# **Week 3 Summary Exercises**

**Due** Oct 20 at 11:59pm **Points** 92 **Questions** 24

Available Oct 13 at 12am - Oct 20 at 11:59pm 8 days Time Limit 360 Minutes

Allowed Attempts 2

# **Attempt History**

	Attempt	Time	Score	
KEPT	Attempt 2	30 minutes	92 out of 92	
LATEST	Attempt 2	30 minutes	92 out of 92	
	Attempt 1	118 minutes	89.33 out of 92	

Score for this attempt: 92 out of 92

Submitted Oct 20 at 12:33pm This attempt took 30 minutes.

# Question 1 2 / 2 pts

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

35.42 Mbps = bits per second

Correct!

35,420,000

orrect Answer

35,420,000

# Question 2 4 / 4 pts

For the following question, proper hexadecimal format is (0xYYYY) where Y will range in (0-9) or (A-F). Only proper formats will be accepted.

20/2010	Wook o cummary Exercises. With the Common Entitle (Co_ore_ 12010)
	Suppose that we send a DNS request with ID #51898.
	What is the little-endian representation (hexadecimal)?
	0xBACA
	2. What is the big-endian representation (hexadecimal)?
	0xCABA
	3. Which representation is required for network communication? (Enter "1"
	or "2" without quotes) <sup>2</sup>
	Answer 1:
Correct!	0xBACA
	Answer 2:
Correct!	0xCABA
	Answer 3:
Correct!	2

	Question 3	2 / 2 pts
	Which of the following are application-layer protocols?	
	Transmission Control Protocol (TCP)	
Correct!	✓ Telnet	
Correct!	Post Office Protocol v3 (POP3)	
	User Datagram Protocol (UDP)	
Correct!	✓ Domain Name Service (DNS)	
Correct!	File Transfer Protocol (FTP)	

### Correct!

Correct!

Secure Shell (SSH)

10/20/2019

# Question 4 2 / 2 pts In a peer-to-peer architecture, no one host is always on, but hosts may connect amongst themselves in an on-demand fashion. Answer 1: peer-to-peer

# What transport-layer services are provided by the base UDP protocol? (Check all that apply) Jitter minimization None of these services are provided by UDP Message security Minimum bandwidth Connection-oriented service Congestion control

2 / 2 pts

# Question 6 2 / 2 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 7

A program running on a host is called a process

### Answer 1:

Correct!

process

Question 8 4 / 4 pts

The SMTP application-layer protocol utilizes the TCP transport-layer protocol.

### Answer 1:

Correct!

