

Your name:

Using the TCP connection state diagram projected at the front of the classroom, answer the following questions.

1. Suppose a socket is in the CLOSED state. What does it send when moving to the LISTENING state?
 - (a) an ACK
 - (b) a FIN
 - (c) a SYN
 - (d) a NAK
 - (e) *nothing***

2. Suppose a socket is in the CLOSED state. What does it send when moving to the SYN_SENT state?
 - (a) an ACK
 - (b) a FIN
 - (c) *a SYN***
 - (d) a NAK
 - (e) nothing

3. Suppose a socket is in the ESTABLISHED state. What happens if it receives a FIN?
 - (a) The socket enters SYN_RCVD and sends an ACK.
 - (b) The socket enters SYN_SENT and sends an ACK.
 - (c) The socket enters FIN_WAIT and sends a FIN.
 - (d) *The socket enters CLOSE_WAIT and sends an ACK.***
 - (e) Nothing—the socket ignores the FIN.

4. Suppose a socket is in the ESTABLISHED state receives a FIN. Where did that FIN most likely come from?
 - (a) A peer attempting to connect.
 - (b) A peer attempting to determine whether the connection is still live.
 - (c) A peer moving from the ESTABLISHED state to the CLOSE_WAIT state.
 - (d) *A peer moving from the ESTABLISHED state to the FIN_WAIT_1 state.***
 - (e) An attacker attempting to hijack the connection.

5. How does a socket ever leave the TIME_WAIT state?
 - (a) *A timer expires.***
 - (b) It receives a FIN.
 - (c) It receives a NAK.
 - (d) It receives a SYN.
 - (e) It receives an ACK.