C

Reg. No. :

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. The cost of physical media and installation should be   CO1- R

    (a) minimum   (b) maximum   (c) negative   (d) zero

2. In Go-Back-N ARQ, if 5 is the number of bits for the sequence   CO2- R
    number, then the maximum size of the receive window must be
    _____.

    (a) 1   (b) 15   (c) 16   (d) 31

3. The early FM push-to-talk telephone systems were used in   CO3- R

    (a) Simplex mode   (b) Half duplex mode

    (c) Full duplex mode   (d) None of the above

4. ICMP is primarily used for   CO4- R

    (a) error and diagnostic functions   (b) addressing

    (c) forwarding   (d) None

5. Which among the following are delivered by the transport layer in   CO5- R
    process-to-process delivery mechanism?

    (a) Frames   (b) Datagram   (c) Packets   (d) All of the above

PART – B (5 x 3= 15Marks)

6.	What are the key elements of a protocol?	CO1- U	
7.	Define piggy backing and its usefulness	CO2- U	
8.	Define Asynchronous TDM.	CO3- U	
9.	Draw the IPv4 datagram format	CO4- R	
10.	Define UDP and TCP?	CO5- App	

PART – C (5 x 16= 80Marks)

11. (a) Explain in detail about the data transmission in OSI reference model.   CO1-U   (16)

OR

(b) (i) Construct the block diagrams of an FDM and TDM communication system and explain.   CO1-U   (10)

(ii) Compare the characteristics of various Un-Guided transmission medium.   CO1-U   (6)

12. (a) (i) Given the dataword 1010011110 and the divisor 10111,   CO2- App   (8)
    (a) Show the generation of the codeword at the sender site (using binary division).
    (b) Show the checking of the codeword at the receiver side (assume no error).

(ii) A bit string 0111111011010101111111111110101 needs to be transmitted at the data link layer. Examine the string actually transmitted after bit stuffing and Explain.   CO2- App   (8)

OR

(b) What is Ethernet? Explain the Ethernet frame structure in detail.   CO2- App   (16)

13. (a) Explain the working of cellular telephone Networks   CO3- U   (16)

OR

(b) (i) Discuss the features of ATM networks. Explain the issues involved in using ATM technology in LANs.   CO3- U   (10)

(ii) Explain satellite frequency bands with downlink and uplink frequency.   CO3- U   (6)

14. (a) (i) Explain in detail about Path vector routing protocol with a neat diagram.   CO4- U   (8)

(ii) Differentiate between ICMP error and query-reporting messages.   CO4- U   (8)

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     (b)   Explain in detail about IP V4   CO4- App   (16)

15. (a)   (i) Compare and contrast TCP's three-way handshaking with   CO5- U   (10)
             four-way handshaking with flow diagram.
          (ii) Discuss about various flow characteristics used to improve   CO5- U   (6)
            Quality of services.

<div align="center">OR</div>

     (b)   Explain the concept of TELNET in detail.   CO5- U   (16)

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