

(6 pages)

**8545/SCS8A52/
SCS9A52**

NOVEMBER 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.

Choose the correct answer :

1. _____ are the exchange of data between two devices via some form of transmission medium such as a wire cable.
 - (a) Networks
 - (b) Protocols
 - (c) Data communications
 - (d) Standards

2. The _____ layer coordinates the functions required to carry a bit stream over a physical medium.
 - (a) Network
 - (b) Physical
 - (c) Session
 - (d) Transport

3. The fiber optics, the signal source is _____ waves.

- (a) light
- (b) radio
- (c) infrared
- (d) very low-frequency

4. The hamming code is a method of _____.

- (a) Error detection
- (b) Error correction
- (c) Error encapsulation
- (d) Both (a) and (b)

5. ARQ stands for _____.

- (a) Automatic Repeat Quantization
- (b) Automatic Repeat Request
- (c) Automatic Retransmission Request
- (d) Acknowledge Repeat Request

6. If an Ethernet destination address is 08-07-06-05-44-33, then this is a _____ address.
- (a) Unicast
 - (b) Multicast
 - (c) Broadcast
 - (d) Any of the above
7. The shortest frame in HDLC protocol is usually the _____ frame.
- (a) Information
 - (b) Supervisory
 - (c) Management
 - (d) None of the above
8. What is the efficiency of a frame in half-duplex Gigabit Ethernet carrying 46 bytes of data?
- (a) 97 percent
 - (b) 70 percent
 - (c) 56 percent
 - (d) 12 percent

9. In which type of switching do all the packets of a message follow the same channels of a path?
- (a) Datagram packet switching
 - (b) Message switching
 - (c) Virtual circuit packet switching
 - (d) Number message switching
10. In ISDN, _____ includes functions associated with the physical and electrical termination of the ISDN on the user's premises.
- (a) NT1
 - (b) NT2
 - (c) NT3
 - (d) NT4

SECTION B — ($5 \times 7 = 35$ marks)

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

11. (a) Discuss about protocols and standards.

Or

- (b) Write short notes on : network classifications.

12. (a) Discuss about any two Guided Transmission Media.

Or

- (b) What are three types of redundancy checks used in data communications? Discuss briefly.

13. (a) Write short notes on Selective Repeat ARQ.

Or

(b) Discuss about HDLC.

14. (a) Write about Traditional Ethernet.

Or

(b) Write about FDDI.

15. (a) Compare datagram packet switching and virtual-circuit packet switching.

Or

(b) What is broadband ISDN? Discuss its features.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain about TCP/IP layers.

17. Discuss in detail, Unguided Transmission Media.

18. Explain about Character Oriented Datalink Protocol.

19. Discuss in detail, CSMA/CD Access Methods in Ethernet.
20. Explain the services and channel types of ISDN.
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