

1. In the following pairs of OSI protocol layers and their functionality, which one is the CORRECT pair / s? [MSQ]

- A. Network layer and Routing
- B. Data Link Layer and Bit synchronization
- C. Transport layer and End-to-end process communication
- D. Medium Access Control sublayer and Channel sharing

2. In the following pairs of OSI protocol layer and their functionality, which one is the CORRECT pair / s? [MSQ]

- A. Segmentation and reassembly are done at hosts only, not at each intermediate router.
- B. Application Layer allows the user or application to access the network.
- C. Session Layer establishes, maintains, and synchronizes the interaction between the communicating systems.
- D. Presentation Layer allows the process to add checkpoints or synchronization points in the stream of data.

3. In the following pairs of OSI protocol layers and their functionality, which one is the CORRECT pair / s? [MSQ]

- A. Physical Layer maintains the same bit rate at the source and destination.
- B. Physical Layer synchronizes sender and receiver clocks.
- C. Physical layer is responsible for moving individual bits from one (node) to the next.
- D. Physical layer defines the type of encoding.

4. Which of the following is/are CORRECT? [MSQ]

- A. Physical addresses in the packet are modified from HOP to HOP.
- B. Network Layer ensures packets belonging to the same message arrive intact and in order.
- C. Network layer uses physical addresses for addressing.
- D. Transport Layer treats every packet individually.

5. Match the following to one or more layers of the OSI model: [MSQ]

1. Transport Layer	a. Reliable process-to-process message delivery
2. Data Link Layer	b. Route selection
3. Network Layer	c. Defines frames
4. Application Layer	d. Provides user services such as e-mail and file transfer e. Uses service point addressing f. Delivery of individual packets of data g. Delivery of each packet independently

- A. 1-g, 2-c, 3-b, 4-d
- B. 1-b, 2-c, 3-a, 4-d
- C. 1-a, 2-c, 3-b, 4-d
- D. 1-e, 2-c, 3-f, 4-d

6. Which of the following statements is/are correct?

- I. In the virtual circuit network, packets are never delivered out of order and In a datagram network, packets may be delivered out of order.
- II. Virtual circuit network provides connection-oriented service, and Datagram network provides connectionless service.
- III. Virtual circuit network is Highly reliable, and Datagram network is not reliable
- IV. Virtual circuit networks are costly, and datagram networks are cost-efficient.

- a. Only I
- b. I & II
- c. II & III
- d. All of these

7. Choose the correct statement/s:

- A. The unit of communication at the physical layer is a bit.

- B. The unit of communication at the network layer is a datagram.
- C. The unit of communication at the transport layer is a segment.
- D. The unit of communication at the transport layer is a user datagram or a packet.

8. Choose the incorrect statement/s: [MSQ]

- A. Computer used for forwarding IP packets is called an IP-router
- B. Session Layer decides whether the way of communication between them is Half Duplex or Full Duplex.
- C. The physical addresses will change from hop to hop, but the logical and port addresses usually remain the same
- D. The two most typical network applications that use UDP are File Transfer Protocol (FTP) and the TELNET

9. Repeater functions at _____

- a. Physical Layer
- b. Data Link Layer
- c. Network Layer
- d. Both (A) and (B)

10. Which of the following statements/is TRUE according to TCP/IP stack [MSQ]

- A. IP hides the underlying network hardware from the network applications.
- B. A set of interconnected physical networks that limit the range of an IP packet is called an "internet".
- C. A node which is connected to n links needs 1 physical-layer protocol.
- D. TCP/IP does not define any specific protocol for the Network Layer.

11. Match the protocols from Group I to one or more in Group II:

Group I	Group II (port, TCP/UDP)
1. TELNET	A. 23 TCP
2. SMTP	B. 25 TCP
3. DHCP-SERVER	C. 67 UDP
4. FTP - DATA	D. 20 TCP
5. FTP - CONTROL	E. 21 TCP
6. DHCP-CLIENT	F. 68 UDP

	G. 67 TCP
	H. 68 TCP

- A. 1- A,2-B,3-C,4-D,5-E,6-F
- B. 1- B,2-B,3-C,4-E,5-D,6-F
- C. 1- A,2-B,3-G,4-E,5-D,6-H
- D. 1- B,2-B,3-G,4-D,5-E,6-H

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