Or

Explain the following :

(a) Network Topology

(b) Internet

7. Explain the following : **6**

(a) Twisted Pair Cable

(b) Optical Fiber Cable

Or

Explain circuit and packet switching in terms of their efficiency and their applications.

8. Explain the following : **6**

(a) CSMA Protocols

(b) FDDI

Or

Explain the concept of sliding window protocol and how it manages data flow between sender and receiver ?

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B.C.A. EXAMINATION, 2026

(Fourth Semester)

(From 2020-21 Onwards)

(Re-appear Only)

BCA-19-43 : COMPUTER NETWORKS

Time : 3 *Hours*] [*Maximum Marks :* 80

Before answering the question-paper, candidates must ensure that they have been supplied with correct and complete question-paper. No complaint, in this regard will be entertained after the examination.

Note : All questions in Section A and Section B are compulsory. Attempt one question out of two alternatives for each question in Section C and Section D.

Section A

1. Explain the following : **12×1=12**

(a) Network Topology

(b) MAN

(c) ATM

(d) Bandwidth

(e) Coaxial Cable

(f) Satellite Communication

(g) Ethernet

(h) Aloha

(i) Token Bus

(j) Network Layer

(k) Routing Algorithm

(l) Flooding

Section B

2. Explain computer network with its uses in detail.

3. Explain the difference between time division and frequency division multiplexing.

4. Explain error detection and correction techniques.

5. Explain the difference between virtual circuit and datagram subnet. **4×3=12**

Section C

6. Explain the following : **6**

(a) LAN

(b) WAN

9. Explain the difference between distance vector routing and link state routing algorithm. **6**

Or

Explain the concept of broadcasting and multicasting in network routing. How do they differ ?

Section D

10. Explain the OSI reference model in detail. **8**

Or

Explain the connection oriented networks-X.25 in detail.

11. Discuss the difference between guided and unguided transmission media. **8**

Or

Explain the following :

(a) Satellite Communication

(b) Radio Waves

12. Explain the IEEE 802.5 in detail. **8**

Or

Explain the following :

(a) GSM

(b) CDMA

13. What is routing ? Explain different types of routing in detail. **8**

Or

Explain the impact of load shedding on network performance and user experience.