployment templates. (10)
(ii) Explain the significance of each level in detail. (6)

(OR)

- (b) Explain in Logical design of IOT? Illustrate with diagram. (16)

12. (a) Explain in detail about M2M. (16)

(OR)

- (b) (i) Explain in detail about software defined Networking. (8)
(ii) Explain the concepts related to NETCONFIG in IoT? (8)

13. (a) (i) What is the difference between IoT communication protocols and IoT network protocols? (8)
(ii) What are some key characteristics of IoT protocols? (8)

(OR)

- (b) (i) What are the key features of Zigbee that make it suitable for low-power, low-data-rate IoT devices? (8)
(ii) What is LoRa, and how does it work in IoT applications? (8)

14. (a) Explain the relationship between IoT and cloud computing in terms of data storage and processing. (16)

(OR)

- (b) Explain the role of sensors in generating big data in IoT systems. (16)

15. (a) Explain in detail about the security threats and attacks. (16)

(OR)

- (b) Explain in detail about how IOT is suitable for weather monitoring system with suitable example? (16)