

**Name:**

**Id#**

**COE 342, Term 012**  
**Data & Computer Communications**

**Quiz# 1**

Date: Monday, March 4, 2002

**Q1.** List in the right order the layers of the OSI model.

**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.

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

**Q4.** Indicate whether the following is true or false and if it is false correct it:

(1) (True, False) The network layer provides the physical interface between the computer and the transmission medium.

(2) (True, False) Circuit Switching utilizes the bandwidth much better than Packet Switching.

(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) In circuit switching, at each intermediate node the entire packet is received before it is forwarded to the next node, while in packet switching the data is continuously routed to the next node without delay.

(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.

(11) (True, False) Packet-switching networks achieve higher data rates than frame relay as they use less overhead for error control.

(12) (True, False) Error Control is required to assure that the source does not overwhelm the destination by sending data faster than they can be processed.

(13) (True, False) The destination Service Access Point (SAP) is an item stored in the header of the transport PDU.

(14) (True, False) The addition of control information to data creates a protocol data unit (PDU) and this process is called Assembly.

(15) (True, False) Virtual circuit is an example of connectionless data transfer where each PDU is treated independently of other PDUs.

(16) (True, False) Sequence numbers are used for ordered delivery, error and flow control.