<u>Mid Semester Examination : Spring 2020</u>

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<u>Course Code:</u> CSE 303 - (self-study)

<u>course title:</u> Data Communication.

Ans to the Q No 1

b)Ans: There are three modes of transmission.

* Simplex
* half duplex
* full duplex

The transmission mode defines the direction of signal flow between two connected device.

writing down one advantage & one disadvantage of Half and full duplex below:

Avdantage:

* Half duplex is better than simplex. Performance wise.

* Direction of full duplex communication is two directional, simultaneously.

Disadvantages!

* Half duplex is two directional communication but it can run the process one at a time.

* No proper bandwidth utilization as the same line is used for sending & receiving data at

P.T.O

the same time.

a) Ans: My ID is 16101148

$$X = 8+1 = 9$$
$$Y = 4+1 = 5$$

⇒ In mesh topology:

we need links ⇒ $N(N-1)/2$

⇒ $9(9-1)/2$

⇒ $9 \cdot 8/2$

⇒ 36

we need 36 links in topology.

⇒ In Star topology doesn't allow direct communication between devices. A device must have to communicate through hub.

we need 1 hub and 36 links.

Ans to the Q No - 2

a) Ans:

My ID is 16101148

$$X = 8^r \bmod 6$$

$$= 64 \bmod 6$$

$$= 4$$

$$Y = (4+1) \bmod 6$$

$$= 5 \bmod 6$$

$$= 5$$

Sender mac	Pecievan mac	Senden IP	Reclaven IP	Sender Port Add	Rectim Port Add	Add	Trailer
				6000	7000	Data	
MAe of R11	MAC of R21	IP of R10	IP of R10				Train

b) Ans flow control in transport layer is performed end to end and Error control in transport layer is also performed end to end, to ensure that the complete message arrives at the receiving without any error. Error correction is done through transmission.

Ans to the Q No-4 (b)

b) Ans Writing down differences below:

Band width	Through Put
* Data capacity of a channel which can be transformed in specific period of time.	* Actual measure of data transformed over a specific period of time.
* Measured in Bits	* Measured is Bits.
* It uses to transfer data	* It uses to communicate.
* Physical layer of OSI Model	* Any layer of OSI Model
* Independent	* Depends on latency.