Reg. No. : ....

Name : ....

I Semester M.C.A. Degree (C.B.S.S. – Reg./Supple./Imp.)
Examination, November 2024
(2021 Admission Onwards)
MCA1C04 : DATA COMMUNICATION AND COMPUTER NETWORK

Time : 3 Hours   Max. Marks : 60

SECTION – A

Answer all questions. Each question carries two marks.

1. What are digital signals ?

2. Distinguish between periodic and aperiodic signals.

3. What are the factors that influence the choice of network topology ?

4. Explain the working principle of optical fibre cable.

5. List any two errors in data communication.

6. What is LRC ?

7. Differentiate between transparent bridges and source routing bridges.

8. What is the significance of routing table in networking ?

9. Explain the mechanisms used for creating end-to-end connection between hosts in transport layer.

10. Briefly explain the UDP header.   (10×2=20)

SECTION – B

Answer all questions. Each question carries eight marks.

11. a) Explain the various transmission modes in data communication.

                              OR

    b) What are wireless transmission media? Describe any three wireless media used for data transmission.

                                                                    P.T.O.

12. a) Distinguish between FDM and TDM.

OR

b) Elucidate the key features of X.21.

13. a) Explain the huffman code data compression technique.

OR

b) Explain any four error control techniques used in datalink layer.

14. a) What are the strengths and weaknesses of MAC address?

OR

b) Compare and contrast distance vector routing with link state routing.

15. a) What is QoS and explain its benefits and applications?

OR

b) Explain SNMP in network management. (5×8=40)

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