



Sagdu Singh Charitable Trust's (Regd.)

**THAKUR COLLEGE OF
ENGINEERING & TECHNOLOGY**

Autonomous College Affiliated to University of Mumbai

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T. E. Semester VI (Credit Based Grading System) - E&TC

**MOCK Paper
CCTN (ETC603)**

1. Which of the following correctly describe the function of a bridge? (01)
 - A. Collision prevention on a LAN segment.
 - B. restores and retransmit the signal
 - C. Packet switching
 - D. bridging between two LANs

2. Assuming you build networks to exact specifications, what is the recommended maximum length a 10BaseT cable can be before it has to be segmented or repeated? (01)
 - A. 100 meters
 - B. 10 meters
 - C. 100 yards
 - D. 200 meters

3. Which of the following term describes an Ethernet addresses that can be used to communicate with more than one device at a time? (01)
 - A. Burned in address
 - B. Unicast address
 - C. Multicast address
 - D. Broadcast address

4. In mesh topology with 5 end devices, no of cables required are (01)
 - A. 5
 - B. 20
 - C. 10
 - D. 15

5. Which of the following term is used to identify the entity that is created when encapsulating data inside transport layer headers (01)
 - A. packet
 - B. segment
 - C. frame
 - D. packet



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6. ICMP error management mechanism is provided by _____ (01)
 - A. logical link control sublayer
 - B. media access control sublayer
 - C. network interface control sublayer
 - D. application access control sublayer

7. The portion of physical layer that interfaces with the media access control sublayer is called _____ (01)
 - A. physical signalling sublayer
 - B. physical data sublayer
 - C. physical address sublayer
 - D. physical transport sublayer

8. In the OSI model, as a data packet moves from the upper layer to the lower layers, headers are _____ (01)
 - A. Added
 - B. Removed
 - C. Rearranged
 - D. Randomized

9. Which is the following true about IP? (01)
 - A. IP is a data link layer protocol
 - B. Addressing packets with IP address
 - C. Node to node delivery
 - D. Encapsulation

10. Identify the class of the following IPv4 binary address:
11100000.10101001.10101010.10011001. (01)
 - a. A
 - b. B
 - c. C
 - d. E

11. As a network administrator, you are required to have a firm understanding of the OSI model. Why does the data communication industry use the layered OSI reference model? (01)
 - A. It enables equipment from different vendors to use the same electronic components, thus saving research and development funds
 - B. It encourages industry standardization by defining what functions occur at each layer of the model
 - D. It provides a means by which changes in functionality in one layer require changes in other layers
 - E. It supports the evolution of multiple competing standards and thus provides business opportunities for equipment manufacturers



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12. When comparing and contrasting the similarities and differences between routers and switches, which of the following is valid statement? (01)

- A. Routers are slower than switches because they have fewer ports.
- B. Router is a physical layer device.
- C. Router and switches learn MAC addresses by examining the source MAC address of each frame received.
- D. A router uses IP address and switch MAC address to forward a broadcast.

13. On a full-duplex LAN, two hosts attempt to send data simultaneously, resulting in a collision. Following this collision, what will the hosts do? (01)

- A. The destination host sends a request to the source for retransmission.
- B. An electrical pulse indicates that the collision has cleared.
- C. The router on the segment will signal that the collision has cleared.
- D. The hosts will do nothing, as the higher layers are responsible for data error correction and re-transmission.

14. Which layer in the OSI reference model is responsible for determining node to node error detection and flow control? (01)

- B. transport
- C. presentation
- D. session
- E. data

15. Which of the following term is used to identify the entity that is created when encapsulating data inside data link layer headers and trailers (01)

- a. data
- c. segment
- d. frame
- e. packet

16. Which one of the following algorithms is not used for congestion control? (01)

- a) traffic aware routing
- b) admission control
- c) load shedding
- d) Address resolution protocol

17. The technique of delaying the outgoing acknowledgements so that they can be added onto the next outgoing data frame is called _____ (01)

