Week 10 Summary Exercises

Due Dec 8 at 11:59pm   **Points** 76   **Questions** 24

Available Dec 1 at 12am - Dec 8 at 11:59pm 8 days   **Time Limit** 360 Minutes

Allowed Attempts 2

Take the Quiz Again

Attempt History

	Attempt	Time	Score
LATEST	**Attempt 1**	132 minutes	75.33 out of 76

Score for this attempt: **75.33** out of 76

Submitted Dec 5 at 12:29am

This attempt took 132 minutes.

Question 1   2 / 2 pts

When encountering an IPv4-only router, an IPv6 datagram is dropped.

○ True

Correct!   ◉ False

Question 2   2 / 2 pts

The IPv6 address size is 128 bits.

Correct!   ◉ True

○ False

Question 3   2 / 2 pts

::ffff:ABCD:DBCA is a valid preferred-format IPv6 address.

- ○ True

Correct!

- ● False

Question 4   2 / 2 pts

Star Ethernet uses the same multiple access control as Bus Ethernet.

- ○ True

Correct!

- ● False

Question 5   1.33 / 2 pts

Select all Channel Partitioning schemes below.

- ☐ Star-configured Ethernet

- ☐ Token Ring Multiple Access

Correct!

- ☑ TDMA

- ☐ Bus Ethernet

Correct!

- ☑ FDMA

orrect Answer   ☐ WDMA

                     ☐ CSMA

Question 6   2 / 2 pts

A switch is a network-layer device.

        ○ True

Correct!   ◉ False

Question 7   2 / 2 pts

For an machine using 2-dimensional even parity for error
detection/correction, and the following received bytes, where is the error? If
there is no error, select "No Error" for both boxes. Bits are numbered left-to-
right and top-down, indexed 1 => 7 then Parity.

Byte # Parity

Bit # Parity

Byte #	Code	Parity
1	1000 011	1
2	1001 110	0
3	1001 101	0
4	1100 011	0
5	1101 000	1
6	1100 110	0
7	1010 100	1
Parity	1111 001	0

Answer 1:

Correct!

    Parity

Answer 2:

Correct!

    Parity

Question 8   2 / 2 pts

A multiple access scheme which divides the usable medium into "chunks" and allows each device sole acces to some number of "chunks" is called...

  ⚪ "taking turns" protocol

  ⚪ collision avoidance protocol

  ⚪ random access protocol

Correct!

  ⦿ channel partitioning protocol

Question 9   2 / 2 pts

A link-layer link between only two adjacent nodes is called a/an point to point link.

Answer 1:
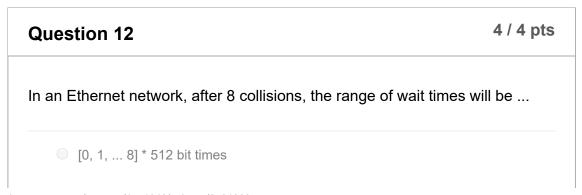
Correct!

    point to point

Question 10   2 / 2 pts

A "collision" is best described as...

Correct!

⊙ when a node receives two or more frames at the same time.

○ when two or more frames are in the channel at the same time.

○ all of these

○ when two or more nodes transmit frames at the same time.

Question 11   2 / 2 pts

Select all "Taking Turns" schemes below.

Correct!

☑ Token Ring Multiple Access

☐ Bus Ethernet

☐ TDMA

Correct!

☑ Polling Multiple Access

☐ FDMA

☐ CSMA

☐ Star-configured Ethernet

Question 12   4 / 4 pts

In an Ethernet network, after 8 collisions, the range of wait times will be ...

○ [0, 1, ... 8] * 512 bit times

○ ([0, 1, ... 255]) * 256 bit times

Correct!

◉ [0, 1, ... 255] * 512 bit times

○ [0, 1, ... 256] * 512 bit times

Question 13   4 / 4 pts

If an Ethernet sender senses a clear channel, and begins transmission, but shortly thereafter detects a collision, it will...

○ Finish transmission and wait for an ACK.

Correct!

◉ Terminate transmission and enter exponential backoff.

○ Terminate and restart transmission.

○ Send a jam signal and restart transmission.

Question 14   4 / 4 pts

For a 10Mbps link, 1000 bit times is 0.1ms.

Correct!

