2323/SCS8A52 **APRIL 2011**

COMPUTER NETWORKS

(For those who joined in July 2008 and 2009)

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 1 = 10 marks)

Answer ALL questions.

1. The ———————— layer is responsible for delivering data units from one station to the next without errors

   (a) Transport (b) Network

   (c) Data link (d) Session.

2. In a ———————— topology, every device has a dedicated point-to-point link to every other device

   (a) Mesh (b) Star

   (c) Bus (d) Ring.

3. Transmission media are closest to the ———————— layer

   (a) Physical (b) Network

   (c) Transport (d) Application.

4. Which error detection method involves polynomials?
   (a) Simple parity check
   (b) Two-dimensional parity check
   (c) CRC
   (d) Checksum.

5. For a sliding window of size n –1 (n sequence numbers), there can be a maximum of ———— frames sent but unacknowledged
   (a) 0 (b) n–1
   (c) n (d) n+1.

6. What is present in all HDLC control fields?
   (a) P/F bit (b) N (R)
   (c) N (S) (d) Code bits.

7. The ———— implementation of Ethernet uses thick coaxial cable
   (a) 10 Base 2 (b) 10 Base 4
   (c) 10 Base 5 (d) 10 Base 6.

8. Fast Ethernet has a data rate of ———— Mbps
   (a) 1 (b) 10
   (c) 100 (d) 1000.

9. In ———— circuit switching, delivery of data is delayed because data must be stored and retrieved from RAM
   (a) Space-division (b) Time-division
   (c) Virtual (d) Packet.

10. ITU-T modestly defines ———————— as "a service requiring transmission channels capable of supporting rates greater than the primary rate"

(a) Fast Ethernet

(b) Circuit switching

(c) Narrowband -ISDN

(d) B-ISDN.

SECTION B — (5 × 7 = 35 marks)

Answer ALL questions., choosing either (a) or (b).

11. (a) With a neat diagram, explain about OSI reference model.

Or

(b) Explain about network classifications.

12. (a) Compare Twisted-pair cable with coaxial cable.

Or

(b) Explain about Checksum error detection method with example.

13. (a) What are the main functions of the Data Link Layer? Discuss briefly.

Or

(b) Write short notes on selective repeat ARQ.

14. (a) Discuss about Ethernet MAC frame structure.

Or

(b) Write short notes on Fast Ethernet.

15. (a) What are the technologies in circuit switching? Discuss briefly about them.

Or

(b) Discuss about ISDN channel types.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the following :

(a) Protocols and standards

(b) Standard organizations.

17. Explain any two unguided transmission media.

18. Discuss in detail, character oriented and bit oriented data link protocols.

19. Write short notes on :

(a) Token bus

(b) FDDI.

20. What are the functions of ISDN layers? Explain.

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