Week 1 Summary Exercises

Due Jul 2 at 11:59pm **Points** 70 **Questions** 26
Available Jun 25 at 12am - Jul 2 at 11:59pm 8 days **Time Limit** 360 Minutes **Allowed Attempts** 2

Instructions

There's a six-hour time limit.

This quiz was locked Jul 2 at 11:59pm.

Attempt History

	Attempt	Time	Score
KEPT	Attempt 2	42 minutes	65 out of 70
LATEST	Attempt 2	42 minutes	65 out of 70
	Attempt 1	136 minutes	52.33 out of 70

Score for this attempt: **65** out of 70
Submitted Jul 2 at 12:11am
This attempt took 42 minutes.

Question 1

2 / 2 pts

The internet core is a packet-switched network

Answer 1:

Correct! packet-switched

Question 2

2 / 2 pts

What devices reside on the network edge?

Correct! ☑ Smart TVs

Correct! ☑ Tablets

Correct! ☑ Printers

Correct! ☑ Desktop Computers

Correct! ☑ Laptops

☐ Switches

☐ Routers

Question 3

2 / 2 pts

Time spent checking bit errors and deciding output link is considered Processing Delay .

Answer 1:

Correct! Processing Delay

Question 4

2 / 2 pts

[Select] is proportional to the rate of travel of electrons through the transmission medium, whereas [Select] porportional to the rate at which the receiving node can interpret the electronic signal.

Answer 1:

Correct! Propagation Delay

Answer 2:

Correct! Transmission Delay

Question 5

2 / 2 pts

The internet is a network of networks.

Correct!

- (•) True
- ( ) False

Question 6

2 / 2 pts

Time spent being placed on the transmission medium is called Transmission Delay .

Answer 1:

Correct!

Transmission Delay

Question 7

2 / 2 pts

In a circuit-switched network, if a user is allowing his available bandwidth to be idle, it is called a silent period

Answer 1:

Correct!

a silent period

Question 8

2 / 2 pts

Al Gore invented the internet.

- ( ) True

Correct!

- (•) False

Question 9

2 / 2 pts

A FDM-based network is a circuit-switched network

Answer 1:

Correct! circuit-switched

Question 10

2 / 2 pts

A network is a system for connecting multiple computers using a single transmission technology.

Correct!

- (●) True
- ( ) False

Question 11

2 / 2 pts

Time spent waiting for the transmission medium to become available is called Queueing Delay .

Answer 1:

Correct! Queueing Delay

Question 12

2 / 2 pts

The UDP protocol implements congestion control.

- ( ) True

Correct!

- (●) False

Question 13

2 / 2 pts

The TCP protocol implements reliable data transfer.

Correct!

- (•) True
- ( ) False

Question 14

2 / 2 pts

A network is a system for connecting computers using multiple, possibly different, transmission technologies.

- ( ) True

Correct!

- (•) False

Question 15

2 / 2 pts

What devices reside in the network core?

Correct!

- [x] Switches

Correct!

- [x] Routers
- [ ] Laptops
- [ ] Smart TVs
- [ ] Tablets
- [ ] Printers
- [ ] Desktop Computers

Question 16

2 / 2 pts

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

5 KiB = _____ bytes

Correct!

5120.0000

Correct Answer

5120.0

Question 17

2 / 2 pts

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

33.12 Mbps = _____ Kbps

Correct!

33120.0000

Correct Answer

33120.0

Question 18

2 / 2 pts

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

874 B = _____ bits

Correct!

6992.0000

Correct Answer

6992.0

Question 19

2 / 2 pts

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

44 KiB = _____ bits

Correct!

360448.0000

Correct Answer

360448.0

Question 20

2 / 2 pts

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

19 MiB = _____ bytes

Correct!

19922944.0000

Correct Answer

19922944.0

Question 21

5 / 5 pts

What is the total utilization of a circuit-switched network, accommodating five users with equal bandwidth share, and the following properties:

- Three users each using 99% of their bandwidth share
- Two users each using 40% of their bandwidth share

Give answer in percent, with one decimal place (normal rounding) and no percentage sign (e.g. for 49.15% you would enter "49.2" without the quotes).

Correct!

75.4000

Correct Answer

75.4 margin of error +/- 0.1

Question 22

5 / 5 pts

Suppose there are 51 packets entering a queue at the same time. Each packet is of size 5 MiB. The link transmission rate is 2 Gbps. What is the queueing delay of packet number 17 (in milliseconds, rounded to one decimal place, e.g. 0.01234 seconds would be entered as "12.3")

Correct!

335.5000

Correct Answer

335.5 margin of error +/- 0.1

Question 23

5 / 5 pts

How long does it take to send a 2 MiB file from Host A to Host B over a circuit-switched network, assuming:

- Total link transmission rate = 28.2 Gbps.
- Network is TDM, with 10 permitted users, each with an equal time slot size.
- A link connection requires a setup time of 86.2 ms.

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

Correct!

92.1000

Correct Answer

92.1 margin of error +/- 0.2

Question 24

0 / 5 pts

Suppose there are 3 routers in sequence between Host A and Host B, all of which use store-and-forward routing. What is the total end-to-end delay for a packet originating from Host A with destination Host B, under the following conditions.

Each of the link transmission rates are 8 Mbps

The total distance from Host A to Host B along its path of transmisison is 143 km

The speed of propagation through the transmission medium is is 2.7×10^8 m/s

The packet size is 2 KiB

Remember that you must also uplink from Host A to the first router. Give answer in milliseconds, rounded to 1 decimal place, without units (e.g. for 0.12345 seconds you would enter "123.5" without the quotes).

You Answered

7.7000

Correct Answer

8.8 margin of error +/- 0.1

Question 25

5 / 5 pts

What is the total utilization of a circuit-switched network, accommodating five users with equal bandwidth share, and the following properties:

- Two users each using 81% of their bandwidth share
- Two users each using 44% of their bandwidth share
- One user using 16% of their bandwidth share

Give answer in percent, with one decimal place (normal rounding) and no percentage sign (e.g. for 49.15% you would enter "49.2" without the quotes).

Correct!

53.2000

Correct Answer

53.2 margin of error +/- 0.1

Question 26

5 / 5 pts

Suppose there are 86 packets entering a queue at the same time. Each packet is of size 96 KiB. The link transmission rate is 1 Gbps. What is the queueing delay of packet number 38 (in milliseconds, rounded to one decimal place, e.g. 0.01234 seconds would be entered as "12.3")

Correct!

29.1000

Correct Answer

29.1 margin of error +/- 0.1

Quiz Score: **65** out of 70