Week 2 Summary Exercises

Due Oct 13 at 11:59pm **Points** 82 **Questions** 20
Available Oct 6 at 12am - Oct 13 at 11:59pm 8 days **Time Limit** 360 Minutes
Allowed Attempts 2

Take the Quiz Again

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	254 minutes	82 out of 82

Score for this attempt: **82** out of 82
Submitted Oct 12 at 5:40pm
This attempt took 254 minutes.

Question 1

2 / 2 pts

Convert the following units. Your answer should be a whole number with no text in the answer field:

22.74 Mbps = _____ Kbps

Correct!

22,740

orrect Answer

22,740

Question 2

2 / 2 pts

Convert the following units. Your answer should be a whole number with no text in the answer field:

50 B = _____ bits

Correct!

400

orrect Answer

400

Question 3

5 / 5 pts

Suppose there are 60 packets entering a queue at the same time. Each packet is of size 4 MiB. The link transmission rate is 2.2 Gbps. What is the queueing delay of packet number 43 (in milliseconds, rounded to one decimal place, e.g. 0.01234 seconds would be entered as "12.3")

Correct!

640.6

orrect Answer

640.6 margin of error +/- 0.1

Question 4

5 / 5 pts

How long does it take to send a 16 MiB file from Host A to Host B over a circuit-switched network, assuming:

- Total link transmission rate = 28.5 Gbps.
- Network is TDM, with 3 permitted users, each with an equal time slot size.
- A link connection requires a setup time of 51.5 ms.

Your answer should be in **miliseconds** (ms) with one decimal place, and without the unit (e.g. "140.6" without the quotes)

Correct!

65.6

orrect Answer

65.6 margin of error +/- 0.2

Question 5

8 / 8 pts

Given a link with a maximum transmission rate of 82.6 Mbps. Only two computers, X and Y, wish to transmit starting at time t = 0 seconds. Computer X sends ***fileX*** (17 MiB) and computer Y sends ***fileY*** (184 KiB), both starting at time t = 0.

- Statistical multiplexing is used, with details as follows
  - Packet Payload Size = 1000 Bytes
  - Packet Header Size = 24 Bytes (overhead)
- Ignore Processing and Queueing delays
- Assume partial packets (packets consisting of less than 1000 Bytes of data) are padded so that they are the same size as full packets.
- Assume continuous alternating-packet transmission.
- Computer X gets the transmission medium first.

At what time (t = ?) would *FileX* finish transmitting?

Give answer in seconds, without units, and round to two decimal places (e.g. for an answer of 12.4567 seconds you would enter "12.46" without the quotes)

Correct!

1.79

orrect Answer

1.79 margin of error +/- 0.02

Question 6

4 / 4 pts

In the Internet protocol stack, the Application Layer is responsible for assembling user data to be sent.

Answer 1:

Correct!

Application Layer

Question 7

4 / 4 pts

Please select all examples of systems using unguided media.

Correct! ☑ Human speech

☐ Ethernet Home Networks

Correct! ☑ Global Positioning System (GPS

☐ Fiber-Optic Internet

Correct! ☑ Signal flares

Correct! ☑ 802.11 Wifi Home Networks

☐ Cable television/internet

☐ ADSL

Question 8

4 / 4 pts

Please place the following in the order of the OSI layering model.

Layer 7: [Select]

Layer 6: [Select]

Layer 5: [Select]

Layer 4: [Select]

Layer 3: [Select]

Layer 2: [Select]

Layer 1: [Select]

Answer 1:

Correct! Application Layer

Answer 2:

Correct! Presentation Layer

Answer 3:

Correct! Session Layer

Answer 4:

Correct! Transport Layer

Answer 5:

Correct! Network Layer

Answer 6:

Correct! Link Layer

Answer 7:

Correct! Physical Layer

Question 9

4 / 4 pts

When a packet is passed down to the next lower layer, it is _____ into the lower-layer packet.

- interoperated
- morphed

Correct!

- (•) encapsulated
- ( ) multiplexed

Question 10

4 / 4 pts

In the Internet protocol stack, if a data transfer is connection-oriented, it is implemented at the Transport Layer .

Answer 1:

Correct!

Transport Layer

Question 11

4 / 4 pts

If I were to send information into the internet with your IP address listed as the sender IP, I would be _____

- ( ) sniffing your packets

Correct!

- (•) spoofing my IP address
- ( ) infecting your computer with a virus
- ( ) executing a DoS attack

Question 12

4 / 4 pts

A third party intercepting a packet and downloading its information before it is sent onward toward its destination is called _____

- an IP spoofer

Correct!

- a packet sniffer
- a virus infection
- malware
- a DoS attack

Question 13

4 / 4 pts

Merging multiple communication streams into the same media is called _____?

- morphing
- interoperability

Correct!

- multiplexing
- encapsulation

Question 14

4 / 4 pts

A pair of sockets is called a connection

Answer 1:

Correct!

connection

Question 15

4 / 4 pts

In a hybrid client-server/P2P architecture, one host is always on, and other hosts may connect and be handed off amongst themselves by this first host.

Answer 1:

Correct!

hybrid client-server/P2P

Question 16

4 / 4 pts

In a client-server architecture, one host is always on, and other hosts may connect and be continually serviced by this first host.

Answer 1:

Correct!

client-server

Question 17

4 / 4 pts

What transport-layer services are provided by the base TCP protocol? (Check all that apply)

- [ ] Message security
- [ ] Jitter minimization

Correct!

- [x] Connection-oriented service
- [ ] Minimum bandwidth

Correct!

- [x] Flow control

Correct!

- [x] Congestion control

Correct!

- [x] Reliable data transmission

Question 18

4 / 4 pts

In the internet, an application-level protocol implemeting live-streaming video would most likely utilize UDP as its transport-layer protocol.

Answer 1:

Correct!

UDP

Question 19

4 / 4 pts

A program running on a host is called a process

Answer 1:

Correct!

process

Question 20

4 / 4 pts

The minimum necessary information for identifying a process on a remote host would be (check all that apply):

Correct!

- [x] Remote Port Number
- [ ] Local Socket Info

- [ ] Gateway Router IP
- [ ] Local Port Number

Correct!

- [x] Remote Host IP
- [ ] Local Host IP

Quiz Score: **82** out of 82