Q1

In slow start, a sender doubles its window size every RTT if all sent packets were acknowledged

True

Q2

In steady state, a sender increases its window size by one packet for each acknowledgement

False – It increases by one MSS (maximum segment size) for every RTT

Q3

A sender that underestimates the round-trip time of a connection may unnecessarily induce a TCP timeout

True

Q4

After detecting packet loss through a timeout, TCP halves its window size as a response to the path congestion

False – TCP resets its window size to one MSS

Q5

1. Triple Duplicate ACK

Q6

1. No

Q7

1. Timeout

Q8

(b) No.

Q9

1. Less

Q10

This “slow-start” period quickly discovers the maximum acceptable throughput that the path supports – otherwise, AI (additive increase) could take too long (each a full RTT).

The TCP behaves in this manner because of a “slow-start” period, which quickly discovers the maximum acceptable throughput that the path supports. Otherwise the additive increase could take too long.

Q11 / Q12

1 RTT (TCP handshake) + 3 RTT in slow-start = 400 miliseconds

Q13

4 MSS -> 16 MSS is equal to 12 sections of RTT, which equals 1.2 seconds time progressed

Q14

A slow start to a 8K window size, then AI from 8 to 10 MSS window size, which equals 500 miliseconds (at 5 RTT).

Q15

Point D is higher than Point B because of the changing cross-traffic caused by other concurrent senders across other routers.