

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

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, including protocols and algorithms, to establish LAN in your campus. [7M]

(OR)

6. a) Explain Token Ring technology. [8M]
b) A bit stream 10011101 is transmitted using the standard CRC 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. [7M]

UNIT-IV

7. a) Compare Adaptive and Nonadaptive routing algorithms. [8M]
b) A router has received new IP addresses: 57.6.96.0/21, 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? [7M]

(OR)

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SET - 1

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 stack. [8M]
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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