

Name:

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COE 342, Term 003
Data & Computer Communications

Quiz# 1

Date: Monday, July 2, 2001

Q1. List in the right order the layers of the OSI model and give a brief definition of the functions performed at each layer.

Q2. The communication tasks for the TCP/IP protocol architecture can be organized into several relatively independent layers. List those layers in the right order and give a brief definition of the functions performed at each layer

Q3. Describe what is meant by encapsulation and segmentation. Give two advantages and two disadvantages of segmentation.

Q4. Indicate whether the following is true or false:

- (1) (True, False) A local area network (LAN) generally covers a large geographical area and rely on circuits provided by a common carrier.
- (2) (True, False) In a circuit-switching network, data are sent in a sequence of packets and each packet is passed through the network from node to node along some path leading from source to destination.
- (3) (True, False) Data rates of wide area networks (WANs) are typically much greater than those of local area networks (LANs).
- (4) (True, False) Sequence number is an item included in the header of the network protocol data unit (PDU).
- (5) (True, False) Destination computer address is an item included in the header of the transport protocol data unit (PDU).
- (6) (True, False) X.25 and Ethernet are examples of standards used in the Internet layer in the TCP/IP protocol architecture.
- (7) (True, False) The internet protocol (IP) is used to provide the routing function between two computers communicating across a single network.
- (8) (True, False) For connectionless data transfer, a connection identifier is used by both communicating entities to reduce overhead as connection identifiers are generally shorter than global identifiers.
- (9) (True, False) Addressing mode determines whether the address is unicast, mulicast or broadcast.
- (10) (True, False) The transmission control protocol (TCP) is implemented in all of the end systems and routers, while the internet protocol (IP) is implemented only in the end systems.