

*" Do not write anything on question-paper except Roll Number, otherwise it shall be deemed as an act of indulging in unfair means and action shall be taken as per rules."*

Roll No. ....

B.C.A. (III)

1733

Compt. Netw.

**B.C.A. Part-III**  
**EXAMINATION - 2021**  
**Paper - III**  
**BCA 303 - Computer Networks**

Time Allowed : **Three** Hours

Maximum Marks : **80**

**Note :** 1. Question No. 1 is Compulsory. Attempt any four from the remaining questions.

2. All questions carry equal marks.

1. (a) Define computer networks. 2×8=16  
(b) What is Bandwidth?  
(c) What is IEEE?  
(d) Difference between IP address and MAC address?

- (e) What is CRC?
  - (f) What is band rate?
  - (g) What is LAN and WAN?
  - (h) What is Protocol?
2. (a) Explain various guided and unguided Transmission media. 8
  - (b) Explain Ring, Bus and STAR topologies with their advantages and disadvantages. 8
  3. (a) Explain the Pure Aloha and Slotted Aloha with suitable diagram. 4+4=8
  - (b) Difference between broadband and baseband. 8
  4. What is ISO and OSI? Explain OSI layers in detail with diagram. 2+14=16
  5. (a) Explain Asynchronous and Synchronous transmission with example. 4+4=8
  - (b) Define Half Duplex, Simplex, Full Duplex with suitable diagram. 8
  6. (a) Explain byte stuffing and bit stuffing. 4+4=8
  - (b) Explain error in data transmission. Explain Hamming Code method with example. 4+4=8

7. (a) What is Switching technique? 2
- (b) Differentiate between Circuit Switching and Packet Switching with example.  $4+4=8$
- (c) Explain wire and wireless transmission media.  $3+3=6$
8. Write short notes :  $4 \times 4 = 16$
- (a) IEEE 802.4 and IEEE 802.5
- (b) Network Security
- (c) CRC
- (d) CDMA.

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