◉ True

○ False

Question 15   6 / 6 pts

Given the following "byte stuffing" scheme:

Character in data	Characters sent
soh	esc x
eot	esc y
esc	esc z

Character	Hex code
soh	01h
eot	04h
esc	1Bh
'x'	78h
'y'	79h
'z'	7Ah

Note: soh and eot are the framing characters.

DATA: **79h 01h 78h 1Bh**

If byte stuffing is used to transmit Data, what is the byte sequence of the frame (including framing characters)? Format answer with capital hex values, with each value followed by an 'h' and separated by spaces, for example: 0Ah 12h

Correct!

01h 79h 1Bh 78h 78h 1Bh 7Ah 04h

orrect Answers

01h 79h 1Bh 78h 78h 1Bh 7Ah 04h

Question 16   4 / 4 pts

When a mobile unit moves from a home or foreign agent to another (foreign) agent, the new agent must assign.... (Check all that apply)

☐ a new home address to the correspondent

☐ a new name (alias) to the mobile unit's home network

Correct!

☑ a new "care-of" address to the mobile unit

Question 17   4 / 4 pts

In one type of wireless network, hosts communicate directly with other hosts that are within range. This communication model forms a "grid" called a(n)

○ basic service set network

○ none of these

○ infrastructure network

Correct!   ◉ ad-hoc network

○ access point network

Question 18   4 / 4 pts

Which of the following are major issues that must be handled in wireless networks (i.e., issues that are more significant than in wired networks). Check all that apply.

Correct!   ☑
Radio waves are more susceptible to interference than signals carried on cable

Correct!   ☑ Hosts may frequently move from one network to another

Correct!   ☑ Obstacles that block radio signals

Correct!   ☑ Multi-path propagation when radio signals bounce off obstacles

Correct!   ☑ The "hidden node" problem

Question 19   4 / 4 pts

A device which is connected to the network through a link which does not utilize any physical connection is a Wireless device.

Answer 1:

Correct!

Wireless

Question 20   4 / 4 pts

In direct routing, after the initial contact with the home network, the correspondent sends packets to

○ The permanent address

○ The home agent

Correct!   ◉ The care-of address

Question 21   4 / 4 pts

When using an *RSA* algorithm to construct private and public keys for a public key encryption system, choose prime numbers *p* and *q*, and then calculate *n = pq*, *z = (p-1)(q-1)*. Then choose *e* and *d* to create the public key and the private key . Suppose that *p = 5*, and *q = 11*. Which of the following values will work for *d* and *e*? Check all that apply.

☐ e = 5, d = 29

Correct!   ☑ e = 7, d = 63

☐ e = 29, d = 63

Question 22   4 / 4 pts

When an organization establishes a network security policy, which of the following should be considered? Check all that apply.

Correct! ☑ The cost of installing "secure" systems.

Correct! ☑ The value of the information that is stored or transmitted by the site.
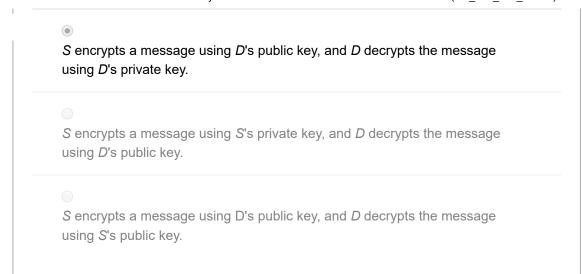
Correct! ☑ The cost of damage control after various types of security breaches.

Question 23   4 / 4 pts

An organization typically implements its firewall security by using

○ the Internet Control Messaging Protocol

○ Network Address Translation

Correct! ◉ packet filtering

○ Address Resolution Protocols

○ none of these

Question 24   4 / 4 pts

S represents a <u>source host</u> and *D* represents a <u>destination host</u>. Which of the following is the most typical use of public key encryption, when *S* sends an encrypted message to *D*?

○ *S* encrypts a message using *S*'s public key, and *D* decrypts the message using *D*'s private key.

Correct!

○ (selected)

S encrypts a message using *D*'s public key, and *D* decrypts the message using *D*'s private key.

○

S encrypts a message using *S*'s private key, and *D* decrypts the message using *D*'s public key.

○

S encrypts a message using D's public key, and *D* decrypts the message using *S*'s public key.

Quiz Score: **75.33** out of 76

○ (selected)