- a) piggybacking
- b) cyclic redundancy check



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c) fletcher's checksum

d) parity check

18. Application layer is implemented in _____ (01)

a) End system

b) NIC

c) Ethernet

d) Packet transport

19. Which of the following statements can be associated with OSI model? (01)

a) A structured way to discuss and easier update system components

b) One layer may duplicate lower layer functionality

c) Functionality at one layer no way requires information from another layer

d) It is an application specific network model

20. At the transport layer, which of the following control is used to keep transmitting a host from overflowing the buffers of a receiving host? (01)

a. Best effort

b. Encryption

c. Flow control

d. Congestion control

21. The equivalent binary notation to dotted decimal for the IP addresses: 01111111 11110000
01100111 11111101 (02)

A. 127.240.103.251

B. 128.240.103.253

C. 127.240.103.253

D. 127.240.103.256

22. For an IP addresses in dotted decimal notation: 129.14.6.8 the binary notation is (02)

A. 10000111 00001110 00000110 00001000

B. 10000001 00001110 00000110 00001001

C. 10000001 00001110 00011110 00001000

D. 10000001 00001110 00000110 00001000



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23. The netid and the hosted of the IP address 132.57.8.6 is: (02)
- 132.57.0.6 & 0.0.8.0
 - 132.57.0.0 & 0.0.8.6
 - 132.57.8.0 & 0.0.0.6
 - 132.0.0.0 & 0.57.8.6
24. What is the subnetwork address if the destination address is 200.45.34.56 and the subnet mask is 255.255.240.0? (02)
- 200.45.32.0
 - 200.45.32.06
 - 200.45.0.0
 - 200.0.0.0
25. What is the network address if one of the addresses is 167.199.170.82/27? (02)
- 167.199.170.0
 - 167.199.170.64
 - 167.199.0.0
 - 167.199.170.02
26. The _____ translates internet domain and host names to IP address. (01)
- domain name system
 - routing information protocol
 - network time protocol
 - internet relay chat
27. Which one of the following is an application layer protocol? (01)
- ARP protocol
 - dynamic host configuration protocol
 - resource reservation protocol
 - Internet protocol
28. When transferring a file, the application layer uses the _____ (01)
- HTTP protocol
 - FTP protocol
 - SMTP protocol
 - TCP protocol
29. Which of the following frequencies is not used in WiMAX for communication? (01)
- 2.3 GHz
 - 2.4 GHz
 - 2.5 GHz
 - 3.5 GHz



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30. Which of the following tasks is done by data link layer? (01)
- packetizing
 - congestion control
 - flow control
 - channel coding
31. Which of the following is not the function of IP? (01)
- Error reporting
 - Handle IP addresses
 - IP format
 - Fragmentation
32. The TTL field has value 26. How many routers (max) can process this datagram? (01)
- 26
 - 25
 - 20
 - 1
33. What should be the flag value to indicate the last fragment? (01)
- 0
 - 1
 - 11
 - 100
34. A B ESC C FLAG FLAG D is given. This data fragment occurs in the middle of a data stream for which the byte-stuffing algorithm described in the text is used. What is the output after stuffing? (02)
- A B ESC ESC C ESC FLAG ESC FLAG D
 - A B ESC ESC C ESC ESC FLAG ESC FLAG D
 - A B ESC ESC C FLAG FLAG D
 - A B ESC C ESC ESC FLAG ESC FLAG D
35. Which of the following can be the beginning address of a block that contains 16 addresses? (02)
- 205.16.37.32
190.16.42.44
17.17.33.80
123.45.24.52



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36. A small organization is given a block with the beginning address and the prefix length 205.16.37.24/29. What is the range of the block? (02)
- B. 16
C. 8
D. 32
E. 64
37. For the given IP 205.16.37.39/28 in some block of addresses, an Address mask is: (02)
- A. 11111111.11111111.11111111.11111100
B. 11111111.11111111.11111111.11111111
C. 11111111.11111111.11111111.11110000
D. 11111111.11111111.11111111.00001111
38. Calculate the window size for Go-Back-N ARQ if the header of the frame allows $m = 2$ bits for sequence number (02)
- A. 3
B. 2
C. 4
D. 5
39. For a pattern of, 1100 1010, Find the checksum of the given bit sequence (02)
- A. 1000
B. 1010
C. 1111
D. 0011