B.C.A. (PART-III) EXAMINATION, 2022-23

(Fifth Semester)

(BCA 503 : COMPUTER NETWORKS)

Paper : III

9209

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 each.

(iv)   All questions carry equal marks.

1.   Answer **all** parts of the following :

(a)   What is OSI Model? Explain the functions of each layer in brief.

(b)   Describe the various topologies used in computer networking in brief.

(c)   Explain the error handling by CRC with a suitable example.

(d)   Briefly explain the different methods of multiplexing in digital communication?

SECTION-A

2. Discuss the different physical medium used in networking, their advantages and disadvantages.

3. Explain the following :

   (i) Circuit switching

   (ii) Packet switching

   (iii) Message switching

4. Briefly explain the following :

   (i) ISDN

   (ii) FDDI

5. Describe the following :

   (i) Bit stuffing

   (ii) Byte stuffing

SECTION-B

6. (a) Write the difference between the pure ALOHA and slotted ALOHA.

   (b) Compare the UDP and TCP protocol. How STCP protocol is different from UDP and TCP?

7. (a) Explain the ATM service and its format.

   (b) Explain any **two** of the following :

   (i) ICMP protocol

   (ii) Classful addressing

   (iii) Virtual private network

8. (a) Explain the SMTP protocol and MIME.

   (b) Explain the FTP and TELNET protocols.

9. Write notes on any **two** of the following :

   (a) Link state routing

   (b) CSMA/CD

   (c) DHCP protocol

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