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COURSE: CSE405 Computer Network Sec: 01

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Answering to the question no \rightarrow 01

Given bit pattern,

010101110010010010111100111110

Using Bit stuffing,

0111110 0101011110 001001001011110 0111110 10

stuffed bit \rightarrow sb

* There will be an extra 0 after each 5 consecutive 1.

Answering to the question no $\rightarrow 02$

Given Stream,

[A] [B] [ESC] [Flag] [D] [ESC] [Flag]

Stream pattern after Byte stuffing

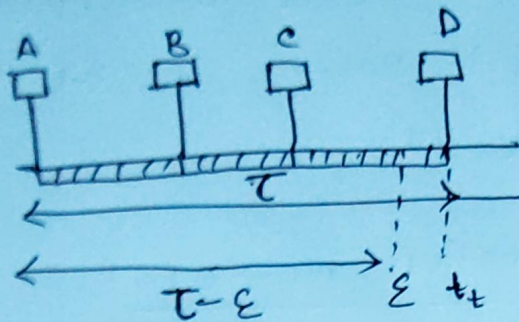
[Flag] A B [ESC] [ESC] [ESC] [Flag] D [ESC] [ESC]

stuffed byte stuffed byte stuffed byte

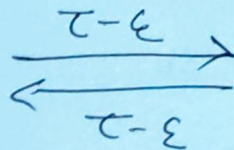
[ESC] [Flag] [Flag]

stuffed byte

Answering to the question no \rightarrow 03



when, A transmit data and propagate through
cables, it can if at the time ϵ , D want
to transmit data then there can be
occur collision and travel back to
A. So,



$$\text{Contention Period} = (T - \epsilon) + (T - \epsilon)$$

$$= 2T - 2\epsilon$$

$$= 2T \quad (\epsilon \text{ is negligible})$$

Because of worst case scenario we
consider the propagation delay between
two farthest host.

Answering to the question no → 04

CSMA/CD is the Carrier sense Multiple Access with collision detection. The transmission method is used in this is half duplex. Because when data is transmitted (TX) receiving part (RX) detect collision. When there is no collision host can transmit data. But if collision is detected host cannot send data. That's why it is half duplex.