

Graded Assessment – Layered Architecture

1. In a LAN, which address is used to transfer frames to appropriate destination?

- IP address
- **Physical address**
- Domain name
- None of the above

2. Suppose an application layer entity wants to send an L-byte message to its peer process, using an existing TCP connection. The TCP segment consists of the message plus 20 bytes of header. The segment is encapsulated into an IP packet that has an additional 20 bytes of header. The IP packet in turn goes inside an Ethernet frame that has 18 bytes of header and trailer. What is the bandwidth utilization in terms of the percentage of the transmitted bits in the physical layer corresponds to message information if L = 500 bytes?

- 70%
- **90%**
- 80%
- 100%

3. Of the following services, which service(s) does the IP layer provides?

- Error control
- Flow control
- Connection-based data transfer
- **None of the above**

4. Which of the following is true about the ways in which the OSI reference model and TCP/IP reference model differ.

- TCP/IP model does not have presentation layer, but OSI model has
- TCP/IP model does not have session layer, but OSI model has
- **All of the above**
- They differ in the number of layers

5. Which of following statements is true about how the data link layer and transport layer differ?

- **Data link layer is concerned with framing and the transport layer is not**
- Data link layer is concerned with flow control and the transport layer is not
- Data link layer is concerned with multiplexing and the transport layer is not
- All of the above

6. This layer is an addition to OSI model

- Application layer
- Presentation layer
- Session layer
- **Presentation layer and Session layer**

7. The functionalities of presentation layer includes

- Data compression
- Data encryption
- Data decryption
- **All of the above**