III B. Tech I Semester Supplementary Examinations, June/July-2022
COMPUTER NETWORKS
(Computer Science and Engineering)

Time: 3 hours   Max. Marks: 75

Answer any **FIVE** Questions **ONE** Question from **Each unit**
All Questions Carry Equal Marks
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UNIT-I

1. a) Summarize network topologies.   [8M]
    b) Compare circuit switching and message switching.   [7M]

(OR)

2. a) Explain design issues for the layers in computer network.   [8M]
    b) Classify internet, intranet and extranet with applications   [7M]

UNIT-II

3. a) Illustrate framing methods in data link layer.   [8M]
    b) Compare sliding window protocols.   [7M]

(OR)

4. a) Explain various multiplexing techniques.   [8M]
   b) Explain the difference between flow control and error control.   [7M]

UNIT-III

5. a) Explain Bluetooth technology.   [8M]
    b) Explain how to choose appropriate hardware and software,   [7M]
        including protocols and algorithms, to establish LAN in your
        campus.

(OR)

6. a) Explain Token Ring technology.   [8M]
    b) A bit stream 10011101 is transmitted using the standard CRC   [7M]
        method. The generator polynomial is x^3+1. Show the actual bit
        string transmitted. Suppose the third bit from the left is inverted
        during transmission. Show that this error is detected at the
        receiver end.

UNIT-IV

7. a) Compare Adaptive and Nonadaptive routing algorithms.   [8M]
    b) A router has received new IP addresses: 57.6.96.0/21,   [7M]
        57.6.104.0/21, 57.6.112.0/21 and 57.6.120.0/21. If all of them
        use the same outgoing line, can they be aggregated? If so to
        what?

(OR)

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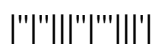
8. a) Draw and explain IPV6 header.   [8M]
    b) Illustrate subnetting in networks.   [7M]

UNIT-V

9. a) Explain addresses used in different layers of network protocol   [8M]
        stack.
    b) Compare iterative and recursive name resolutions.   [7M]

(OR)

10. a) Explain TCP connection establishment and connection release [8M]
    b) Explain architecture and services provided by electronic mail. [7M]

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