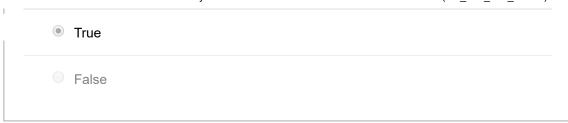
**TCP** 

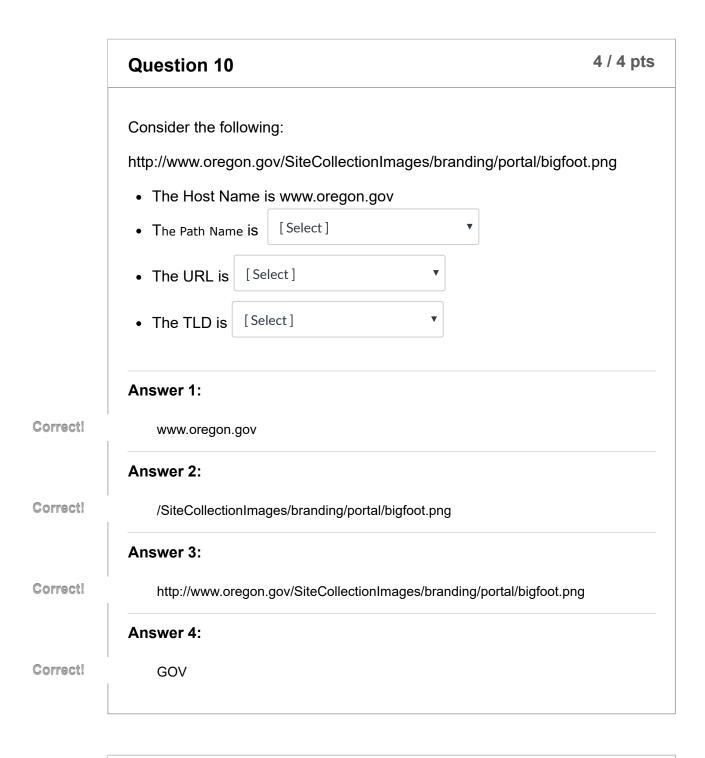
Question 9 4 / 4 pts

The following is a valid IP address:

130.154.1.25

### Correct!

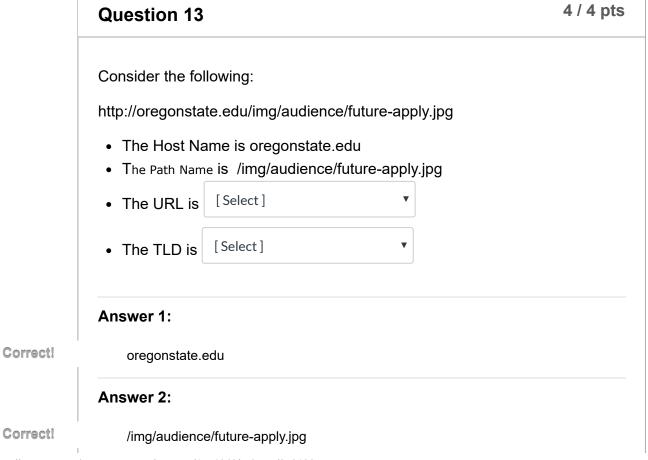




Question 11 4 / 4 pts

	A client-side piece of data which is used to keep track of transactions between a client and server is called a cookie.	
Correct!	True	
	False	

	Question 12	4 / 4 pts
	The reserved port for FTP data transfer is port 20 .	
	Answer 1:	
Correct!	20	

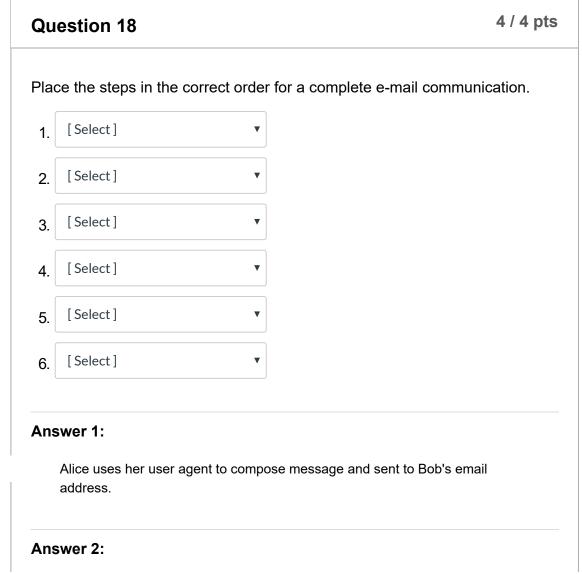


10/20/2019

Correct!

UDP

	Question 17	4 / 4 pts
	The following is a valid IP address: 130.154.465.201	
	True	
Correct!	False	



Correct!

Correct!

Alice's user agent sends message to her mail server; message placed in message queue.

### Answer 3:

Correct!

Client side of SMTP opens TCP connection with Bob's mail server.

### Answer 4:

Correct!

SMTP client sends Alice's message over the TCP connection.

### Answer 5:

Correct!

Bob's mail server places the message in Bob's mailbox.

### Answer 6:

Correct!

