Roll No ....

MCADD-402

M.C.A. (Integrated), IV Semester

Examination, June 2020

Foundation of Computer Networks

Time : Three Hours

Maximum Marks : 70

Note: i)   Attempt any five questions.

    ii) All questions carry equal marks.

1. a)   What do you mean by computer networks? What are its advantages and goals?

   b)   Differentiate between guided and unguided transmission media. Write briefly about twisted pair.

2. a)   Explain the different layer and functions of ISO-OSI model with the help of diagram.

   b)   What are the need of packet switching? Explain working of packet switching and also methods for packet switching.

3. a)   Draw the frame format of HDLC protocol. Explain the use of control, flag, address field of HDLC protocol.

   b)   Explain the uses advantages and disadvantages repeaters, hubs, bridge, switch and router.

4. a)   What is ALOHA protocol? Explain and differentiate between pure ALOHA and slotted ALOHA? What is vulnerable time in pure ALOHA.

b) Differentiate slop and wait protocol and Go-Back-N protocol.

5. a) Explain the frame format of 802.3 standards. What is the maximum and minimum size of a frame?

b) Given a dataword M = 1100111000001110, determine the CRC using the divisor 1100.

6. a) Explain the Dijkstra algorithm with example.

b) Give the comparative study of IPv4 and IPv6.

7. a) What is congestion control? Explain the leaky bucket mechanism for congestion control.

b) What are the element of transport protocol? Differentiate between TCP and UDP.

8. Write short notes on :
i) DNS
ii) CSMA/CD
iii) Virtual terminal protocol
iv) File transfer protocol

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