Module 10 Summary Exercises

Due Mar 16 at 1:59am **Points** 76 **Questions** 24 **Time Limit** None
Allowed Attempts 2

Instructions

Attempt History

	Attempt	Time	Score
KEPT	Attempt 2	33 minutes	76 out of 76
LATEST	Attempt 2	33 minutes	76 out of 76
	Attempt 1	578 minutes	70 out of 76

Score for this attempt: **76** out of 76
Submitted Mar 14 at 10:35pm
This attempt took 33 minutes.

Question 1

2 / 2 pts

The IPv6 address size is 128 bits.

Correct!

- (•) True
- ( ) False

Question 2

2 / 2 pts

IPv6 datagrams cannot be converted to IPv4 datagrams without losing any information.

Correct!

- (•) True
- ( ) False

Question 3

2 / 2 pts

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

- True
- False

Correct!

Question 4

2 / 2 pts

Given the following received byte on an even-parity machine, there is definitely at least one error.

```
01001101
```

- True
- False

Correct!

Question 5

2 / 2 pts

In Random Access multiple access schemes, no two nodes will ever transmit at the same time.

- True
- False

Correct!

Question 6

2 / 2 pts

It is fairly easy to detect collisions in wired networks.

- True

Correct!

False

Question 7

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...

Correct!

- (•) channel partitioning protocol
- ( ) collision avoidance protocol
- ( ) random access protocol
- ( ) "taking turns" protocol

Question 8

2 / 2 pts

On the sending or receiving host, most of the protocol tasks "below" the application layer of the protocol stack (data encapsulation, IP addressing, etc.) are handled by

- ( ) direct memory access (DMA)
- ( ) the central processing unit (CPU)
- ( ) network address translation (NAT)

Correct!

- (•) the network interface controller (NIC)

Question 9

2 / 2 pts

The address table shown below would be maintained by a host, router, or switch by...

Hardware address to IP address table

Hardware Address	IP Address
00-13-72-BA-C0-23	10.0.1.142
00-13-72-BA-9E-F0	10.0.2.5

00-13-72-BA-33-7A	10.0.3.213

Correct!

- (●) ARP
- ( ) TCP/IP
- ( ) NIC
- ( ) ICMP

Question 10

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...

- ( ) random access protocol

Correct!

- (●) "taking turns" protocol
- ( ) reservation protocol
- ( ) channel partitioning protocol

Question 11

2 / 2 pts

It is fairly easy to detect collisions in wireless networks.

- ( ) True

Correct!

- (●) False

Question 12

4 / 4 pts

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

- ( ) True

Correct!

- False

Question 13

4 / 4 pts

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

- Send a jam signal and restart transmission.
- Finish transmission and wait for an ACK.

Correct!

- Terminate transmission and enter exponential backoff.
- Terminate and restart transmission.

Question 14

4 / 4 pts

Given the following diagram of typical Ethernet hardware frame with partitions A, B, C, D, Data, and A:

Select the proper portion of the data encapsulation from the dropdown menu, which corresponds to the letter in the figure.

A	B	C	D	Data	A

A: [Select]

B: [Select]

C: [Select]

D: [Select]

Answer 1:

Correct!

hardware framing character(s)

Answer 2:

Correct!

hardware frame header(s)

Answer 3:

Correct!

IP header(s)

Answer 4:

Correct!

TCP/UDP header(s)

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

Correct Answers

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

Question 16

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)

- access point network

- infrastructure network
- none of these
- basic service set network
- Correct! ad-hoc network

Question 17

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 18

4 / 4 pts

Which of the following are used in a wireless network such as 802.11n?

- Correct! Exponential back-off/retry for collision resolution
- Correct! Collision Avoidance
- Correct! Carrier Sense Multiple Access
- Collision Detection
- Correct! Reservation system with Request to Send (RTS) and Clear to Send (CTS)

Question 19

4 / 4 pts

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

- Correct! The permanent address

- The care-of address
- The foreign agent

Question 20

4 / 4 pts

A device which moves between networks is a Mobile device.

Answer 1:

Correct!

Mobile

Question 21

4 / 4 pts

An organization typically implements its firewall security by using

- Address Resolution Protocols

Correct!

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

Question 22

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 23

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 24

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*?

○ *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.

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.

Quiz Score: **76** out of 76