Bob uses his user agent to read the message.

## **Question 19**

4 / 4 pts

The reserved port for FTP control is port 21.

### Answer 1:

Correct!

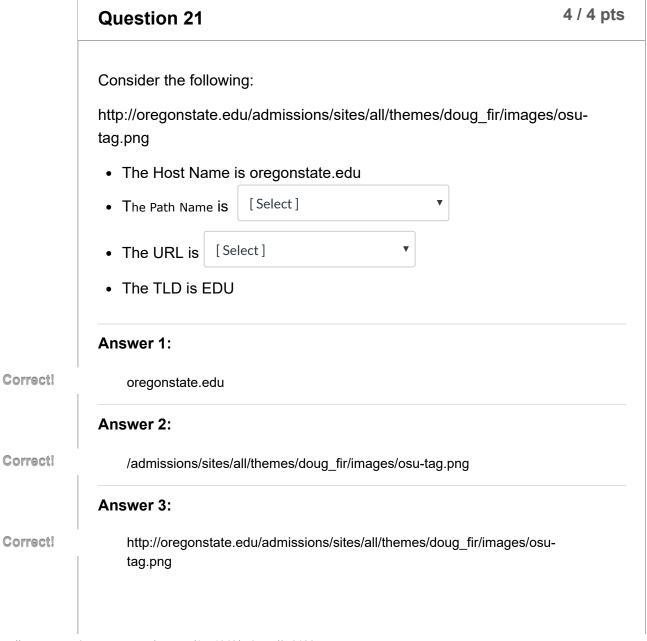
21

### **Question 20**

4 / 4 pts

A client's browser sends an HTTP request to a website. The website responds with a handshake and sets up a TCP connection. The connection setup takes 2 sec, including the RTT. The browser then sends the request for the website's index file. The index file references **5** additional images, which are to be requested/downloaded by the client's browser. How many requests (including the initial request) must be sent by the browser...

20/2019	Week 3 Summary Exercises: INTRO TO COMPUTER NETWORKS (CS_3/2_400_F2019)		
	1. With non-persistent HTTP? [Select] requests		
	2. With persistent HTTP? [Select] requests		
	Answer 1:		
Correct!	12		
	Answer 2:		
Correct!	7		



Answer 4:

Correct!

**EDU** 

**Question 22** 

4 / 4 pts

The HTTP application-layer protocol utilizes the TCP transport-layer protocol.

Answer 1:

Correct!

TCP

**Question 23** 

8 / 8 pts

A client in a network with a proxy server requests a 7 MiB file from an internet server, fakeservername.com. The network's proxy server has a 2.12 Mbps connection to fakeservername.com. The average response time between the network's proxy server and the internet origin server (including RTT) is 5.4 seconds for a small "header-only" HTTP request/response. The file requested by the client is currently in the proxy server cache, but the proxy server relays the client's request to the internet server with "if-modified since".

Assume that transmissions between the proxy and the origin servers are stream (not packets) at full bandwidth, with negligible propagation delay.

How much time is saved if the file has not been modified? (Give answer in seconds, without units, rounded to two decimal places, so for an answer of 1.4233 seconds you would enter "1.42" without the quotes.)

Correct!

27.7

orrect Answer

27.7 margin of error +/- 0.02

Question 24 8 / 8 pts

A client's browser sends an HTTP request to a website. The website responds with a handshake and sets up a TCP connection. The connection setup takes 9.4 ms, including the RTT. The browser then sends the request for the website's index file. The index file references 27 additional images, which are to be requested/downloaded by the client's browser.

Assuming all other conditions are equal, how much longer would non-persistent HTTP take than persistent HTTP? (Give answer in milliseconds, without units, rounded to one decimal place. For an answer of 0.01005 seconds, you would enter "10.1" without the quotes.)

Correct!

253.8

orrect Answer

253.8 margin of error +/- 0.1

Quiz Score: 92 out of 92