

COM-208: Computer Networks - Quiz 1 (A)

Name:

1. The transmission delay is:
 - (a) the same thing as the propagation delay.
 - (b) the amount of time it takes for one bit to get from the beginning to the end of a link.
 - (c) the amount of time it takes to push all bits of a packet into the link. *(Correct)*
2. A large file is being transmitted over two consecutive links: one of rate R_1 and one of rate $R_2 > R_1$. Ignore queuing and processing delays. The average throughput is:
 - (a) R_1 *(Correct)*
 - (b) $R_2 - R_1$
 - (c) $\frac{R_1 + R_2}{2}$
3. In a Denial-of-Service attack against a pair of communicating hosts, the goal is to:
 - (a) interrupt the communication between the two hosts. *(Correct)*
 - (b) listen in the exchanged messages on the communication.
 - (c) pretend to be one of the hosts.
4. Packet switching is more efficient than connection switching in terms of resource use, because:
 - (a) it uses fewer switches than connection switching.
 - (b) it uses better TCP congestion control than connection switching.
 - (c) resources are shared on a packet-by-packet basis only among the users that have data to send. *(Correct)*
5. One similarity between the Digital Subscriber Line (DSL) and the Cable internet access is that:
 - (a) both are shared broadcast media.
 - (b) both use fiber-to-the-home technology.
 - (c) both have two different data streams: the downstream and the upstream. *(Correct)*
6. Suppose that we want to transmit packet p . Which of the following depends on the size of p ?
 - (a) The queuing delay that p experiences.
 - (b) The transmission delay that p experiences. *(Correct)*
 - (c) The propagation delay that p experiences.
7. We use layers because:
 - (a) they always improve performance.
 - (b) they reduce complexity and improve flexibility. *(Correct)*
 - (c) Both of the above.
8. The following is true about the queuing delay experienced by a packet that arrives at a buffer:
 - (a) It depends on the bit arrival rate and traffic arrival pattern (burstiness) observed at the buffer. *(Correct)*
 - (b) It is always zero, as long as the bit arrival rate of the buffer is smaller than the bit departure rate.
 - (c) It is always insignificant compared to the transmission and propagation delays experienced by the packet.
9. The forwarding table, that is contained in a packet switch, is used for:
 - (a) storing packets before forwarding them to one of the output links.
 - (b) storing metadata that helps the switch decide where to send the packets. *(Correct)*
 - (c) storing packets that are dropped from a link queue.
10. Two regional ISPs can exchange traffic directly between each other instead of paying a tier-1 ISP, in order to save costs. This arrangement is called:
 - (a) Internet Exchange Point
 - (b) Peering *(Correct)*
 - (c) Multi-homing

COM-208: Computer Networks - Quiz 1 (B)

Name:

- One similarity between the Digital Subscriber Line (DSL) and the Cable internet access is that:
 - both are shared broadcast media.
 - both use fiber-to-the-home technology.
 - both have two different data streams: the downstream and the upstream. *(Correct)*
- The following is true about the queuing delay experienced by a packet that arrives at a buffer:
 - It depends on the bit arrival rate and traffic arrival pattern (burstiness) observed at the buffer. *(Correct)*
 - It is always zero, as long as the bit arrival rate of the buffer is smaller than the bit departure rate.
 - It is always insignificant compared to the transmission and propagation delays experienced by the packet.
- We use layers because:
 - they always improve performance.
 - they reduce complexity and improve flexibility. *(Correct)*
 - Both of the above.
- The transmission delay is:
 - the same thing as the propagation delay.
 - the amount of time it takes for one bit to get from the beginning to the end of a link.
 - the amount of time it takes to push all bits of a packet into the link. *(Correct)*
- Two regional ISPs can exchange traffic directly between each other instead of paying a tier-1 ISP, in order to save costs. This arrangement is called:
 - Internet Exchange Point
 - Peering *(Correct)*
 - Multi-homing
- In a Denial-of-Service attack against a pair of communicating hosts, the goal is to:
 - interrupt the communication between the two hosts. *(Correct)*
 - listen in the exchanged messages on the communication.
 - pretend to be one of the hosts.
- The forwarding table, that is contained in a packet switch, is used for:
 - storing packets before forwarding them to one of the output links.
 - storing metadata that helps the switch decide where to send the packets. *(Correct)*
 - storing packets that are dropped from a link queue.
- Suppose that we want to transmit packet p . Which of the following depends on the size of p ?
 - The queuing delay that p experiences.
 - The transmission delay that p experiences. *(Correct)*
 - The propagation delay that p experiences.
- Packet switching is more efficient than connection switching in terms of resource use, because:
 - it uses fewer switches than connection switching.
 - it uses better TCP congestion control than connection switching.
 - resources are shared on a packet-by-packet basis only among the users that have data to send. *(Correct)*
- A large file is being transmitted over two consecutive links: one of rate R_1 and one of rate $R_2 > R_1$. Ignore queuing and processing delays. The average throughput is:
 - R_1 *(Correct)*
 - $R_2 - R_1$
 - $\frac{R_1 + R_2}{2}$