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.

Correct!

Question 1	2 / 2 pts
The internet core is a packet-switched network	
Answer 1:	
packet-switched	



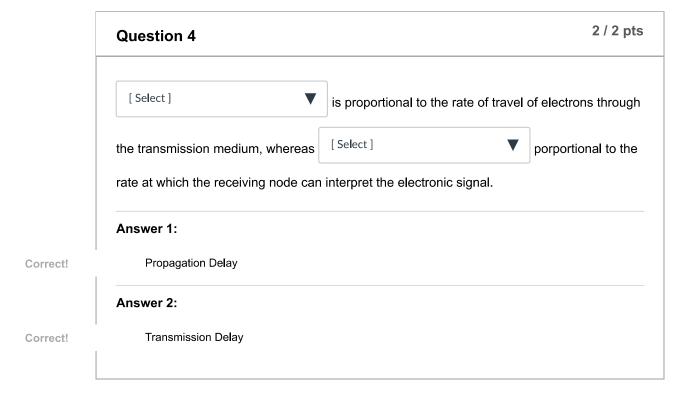
Question 3

Z / 2 pts

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

Answer 1:

Processing Delay



Question 5 2 / 2 pts

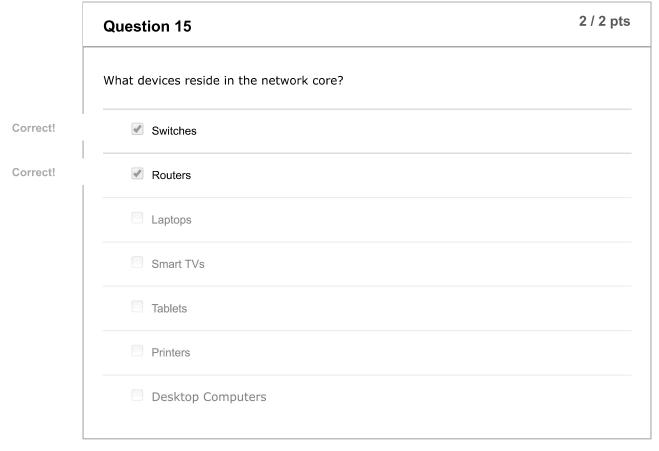
Correct!

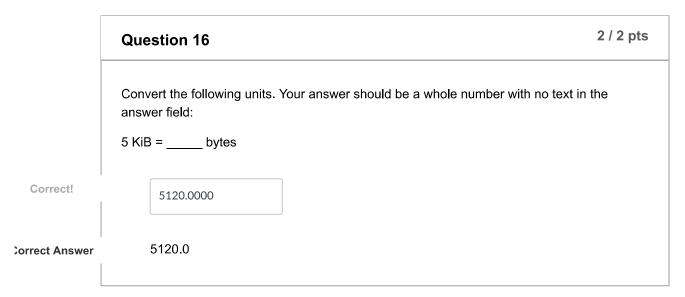
Question 9 2 / 2 pts

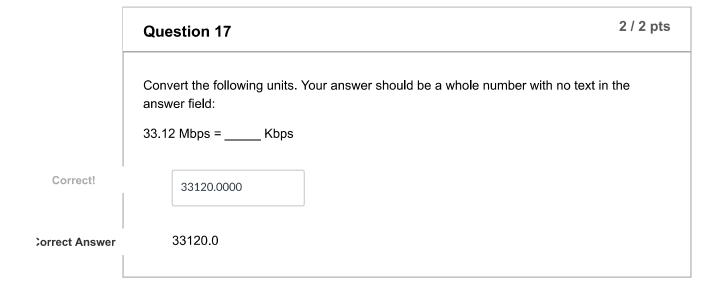
	A FDM-based network is a circuit-switched network
	Answer 1:
Correct!	circuit-switched
	Question 10 2 / 2 pts
	A network is a system for connecting multiple computers using a single transmission technology.
Correct!	True
	○ False
	Question 11 2 / 2 pts
	Time spent waiting for the transmission medium 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

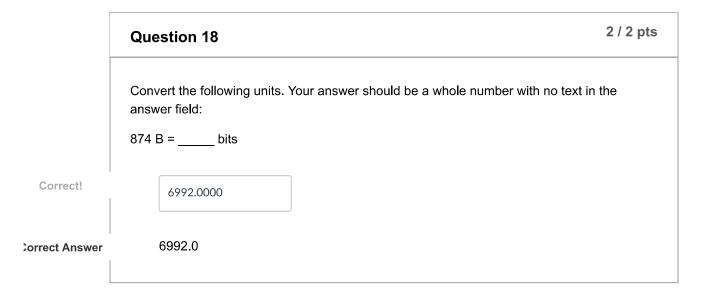
Correct!	Question 13	2 / 2 pts
	The TCP protocol implements reliable data transfer.	
	True	
	○ False	

	Question 14	2 / 2 pts
	A network is a system for connecting computers using multiple, possibly different, transmission technologies.	
	True	
Correct!	False	









Question 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

360448.0

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

19 MiB = ____ bytes

Correct! 19922944.0000

19922944.000

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 storeand-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

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

53.2 margin of error +/- 0.1

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

29.1 margin of error +/- 0.1

Quiz Score: 65 out of 70