

CS & IT ENGINEERING

Computer Networks



TCP & UDP
DPP- 01

(Discussion Notes)



By – Devvrat Tyagi sir

TOPICS TO BE COVERED

01 Question

02 Discussion

Q.1

which of the following statements is/are true regarding TCP header?

[MSQ]

 0000 0001
0010 0011 0000

$$\text{HLFN} = 5 \times 4 = 20 \text{ bytes}$$
$$(0101)_2 = 5$$

- A. The range of TCP header length field value is always [5, 15]
- B. The range of TCP header length is always [20, 60]
- C. The range of TCP header length field value is always [0 - 15]
- D. The range of TCP header length is always [0 - 60]

20 to 60 bytes

Q.2

What is the purpose of using PSH bit in TCP header?

[MCQ]

P
W

URG

- A. PSH bit is used to treat certain data on an **urgent** basis.
- B. PSH bit indicates whether acknowledgement number field is valid or not.
- C. PSH bit is to push the entire buffer immediately to the receiving application.
- D. None of these

AL Program1 == AL Program2

| Push Request

TCP

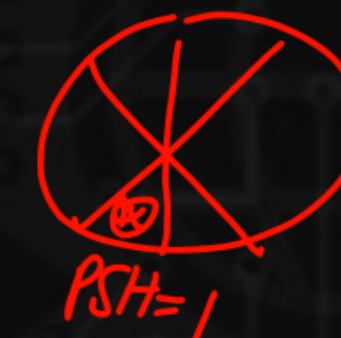


(Maximum Segment Size

1 MSS

NL

TCP



Q.3

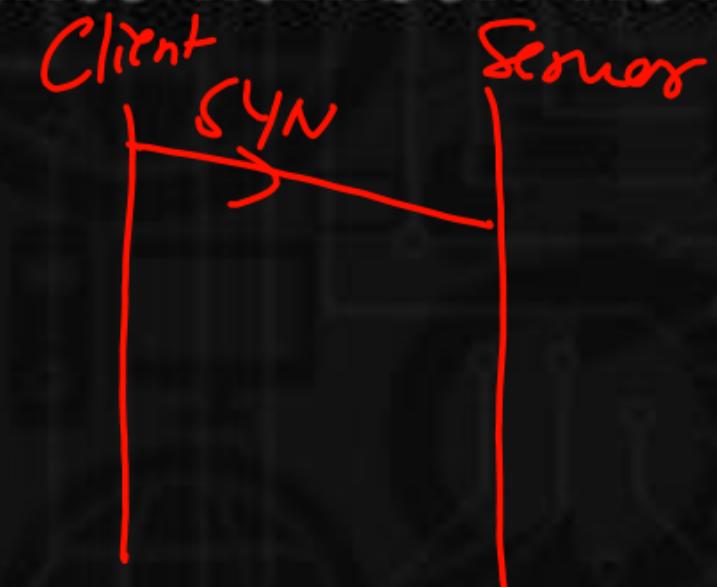
Consider the following statements:

[NAT]



- S₁: RST bit is used to reset the TCP connection.
- S₂: When RST bit is set to 1, it indicates the receiver to terminate the connection immediately.
- S₃: When RST bit is set to 1 it may result in the loss of data that is in transit.
- S₄: SYN bit is used to synchronize the sequence number. How many are the true statements?

Number of true statements?



Q.4

Match the Following:

[MCQ]

P
W

Field in TCP header

Length in bits

1. Sequence number
2. Reserved bits
3. Header length
4. Advertisement window

- A : 16
B : 4
C : 32
D : 6

A.
1 - A, 2 - B, 3 - C, 4 - D

1 - C, 2 - D, 3 - B, 4 - A

B.
1 - C, 2 - D, 3 - B, 4 - A

C.
1 - C, 2 - D, 3 - A, 4 - B

D.
1 - A, 2 - B, 3 - D, 4 - C

Q.5

Which of the following is not a field in TCP header?

[MCQ]

P
W

A. Sequence Number

B. Checksum

C. Fragment offset

D. Window size

Q.6

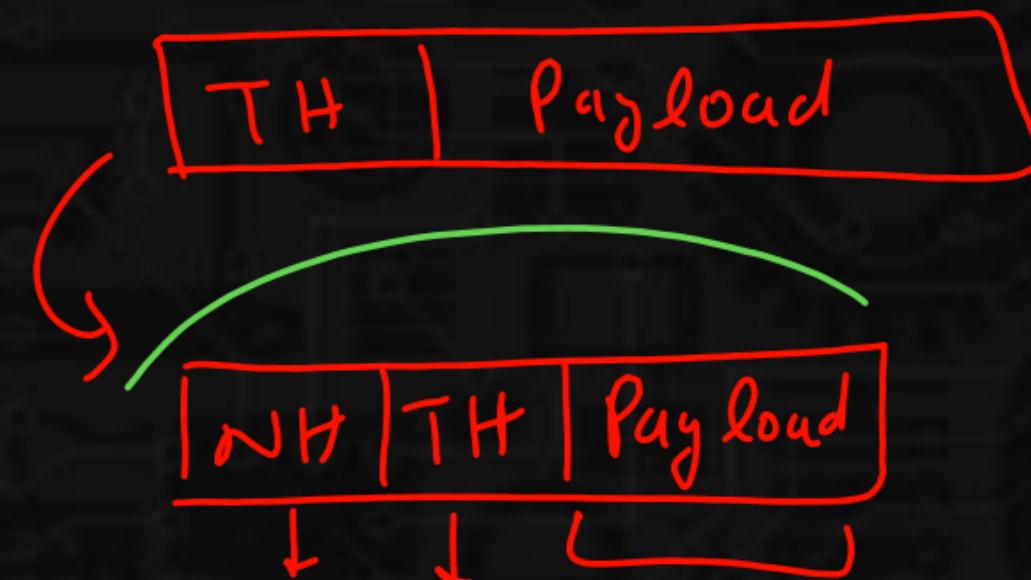
The maximum ~~pay~~load of TCP segment is:

[MCQ]

P
W

- A. 65,535
- B. 65,495
- C. 65,515
- D. 65,475

$$TL \rightarrow 2^{16} = 65536$$



$$\begin{aligned} \text{IPv4} &\rightarrow 20-60 \text{ B} \\ \text{TCP Header} &= 20-60 \text{ B} \end{aligned}$$

$$\begin{aligned} TL &= 65535 \\ \text{payload} &= 65535 - (20+20) \\ &= \underline{\underline{65495}} \end{aligned}$$

