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Roll : 20

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Course Code: CSE-303 (A).

Course Title:

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ANS To The Q No: 1

a

ID = 18101020

X = 0+1 = 1

Y = 2+1 = 3.

For mesh network

number of links = $X(X-1)/2$

$= 1(1-1)/2$

$= 0$

For star network

number of links = Y

$= 3.$

For more secure network I will prefer mesh network.

In mesh network every node is connected with each other. So if we want to transmit data from one node to another we can direcly send that, there is no ~~interm~~ other medium between that two nodes. 4

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In star network all the nodes are connected to a hub and hub acts as a controller. So no direct transmission between nodes. So if the hub is corrupted then we can access any node.

So, I mesh topology is more secure among mesh and star.

b

Half Duplex :

Advantage :

- The entire channel capacity can be used by one device.

Disadvantage :

We can not communicate simultaneously that means a device can not send and receive data simultaneously. if use use half duplex.

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Full Duplex:

Advantage:

Devices can send dat and receive data simultaneously. That means a device can send data and receive data at the same time.

Disadvantage:

The channel capacity must be shared between devices.

2 NO Q: ANS

a

ID: 18101020

$X = (0)^2 \bmod 6$

$= 0$

$Y = (0+1) \bmod 6$

$= 1$

Port address of X = 6000

Port address of Y = 7000

From PC A to router router 0

From PC A to router 0

MAC of A | mac of r00 | IP of A | IP of PC1 | 6000 | 7000 | Data | Trailer

From ~~Pc A to~~
From router 0 to router 1.

MAC of r02 | MAC of r12 | IP of A | IP of PC1 | 6000 | 7000 | Data | trailer

From router 1 to PC 1

MAC of r10 | mac of PC1 | IP of A | IP of PC1 | 6000 | 7000 | Data | trailer

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b.

In transport layer the data is transport from process to process. And in this layer. Error control and Flow control are also performed..

In Data link layer the data is transport from hop to hop so the flow and error control are performed ~~in a ding~~ across a single link.

In transport layer the data transported from process to process. So the flow and Error control are performed from end to end rather than across a single link.

Scanned with CamScanner

SNRdB =

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3 NO Q: ANS:

a

loss in the cable. = 20 × -0.3
= -6 dB.

Now,

$$10 \log_{10} \frac{P_2}{P_1} = -6$$

$$\Rightarrow \log_{10} \frac{P_2}{2mw} = -0.6$$

$$\Rightarrow P_2 = 10^{-0.6} \times 2mw$$

$$= 0.5 \text{ mw} \quad \text{(ANS)}$$

6 ✓

b

In the Shannon capacity the capacity, C = Bandwidth X $\log_2(1+SNR)$ and in Nyquist ~~det~~ bit rate, BitRate = 2 X B

b

In shannon capacity the capacity C = Bandwidth X $\log_2(1+SNR)$, and in Nyquist bit reate Bit Rate = 2XBandwidth X $\log_2 L$.

from ~~bot~~ Shanon equation we see that we dont need the level of the signal. We need bandwidth and signal to noise ratio. So it gives the upper bit limit

SNRdB = 10 log

of the channel by comparing bandwidth and SNR.

In Nyquist formul we need bandwidth and level of the signal that means the bit rate is depend on the level of the signal. If we increase ~~bit~~ level of the signal we can increase the bit rate but it causes the reliability of the system.

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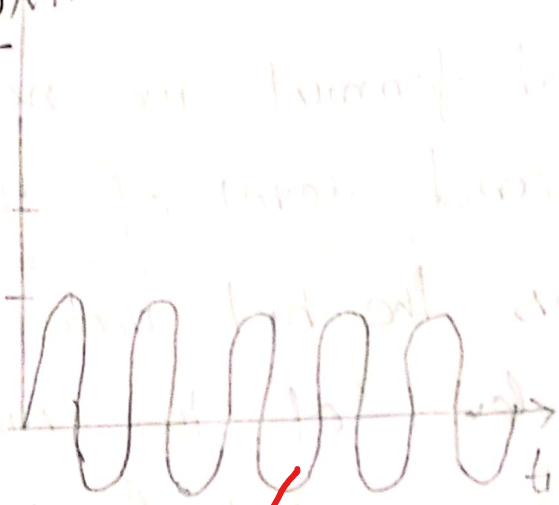
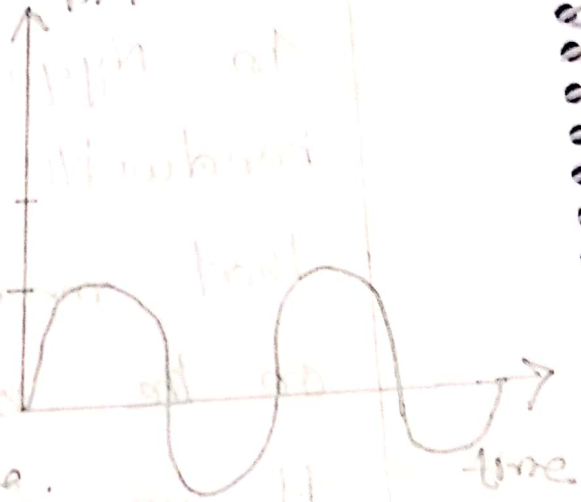
Q

