Congratulations! You passed!
TO PASS 80% or higher

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The Transport and Application Layer

LATEST SUBMISSION GRADE
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1. Question — 1 / 1 point

Ports 1-1023 are known as _____ ports.

- (x) system
- ( ) registered
- ( ) destination
- ( ) source

Correct
You got it! System ports are used for very well-known services.

2. Question — 1 / 1 point

If the transmitting device would like for the receiving device to push currently buffered data to the application on the receiving end immediately, it would set the ____ flag.

- ( ) SYN
- ( ) ACK
- (x) PSH
- ( ) FIN

Correct
You nailed it! The PSH flag ensures that the receiving end doesn't wait for any further data.

3. Question — 1 / 1 point

A 32-bit number that's used to keep track of where you are in a sequence of TCP segments is known as a(n) _____ number.

- ( ) acknowledgement
- ( ) TCP
- ( ) address
- (x) sequence

Correct
Great work! A sequence number is used to keep track of where you are in a series of TCP segments.

4. Question — 1 / 1 point

The OSI network model has ____ layers.

- ( ) three
- ( ) five
- ( ) six
- (x) seven

Correct
Yep! Unlike our model, which focuses on five layers, the OSI model has seven layers.

5. Question — 1 / 1 point

The control flag that isn't really in use by modern networks is the _____ flag.

- ( ) SYN
- ( ) ACK
- (x) URG
- ( ) PSH

Correct
You got it! The URG flag has never seen widespread adoption, but it's still defined in every TCP header.

6. Question — 1 / 1 point

A network has the ability to direct traffic toward all of the receiving services. What provides this ability in the transport layer?

- ( ) Socket address
- (x) Multiplexing
- ( ) File Transfer
- ( ) Demultiplexing

Correct
Right on! Multiplexing in the transport layer means that nodes on a network have the ability to direct traffic toward many different receiving services.

7. Question — 1 / 1 point

A connection has been terminated and no communication is possible. What is the Transmission Control Protocol (TCP) socket state?

- (x) CLOSED
- ( ) FIN_WAIT
- ( ) CLOSE_WAIT
- ( ) FINISHED

Correct
Woohoo! The TCP socket will be in the CLOSED state when the connection has been fully terminated and no further communication is possible.

8. Question — 1 / 1 point

Which field in a Transmission Control Protocol (TCP) header provides the next expected segment?

- ( ) Sequence number
- ( ) Checksum
- ( ) Data offset
- (x) Acknowledgement number

Correct
Well done! The acknowledgement number is the number of the next expected segment.

9. Question — 1 / 1 point

A communication between two devices is over the maximum limit of an ethernet frame size. The Transmission Control Protocol (TCP) splits up the data into segments. Which field in the header helps keep track of the many segments?

- ( ) Acknowledgement number
- (x) Sequence number
- ( ) Urgent pointer
- ( ) Checksum

Correct
Nice job! The sequence number is used to keep track of where in a sequence of TCP segments that the packet is expected to be.

10. Question — 1 / 1 point

A connection, at which layer, implies that every segment of data sent is acknowledged?

- ( ) Application
- (x) Transport
- ( ) Data link
- ( ) Network

Correct
Right on! A connection at the transport layer implies that every segment of data sent is acknowledged.

11. Question — 1 / 1 point

A communication sent through Transmission Control Protocol (TCP) arrives out of order. What allows the data to be put back together in the correct order?

- ( ) Preamble
- ( ) Checksum
- (x) Sequence numbers
- ( ) Acknowledgement number

Correct
Well done! Sequence numbers allow the data to be put back together in the correct order.

12. Question — 1 / 1 point

When is using the Transmission Control Protocol (TCP) most appropriate?

- ( ) When you visit a news website
- (x) When you make a phone call
- ( ) When you are listening to the radio.
- ( ) When you are streaming a video.

Correct
Nice job! Phone calls require a connection-oriented protocol, such as TCP.

13. Question — 1 / 1 point

You are sending a very small amount of information that you need the listening program to respond to immediately. Which Transmission Control Protocol (TCP) flag will be used?

- ( ) ACK
- ( ) RST
- (x) PSH
- ( ) URG

Correct
You nailed it! The PSH flag will be used to push the information immediately.

14. Question — 1 / 1 point

A Transmission Control Protocol (TCP) connection is established and two devices ensure that they're speaking the same protocol. What has occured?

- ( ) Handshake
- ( ) Two-way handshake
- ( ) Four-way handshake
- (x) Three-way handshake

Correct
You nailed it! A three-way handshake involves segments that have SYN, SYN/ACK, and ACK which happens every time a TCP connection is established.