



**Started on** Wednesday, 23 October 2024, 4:28 PM

**State** Finished

**Completed on** Wednesday, 23 October 2024, 4:30 PM

**Time taken** 1 min 57 secs

**Grade** 9.00 out of 10.00 (90%)

## Question 1

Correct

Mark 1.00 out of 1.00

A TCP socket application can use setsockopt() with the TCP\_NODELAY flag to:

Select one:

- ☐ a. enable the TCP Nagle algorithm for the entire system
- ☒ b. disable the TCP Nagle algorithm for the connection in question ✓
- ☐ c. enable the TCP Nagle algorithm for the connection in question
- ☐ d. disable the Nagle algorithm for all existing TCP connections

Your answer is correct.

## Question 2

Correct

Mark 1.00 out of 1.00

The TCP congestion window update strategy called “Additive Increase, Multiplicative Decrease” (AIMD) is used during the slow-start phase of TCP connections.

Select one:

- ☐ True
- ☒ False ✓

**Question 3**

Correct

Mark 1.00 out of 1.00



The following TCP segment can be sent by either side at any time to abort the TCP connection:

Select one:

- ☒ a. RST ✓
- ☐ b. SYN + ACK
- ☐ c. FIN + ACK
- ☐ d. FIN

Your answer is correct.

**Question 4**

Correct

Mark 1.00 out of 1.00

TCP is stream-oriented, meaning that the application can write very small or very large messages and the TCP layer will take care of preserving message boundaries on the wire.

Select one:

- ☐ True
- ☒ False ✓

**Question 5**

Correct

Mark 1.00 out of 1.00

Starting from the TCP ESTABLISHED state, the side that closes the connection first (active CLOSE) will end up in the TIME WAIT state.

Select one:

- ☒ True ✓
- ☐ False

**Question 6**

Correct

Mark 1.00 out of 1.00

A TCP connection cannot remain idle for a long period of time without getting terminated by the OS.

Select one:

- ☐ True
- ☒ False ✓

**Question 7**

Correct

Mark 1.00 out of 1.00



In TCP's congestion avoidance phase, the Congestion Window adjustment rule introduced by TCP Tahoe says that, after packet loss has been detected:

Select one:

- ☐ a. the Congestion Window is decreased by 10%
- ☐ b. the Congestion Window is set to the Advertised Window value
- ☒ c. the Congestion Window is cut by half ✓
- ☐ d. the Congestion Window is set to 0

Your answer is correct.

**Question 8**

Incorrect

Mark 0.00 out of 1.00

No matter the available bandwidth, every TCP connection must go through the slow-start phase.

Select one:

- ☐ True
- ☒ False ✗

**Question 9**

Correct

Mark 1.00 out of 1.00

In terms of the TCP sequence and acknowledgment numbers, which of the following count as 1?

Select one:

- ☐ a. SYN, FIN and ACK
- ☐ b. SYN, but not FIN nor ACK
- ☐ c. SYN and ACK but not FIN
- ☒ d. SYN and FIN, but not ACK ✓

Your answer is correct.

**Question 10**

Correct

Mark 1.00 out of 1.00



If there is no LISTENING TCP socket at the host TCP port to which a SYN request is sent, the response is to ignore the SYN segment and send no reply.

Select one:

- ☐ True
- ☒ False ✓