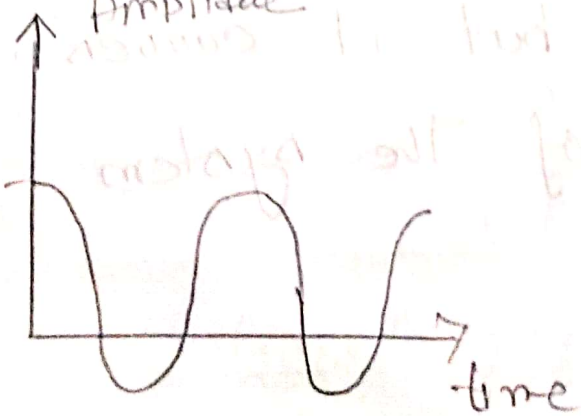
(i) Amplitude



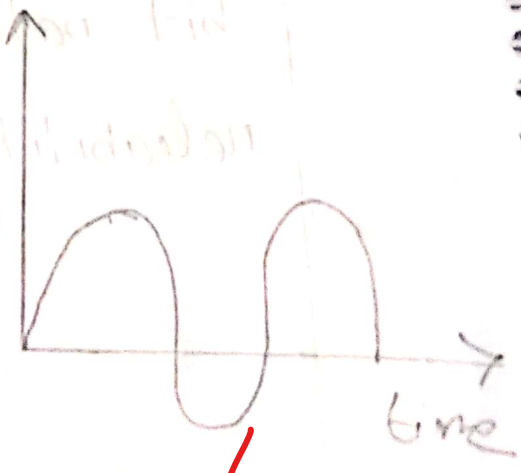
Amplitude



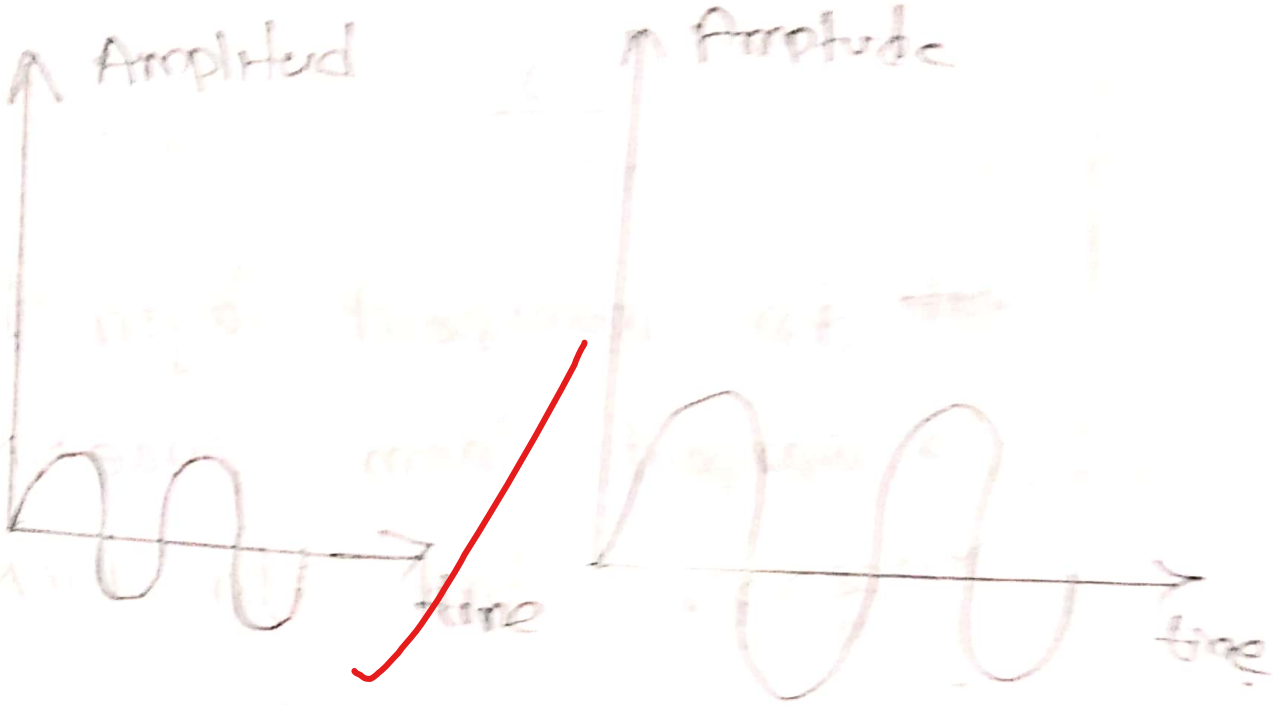
(i) Amplitude



Amplitude



(iii)



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