

Computer Networks

TCP & UDP

DPP 03

[MCQ]

1. Which of the following control field in TCP header is used to specify whether sender has no more data to transmit?

- (a) FIN (b) RST
(c) SYN (d) PSH

[MCQ]

2. An ACK number of 500 in TCP always means.

- (a) 499 bytes have been successfully received.
(b) 500 bytes have been successfully received.
(c) 501 bytes have been successfully received.
(d) None of the above.

[MSQ]

3. Which of the following statement(s) is/are true?

- (a) A SYN segment can carry data and consumes one sequence number.
(b) A SYN segment can't carry data, but consumes one sequence number.
(c) A SYN + ACK segment can carry data, and consumes one sequence number.
(d) A SYN + ACK segment can't carry data, but consumes one sequence number.

[MCQ]

4. In TCP state transition diagram what will be the correct order of states in which the client will move while establishing the connection with TCP server.

- (a) SYN-SENT → ESTABLISHED → FIN-WAIT 1 → FIN-WAIT 2 → LAST-ACK
(b) SYN-SENT → ESTABLISHED → FIN-WAIT 1 → FIN-WAIT 2 → TIME-WAIT
(c) SYN-SENT → SYN-RCVD → FIN-WAIT 1 → FIN-WAIT 2 → TIME-WAIT
(d) None of these

[MCQ]

5. Consider a TCP state transition diagram which of the following state is also called 2 MSL wait time state? (MSL = Maximum Segment Lifetime)

- (a) FIN-WAIT 2 (b) TIME-WAIT
(c) CLOSE-WAIT (d) LAST-ACK

[NAT]

6. Consider the following statements:

- S₁: TCP can accept out of order segments but always sends in order acknowledgment.
S₂: TCP connection is full duplex connection for example data can be sent in both the direction.
S₃: In TCP for complete connection establishment 3-way handshaking is required.
S₄: For complete connection establishment and connection release control segments are transmitted whereas in data transfer phase data segments are transmitted.

The total number of correct statements will be _____.

Answer Key

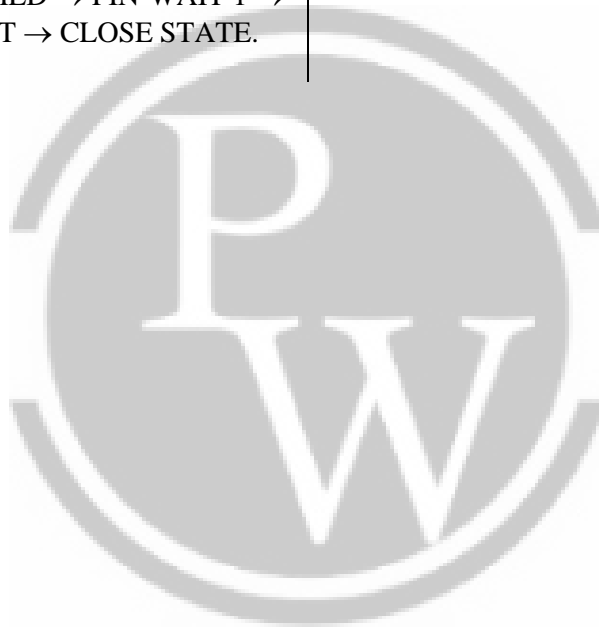
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| 1. (a) | 4. (b) |
| 2. (a) | 5. (b) |
| 3. (b,d) | 6. (4 to 4) |



Hints & Solutions

1. (a)
FIN control field of TCP header indicates the end of data transmission.
2. (a)
If X bytes has been received by receiver than ACK number will be X+ 1.
3. (b, d)
SYN and SYN + ACK segment do not carry data, but both consume a sequence number.
4. (b)
The order of states in which client will move.

SYN – SENT → ESTABLISHED → FIN-WAIT 1 →
FIN -WAIT 2 → TIME -WAIT → CLOSE STATE.
5. (b)
TIME-WAIT is also known as the 2MSL state. This is because the socket that transition to TIME-WAIT stage there for a period that is 2 x maximum segment lifetime in duration.
6. (4 to 4)
All statement are correct.



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