II B. TECH I SEMESTER REGULAR EXAMINATIONS, MARCH - 2022
DATA COMMUNICATIONS AND NETWORKING FOR IoT
(CSE - Internet of Things)

Time: 3 Hours   **Max. Marks: 70**

Note: Answer **ONE** question from each unit **(5 × 14 = 70 Marks)**

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UNIT-I

1. a) What are different layers of the OSI Model? Explain the features of each Layer? [10M]

   b) Define Computer Network and Categorize? [4M]

(OR)

2. a) Explain the TCP/IP Protocol Suite. [10M]

   b) Describe the advantages of Ring Topology? [4M]

UNIT-II

3. a) What is Multiplexing? Discuss about different types of Multiplexing? [10M]

   b) Describe Un-Guided Media [4M]

(OR)

4. a) Briefly describe Circuit Switching and Packet Switching. [7M]

   b) Draw and discuss about Guided Transmission Media? [7M]

UNIT-III

5. a) What is the need for Framing? What are the different Framing techniques? [10M]

   b) What are the responsibilities of Data Link Layer? [4M]

(OR)

6. a) Explain the Frame format and working of HDLC Protocol. [7M]

   b) How CRC is used for error detection? A big screen 1001101100 is transmitted using the standard CRC method. The generator polynomial is $x^4 + x+1$. What is the actual bit string transmitted? [7M]

UNIT-IV

7. a) What is logical addressing? Give the Services and Header format of IPV4 and compare with IPV6? [8M]

   b) Explain briefly above ICMP. [6M]

(OR)

8. a) Illustrate Internet Control Message Protocol?   [4M]

    b) Describe shortest path routing and distance vector routing   [10M]
        algorithms with examples.

UNIT-V

9. a) Distinguish between TCP vs UDP?   [7M]

    b) Write about Congestion Control Algorithms?   [7M]

(OR)

10. a) Describe in detail about the World Wide Web (WWW)?   [7M]

    b) Discuss how the Simple Mail Transfer Protocol (SMTP) is   [7M]
        useful in electronic mail?

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