Week 7 Quiz Results for Austin Koske

Score for this attempt: 17.93 out of 20
Submitted Oct 19 at 10:07pm
This attempt took 3 minutes.

Correct answer

Question 1
2 / 2 pts

6.2-1. Two dimensional parity. Which of the following statements is true about a two-dimensional parity check (2D-parity) computed over a payload?

- [x] 2D-parity can detect any case of a single bit flip in the payload.
- [x] 2D-parity can detect and correct any case of a single bit flip in the payload.
- [x] 2D-parity can detect any case of two bit flips in the payload.
- [ ] 2D-parity can detect and correct any case of two bit flips in the payload.

Nice! This answer is correct.

Question 2
1 / 2 pts

6.3-2. Pure Aloha and CSMA. Which of the following statements is true about **both** Pure Aloha, and CSMA (both with and without collision detection?

- [x] There can be simultaneous transmissions resulting in collisions.
- [ ] There can be times when the channel is idle, when a node has a frame to send, but is prevented from doing so by the medium access protocol.
- [ ] Pure Aloha and CSMA can achieve 100% channel utilization, in the case that all nodes always have frames to send.
- [ ] Pure Aloha and CSMA can achieve 100% utilization, in the case that there is only one node that always has frames to send

Correct answer

Question 3
2 / 2 pts

6.3-4. Characteristics of Multiple Access Protocols (a). Consider the following multiple access protocols that we've studied: (1) TDMA, and FDMA (2) CSMA (3) Aloha, and (4) polling. Which of these protocols are **collision-free** (e.g., collisions will never happen)?

- [x] TDMA and FDMA
- [ ] Aloha
- [ ] CSMA and CSMA/CD
- [x] Polling

Nice! This answer is correct.

Correct answer

Question 4
2 / 2 pts

6.4-1. Different types of addressing (a). We've now learned about both IPv4 addresses and MAC addresses. Consider the address properties below, and use the pulldown menu to indicate which of these properties is *only* a property of MAC addresses (and therefore is **not** a property of IPv4 addresses - careful!).

- [ ] This is a 32-bit address.
- [x] This is a 48-bit address.
- [ ] This is a 128-bit address.
- [x] This is a link-layer address.
- [ ] This is a network-layer address.
- [ ] This address must be unique among all hosts in a subnet.
- [x] This address remains the same as a host moves from one network to another.
- [ ] This address is allocated by DHCP.

Nice! This answer is correct.

Question 5
1.33 / 2 pts

6.4-2. Different types of addressing (b). We've now learned about both IPv4 addresses and MAC addresses. Consider the address properties below, and use the pulldown menu to indicate which of these properties is *only* a property of IPv4 addresses (and therefore is **not** a property of MAC addresses - careful!).

- [x] This is a 32-bit address.
- [ ] This is a 48-bit address.
- [ ] This is a 128-bit address.
- [ ] This is a link-layer address.
- [x] This is a network-layer address.
- [x] This address must be unique among all hosts in a subnet.
- [ ] This address remains the same as a host moves from one network to another.
- [x] This address is allocated by DHCP.

Correct answer

Question 6
2 / 2 pts

6.4-3. Different types of addressing (c). We've now learned about both IPv4 addresses and MAC addresses. Consider the address properties below, and use the pulldown menu to indicate which of these properties is a property of *both* IPv4 addresses *and* MAC addresses.

- ○ This is a 32-bit address.
- ○ This is a 48-bit address.
- ○ This is a 128-bit address.
- ○ This is a link-layer address.
- ○ This is a network-layer address.
- ◉ This address must be unique among all hosts in a subnet.
- ○ This address remains the same as a host moves from one network to another.
- ○ This address is allocated by DHCP.

Nice! This answer is correct.

Question 7
1.6 / 2 pts

6.4-4. Fields in an Ethernet frame. Use the pulldown menus below to match the name of the field with the function/purpose of a field within an Ethernet frame.

Cyclic redundancy check (CRC) field

Used only to detect, but neve

Used to detect and possibly correct bit-level errors in the frame.

Source address field

48-bit MAC address of the se

Data (payload) field

The contents of this field is ty

Type field.

Used to demultiplex the payl

Sequence number field

This field does not exist in the

Other Incorrect Match Options:

- Used only to detect, but never correct, bit-level errors in the frame.
- Used for flow control.

Correct answer

Question 8
2 / 2 pts

6.4-5. Switch forwarding and filtering. Suppose an Ethernet frame arrives to an Ethernet switch, and the Ethernet switch does not know which of its switch ports leads to the node with the given destination MAC address? In this case, what does the switch do?

- Choose a port randomly and forward the frame there.
- Use the address resolution protocol (ARP) to determine the appropriate outgoing port.
- Flood the frame on all ports except the port on which the frame arrived.
- Drop the frame without forwarding it.

Nice! This answer is correct.

Correct answer

Question 9
2 / 2 pts

6.4-6. Self-learning switches. Which of the following statements are true about a self learning switch?

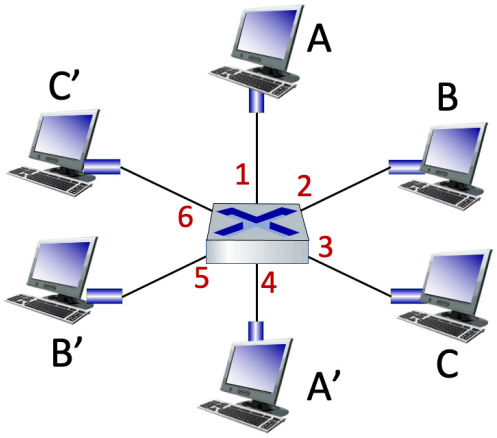
- [ ] A self-learning switch never forgets a self-learned association of a MAC address x and switch port y.
- [x] A self learning switch associates the source MAC address on an incoming frame with the port on which it arrived, and stores this matching in a table. The switch has now learned the port that leads to that MAC address.
- [x] A self-learning switch will age-out (forget) a self-learned association of a MAC address x and switch port y if it doesn't see a frame with MAC address x incoming on switch port y after some amount of time.
- [x] A self-learning switch frees a network manager from a least one configuration task that might be associated with managing a switch

Nice! This answer is correct.

Correct answer

Question 10
2 / 2 pts

6.4-7. Learning switch scenario. Consider the simple star-connected Ethernet LAN shown below, and suppose the Ethernet switch is a learning switch, and that the switch table is initially empty. Suppose C sends an Ethernet frame address to C' and C ' replies back to C. How many of these two frames are also received at B's interface?



- 0
- 1
- 2
- 4

Nice! This answer is correct.

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