Started on	Monday, 25 March 2019, 9:23 PM
State	Finished
Completed on	Monday, 25 March 2019, 9:25 PM
Time taken	2 mins 37 secs
Marks	15.00/15.00
Grade	**10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

Stop-and-Go

Select one:

- a. does not require any window to buffer packets
- b. requires a window of size 1 ✓
- c. requires a large sequence number space
- d. requires more than 1 bit for the sequence number

Your answer is correct.

The correct answer is: requires a window of size 1

Question **2**

Correct

Mark 1.00 out of 1.00

Stop-and-Go cannot provide reliability.

Select one:

- True
- False ✓

The correct answer is 'False'.

Question **3**

Correct

Mark 1.00 out of 1.00

For short distances, Stop-and-Go is always efficient, but it fails to support high throughput only when the distance between the client and server is large.

Select one:

- True
- False ✓

The correct answer is 'False'.

Question **4**

Correct

Mark 1.00 out of 1.00

Pipelining increases throughput (compared to stop-and-go) linearly with the window size (number packets the sender can have in the pipeline without having to stop and wait for the ACK).

Select one:

- True ✓
- False

The correct answer is 'True'.

Question **5**

Correct

Mark 1.00 out of 1.00

To speed up file transfers, a Go-back-N implementation uses a window size of 5. The sequence number field in the packet header must have at least

Select one:

- a. 5 bits
- b. 32 bits
- c. 3 bits ✓
- d. 2

Your answer is correct.

The correct answer is: 3 bits

Question **6**

Correct

Mark 1.00 out of 1.00

In Go-back-N, the receiver has a window size of

Select one:

- a. 1 ✓
- b. 2
- c. 3
- d. the same used in the sender.

Your answer is correct.

The correct answer is: 1

Question **7**

Correct

Mark 1.00 out of 1.00

In Selective Repeat, the sender window

Select one:

- a. has the same size as the receiver window ✓
- b. is smaller than the receiver window
- c. is larger than the receiver window
- d. has a size of 1

Your answer is correct.

The correct answer is: has the same size as the receiver window

Question **8**

Correct

Mark 1.00 out of 1.00

For a 4-bit sequence number field in the packet header, the maximum window size for Selective Repeat is

Select one:

- a. 15
- b. 16
- c. 8 ✓
- d. 7

Your answer is correct.

The correct answer is: 8

Question **9**

Correct

Mark 1.00 out of 1.00

To speed up file transfers, a Selective Repeat implementation is using a window size of 8. The sequence number field in the packet header must be at least

Select one:

- a. 8-bit long
- b. 4-bit long ✓
- c. 3-bit long
- d. 16-bit long

Your answer is correct.

The correct answer is: 4-bit long

Question **10**

Correct

Mark 1.00 out of 1.00

A TCP client sends a 100-byte packet with sequence number of 128, which reaches the sever correctly. Assuming that all previous packets from the client were received correctly and duly acknowledged by the server, what would be the acknowledgement sequence number if the server decides to immediately acknowledge this packet?

Select one:

- a. 129
- b. 227
- c. 229
- d. 228 ✓

Your answer is correct.

The correct answer is: 228

Question **11**

Correct

Mark 1.00 out of 1.00

A TCP sender estimates RTT as 200 ms and the standard deviation of RTT from the estimated RTT as 20 ms. What timeout interval it should set for the next packet to be transmitted?

Select one:

- a. 220 ms
- b. 240 ms
- c. 260 ms
- d. 280 ms ✓

Your answer is correct.

The correct answer is: 280 ms

Question **12**

Correct

Mark 1.00 out of 1.00

TCP receiver may intentionally delay the acknowledgement of a correctly received packet.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question **13**

Correct

Mark 1.00 out of 1.00

A TCP receiver receives an in-order segment with expected sequence number, but it has two other segments with pending ACK. Which of the following is a possible action for this receiver?

Select one:

- a. It sends 3 ACKs one after the other
- b. It sends 2 ACKs one after the other
- c. It sends one cumulative ACK acknowledging all packets with pending ACK ✓
- d. It sends a Duplicate ACK.

Your answer is correct.

The correct answer is: It sends one cumulative ACK acknowledging all packets with pending ACK

Question **14**

Correct

Mark 1.00 out of 1.00

With Fast Transmit, a TCP sender is allowed to retransmit after receiving the same ACK

Select one:

- a. 2 times
- b. 3 times
- c. 4 times ✓
- d. 5 times

Your answer is correct.

The correct answer is: 4 times

Question **15**

Correct

Mark 1.00 out of 1.00

TCP is never allowed to retransmit unless there is a timeout.

Select one:

- True
- False ✓

The correct answer is 'False'.