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B.C.A. (PART-III) Vth SEMESTER EXAMINATION, 2024-25

(BCA-503 : COMPUTER NETWORKS)

Paper : III

1451

Time : Three Hours]   [Maximum Marks : 70

Note: (i)   Answer **five** questions in all.

      (ii)   Question **No. 1** is **compulsory**.

      (iii)   Answer remaining **four** questions, selecting **two** from each section **A** and **B**.

      (iv)   All questions carry equal marks.

1.   Answer any four of the following :

      (a)   Discuss about mode of transmission in networking.

      (b)   Describe the Microwave transmission.

      (c)   State about ALOHA.

      (d)   Define routing concept.

      (e)   Discuss the role of Hyper Text transfer protocol (HTTP).

Section–A

2. Define network topology. Compare various topologies with advantage and disadvantages.

3. What is communication Channel ? Discuss about transmission mediums for networking.

4. Explain various type of HDLC frame with their control bits with suitable diagram.

5. What is MAC layer ? Explain medium access technique of CSMA and CSMA/CD.

Section–B

6. (a) What is TCP/IP Model ? Explain the functions; protocols and services of each layer.

   (b) Encode the data-stream 10011010 using the following encoding scheme :

   (i)   Unipolar

   (ii)   Bipolar NRZ-L

   (iii) Bipolar NRZ-I

   (iv)   RZ

   (v)   Manchester

   (vi)   Differential Manchester

   (vii) AMI

7. Differentiate between :

 (a) LAN and WAN Network.

 (b) Message and Packet Switching.

8. (a) Explain error control mechanism in Data link layer and giving example of each method.

 (b) What is IP addressing ? How it is classified ? How subnet and super net addressing is performed ?

9. Write notes on any two of the following :

 (a) Multiplexing.

 (b) Routing protocol

 (c) E-mail system.

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