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Course Code: CSE 303

Course Title: Data Communication

ID: 18101038

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Ans: to the que no-1(a)

ID = 18101038

Here,

$x = 8 + 1 = 9$

$Y = 3 + 1 = 4$

For Mesh topology,

node = 9

Link = $\frac{9(9-1)}{2}$

$= 36$

For star topology.

We know that no of computer = no of link

So Link will be 4.

If I have to choose between mesh and star topology I will choose star topology topology. Because each of the nodes is independently connected to the central hub, Should one go down, the rest of the network will continue functioning unaffected, making the star topology a stable and secure network layout.

D

Ans: to the que no-1 (b)

Half duplex

Advantages: Whole bandwith can be utilised as at a time only one single transmits

Disadvantages: other device cannot send data until it receives the data which is already in transmission.

Full duplex

Advantages: The speed of full duplex is high

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Dis Advantage: No proper bandwith utilization

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P-04

Ans: to the que no-2(a)

ID = 1810038

$x = (8)^8 \bmod 6 = 4$

$y = (4+1) \bmod = 5$

MAC of E	MAC of r40	IP of E	IP of D	6000	7000	DATA	trailer

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MAC of r41	MAC of r31	IP of E	IP of D	6000	7000	DATA	trailer

MAC of r50	MAC of D	IP of E	IP of D	6000	7000	DATA	trailer

Ans: to the que no- 2(G) P-03

Error Control: Error control is normally achieved when a trailer added to the end of the frame Data like layer add a error control mechanism to detect and retransmit damaged or lost frame.

In transport layer:- Flow & control: It control the amount of data being transmitted. Flow control at this layer is performed end to end rather than across a single link.

Error control: Error Control is also performed in this layer process to process rather than across a single link

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Ans: to the que no-3 (a)

ID : 18101038

$x = 38$

The loss in the cable is $(38 \times (-0.3) = 11.4 dB$

$$dB = 10 \log_{10} \frac{P_2}{P_1}$$

$$\Rightarrow -11.4 = 10 \log_{10} \frac{P_2}{P_1}$$

$$\Rightarrow -1.14 = \log_{10} \frac{P_2}{P_1}$$

$$\Rightarrow \frac{P_2}{P_1} = 0.072$$

$$\therefore P_2 = 0.144 \text{ mw}$$

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