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## Mid Term Examination of Spring - 2020

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Course code: CSE-303

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Section: A

Semester - 3-1

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①

Ans to the Ques. no-4(a)

Here,

X is the last digit of  $ID+1 = 7+1$   
 $= 8$

Y is the second last digit of  $ID+1 = 4+1$   
 $= 5$

So,

bandwidth = 8 MHz

$$SNR = 10 \times 5 = 50$$

4  
/

②

b)

Difference between bandwidth and throughput is given below;

Key	Bandwidth	Throughput
Definition	Data Capacity of a channel which can be transferred in specific period of time	Actual measure of data transferred over a specific period of time
Measurement Unit	Bits	Bits per Sec
Objective	To transfer Data	To communicate
Layer	Physical Layer of OSI model	Any Layer of OSI model
Dependency	No Dependency	Dependent on latency
Analogy	Speed of water coming out of tap in particular time	Actual water flow out of tap in particular time



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1810

Ans to the Ques. no 1(a)

a) Here

My id is = 18101047

$$\text{So } x = 7 + 1 = 8$$

$$\text{and } y = 4 + 1 = 5$$

For Mesh topology,

we need  $\{x(x-1)/2\}$  cable

$$= 8(8-1)/2$$

= 28 cable link.

For Star topology,

we need  $y = 5$  cable link

According to the security level I think

Mesh will be more secure network.

18/09/21

(4)

Ans to the Ques no.1 (b)

half-duplex: Sender can send data and also can receive data.

disadvantage: This data flow is on time each, that means sender can send data at a time or receive a data at a time.

Full duplex:

Advantages: Sender can send and receive data at the same time.

Disadvantage: No proper bandwidth utilization as the same line is used for sending and receiving data at the same time.



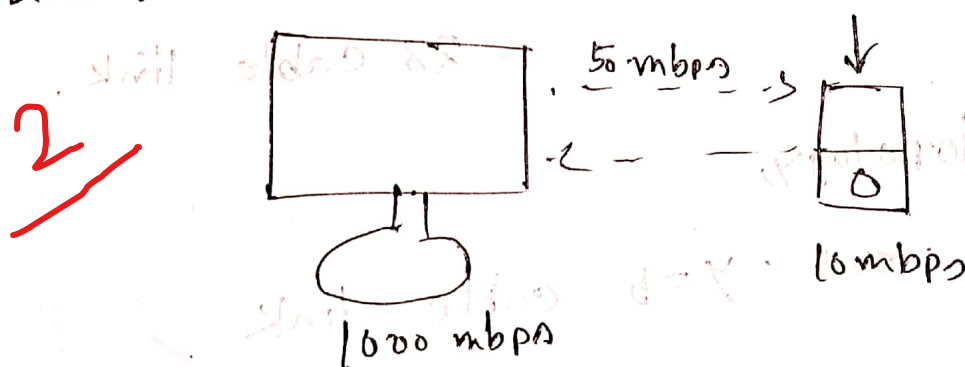
18/10/2019

⑤

Ans to the Ques. no 2(b)

Error control and Flow control are also performed in Transport Layer.

Flow control: Flow control like as in data link layer, transport layer is responsible for flow control. Flow control is transferred end to end, rather than across a single link.



Error control: Error control at this layer is performed process to process rather than across a single link. The sending transport layer makes sure the entire message



⑥

arrives at the receiving transport layer without error (damage & loss), it is usually

### Services

→ Connection oriented → Transmission Control protocol (TCP)

→ Connectionless → ~~used~~ user diagram protocol (UDP)

UDP	TCP
Faster	Slower
video games	www. FTP