Quiz 2 Answers

1) The Transport layer differs from the Network layer in that the Transport Layer is the logical communication between **processes** while the Network Layer is the logical communication between **hosts**.

2) A reliable protocol must be chosen for a transport transmission where the packets are received in-order. The best protocol for this is **TCP**

3) UDP is always worse than TCP.

Which of the following statements is true regarding this statement?

A) True
B) False, UDP is always better than TCP
C) False, UDP is faster than TCP
D) False, UDP is more stable than TCP

4) Which of the following is **NOT** a property of UDP?

A) each UDP segment is handled efficiently in batches before being sent
B) UDP does not establish a connection
C) UDP has relatively small segment header
D) UDP has no congestion control

5) In UDP checksum, the sum + checksum must be all 1's. If this is the case then the **Receiver** can deduce that there are **no detected errors**.

6) In stop-and-wait, the sender will resend a packet if the **Acknowledgement (ACK)** is not received. This will be done after the **Timeout**.

7) Consider the transmission between a sender and receiver using Go Back N.

The sender sends packets 0, 1, 2, and 3 in its first sending window.

Packet 2 is lost.

To notify the host of this, the receiver will send an Acknowledge for packet **1** and the sender will resend packets starting from **2**.

8) TCP will open a connection with a 3 way handshake which consists of (Note: {C] and [S] represent client and server respectively):

A)
[C] REQ
[S] ANS, ACK
[C] REQ

B)
[C] REQ
[S] ACK
[C] ACK

C)
[C] SYN, ACK
[S] SYN, ACK
[C] ACK

D)
[C] SYN, SEQ
[S] SYN, SEQ, ACK
[C] ACK, SEQ

9) Convert the following 16 bit binary numbers into the first 4 hex digits of IPv6 notation:
1001 0000 1010 0111

90A7

10) Round Trip Time (RTT) on a link between two hosts is 100 milliseconds and the bandwidth is 10^6 Bytes/second. Assume that the link is reliable (no ack needed). How long does it take to transfer a message of 1000 Kbytes? The header size of the message is 100 bytes.

Total time = P.D (1/2 RTT) + transfer time [(MSG size + header) / BW]
50 + [(1000000 + 100) / 10^6] = 1050.1msec