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

Attempt History

	Attempt	Time	Score
KEPT	Attempt 2	117 minutes	76 out of 76
LATEST	Attempt 2	117 minutes	76 out of 76
	Attempt 1	132 minutes	75.33 out of 76

Score for this attempt: **76** out of 76
Submitted Dec 8 at 11:50pm
This attempt took 117 minutes.

Question 1 — 2 / 2 pts

The IPv6 address size is 120 bits.

- True
- False

Correct!

Question 2 — 2 / 2 pts

The IPv6 header does not have a checksum.

- True
- False

Correct!

Question 3

2 / 2 pts

1234::a03:abcd is a valid preferred-format IPv6 address.

Correct!

- (•) True
- ( ) False

Question 4

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 # [Select]

Bit # [Select]

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	1

Answer 1:

Correct!

No Error

Answer 2:

Correct!

No Error

Question 5

2 / 2 pts

A MAC address was originally designed to be permanent and unique.

Correct!

- (•) True
- ( ) False

Question 6

2 / 2 pts

Which are functions of the Ethernet preamble? (Check all that apply)

- [ ] Error detection/correction
- [ ] Address switching.
- [ ] Stop signal

Correct!

- [x] Start signal

Correct!

- [x] Clock synchronization

Correct!

- [x] Circuit wake-up

Question 7

2 / 2 pts

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

- True
- False

Correct!

Question 8

2 / 2 pts

There are reserved MAC addresses unusable for devices.

- True
- False

Correct!

Question 9

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 # [Select]

Bit # [Select]

Byte #	Code	Parity
1	1000 011	1
2	1000 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	1

Answer 1:

Correct!

2

Answer 2:

Correct!

4

Question 10

2 / 2 pts

When sending a message to all devices on a link, you would send it to the broadcast MAC address: 00-00-00-00-00-00

- True

Correct!

- (•) False

Question 11

2 / 2 pts

A multiple access scheme which uses a master node to poll each slave node, and control who has 'permission' to transmit at any given time is called...

- channel partitioning protocol
- reservation protocol
- random access protocol

Correct!

- (•) "taking turns" protocol

Question 12

4 / 4 pts

For a 10Mbps link, 100 bit times is 0.1ms.

- True
- False

Correct!

Question 13

4 / 4 pts

Ethernet uses a RTS/CTS contention-free period.

- True
- False

Correct!

Question 14

4 / 4 pts

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

- True
- False

Correct!

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: **78h 79h 01h 04h**

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 78h 79h 1Bh 78h 1Bh 79h 04h

orrect Answers

01h 78h 79h 1Bh 78h 1Bh 79h 04h

Question 16

4 / 4 pts

In one type of wireless network, hosts communicate through a central “base station” access point, which is typically connected to a wired network. This communication model is called a(n)

- ad-hoc network
- access point network
- none of these
- basic service set network
- infrastructure network

Correct!

Question 17

4 / 4 pts

A device which moves between networks is a Mobile device.

Answer 1:

Correct!

Mobile

Question 18

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)

Correct!

- [x] a new “care-of” address to the mobile unit
- [ ] a new name (alias) to the mobile unit’s home network
- [ ] a new home address to the correspondent

Question 19

4 / 4 pts

The default multiple access scheme of 802.11g is RTS/CTS.

- ( ) True

Correct!

- (•) False

Question 20

4 / 4 pts

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

Correct!

- (●) The care-of address
- ( ) The home agent
- ( ) The permanent address

Question 21

4 / 4 pts

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

Correct!

- [x] The value of the information that is stored or transmitted by the site.

Correct!

- [x] The cost of installing "secure" systems.

Correct!

- [x] The cost of damage control after various types of security breaches.

Question 22

4 / 4 pts

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

Correct!

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

S encrypts a message using *S*'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.

Question 23

4 / 4 pts

An organization typically implements its firewall security by using

- Address Resolution Protocols
- the Internet Control Messaging Protocol
- none of these
- Network Address Translation
- packet filtering

Correct!

Question 24

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 = 29, d = 63
- e = 7, d = 63

Correct!

- [ ] e = 5, d = 29

Quiz Score: **76** out of 76