

Department of Electrical Engineering

Assignment

Date: 07/05/2020

Course Details

Course Title: Computer Communication Network

Module: _____

Instructor: _____

Total Marks: 20

Student Details

Name: _____

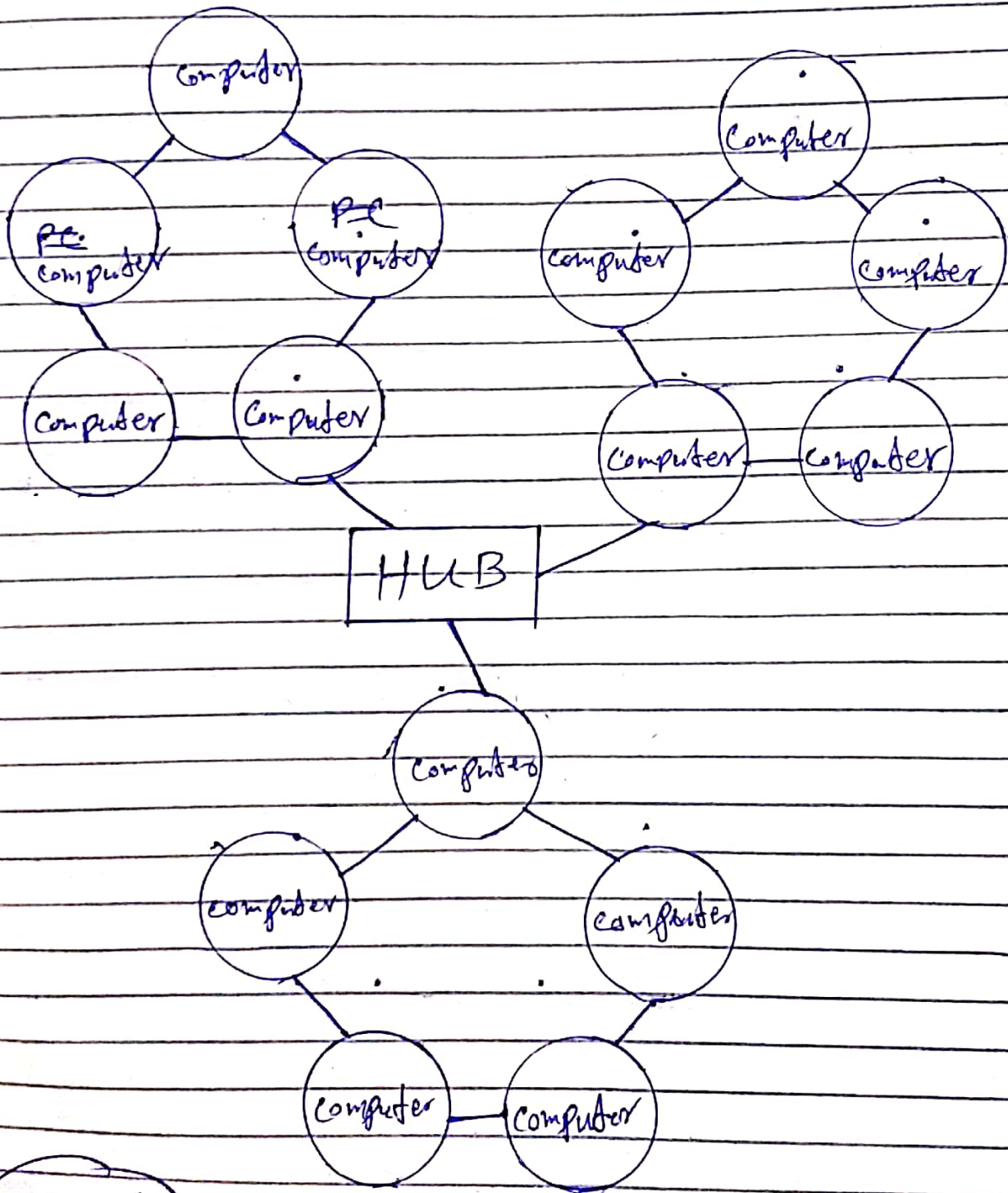
Student ID: _____

Q1.	(a)	Draw a hybrid topology with a star backbone and three ring networks also simulate the topology in Opnet.	Marks 4 CLO 1
Q2.	(a)	Suppose a computer sends a frame to another computer on a bus topology LAN. The physical destination address of the frame is corrupted during the transmission. What happens to the frame? How can the sender be informed about the situation?	Marks 4 CLO 1
Q3.	(a)	Suppose a computer sends a packet at the transport layer to another computer somewhere in the Internet. There is no process with the destination port address running at the destination computer. What will happen?	Marks 4 CLO 1
Q4.	(a)	Match the following to one or more layers of the OSI model: a. Reliable process-to-process message delivery b. Route selection c. Defines frames d. Provides user services such as e-mail and file transfer	Marks 4 CLO 1
Q5.	(a)	Draw the graph of the NRZ-L, NRZ-I and Manchester scheme using each of the following data streams, assuming that the last signal level has been positive. From the graphs, guess the bandwidth for this scheme using the average number of changes in the signal level. a. 00000000 b. 11111111 c. 01010101 d. 00110011	Marks 4 CLO 2

Yasir Ahmad 13788

Q1 Draw a hybrid Topology with a star backbone and Three ring network also simulate the Topology in Opnet.

Ans



Page 1

Sir

Assalamo Alaikum

Sir humare gao me net ka boht boht
masla he ye App down load nahi
hoskta

To Sir ye wala question mene
Draw kar diya

Page 2

Q: Suppose a computer sends a frame to another computer on a bus topology LAN. The physical destination address of the frame is corrupted during the transmission.

What happens to the frame?
How can the sender be informed about the situation?

Ans if the corrupted destination address does not match any station address in the network.

The packet is lost.

If the corrupted destination address matches one of the stations, the frame is delivered to the wrong station.

In case, however the error detection mechanism, available in most data link protocols,

will find the error and discard the frame.

In both cases, the source will somehow be informed using one of the data link control mechanisms discussed.

Q3: Suppose a computer sends a packet at the transport to another computer somewhere in the internet. There is no process with the destination port address running at the destination computer. What will happen?

Ans Most protocols issue a special error message that is sent back to the source in this case.

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Q. Match the following to one or more layers of the OSI model.

a) Reliable process-to-process message delivery.

b) Route selection.

c) Defines frame

d) Provides user services such as e-mail and file transfer.

Ans

a) Reliable process-to-process message delivery.
→ Transport

b) Route selection

Network

c) Defines frames

Data Link

d) Provides user services such as e-mail and file transfer.

Physical

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Q3 Draw the graph of the NRZ-L, NRZ-I and Manchester scheme using each of the following data streams, Assuming that the last signal level has been positive.

From the graphs, guess the bandwidth for this scheme using the Average number of changes in the signal level.

a, 00000000 b, 11111111 c, 01010101

d, 00110011

Ans Draw the graph of the NRZ-L scheme using each of the following data streams,

Assuming that the last signal level has been positive. From the graphs, guess the

bandwidth of this scheme using the Average number of changes in the signal level.

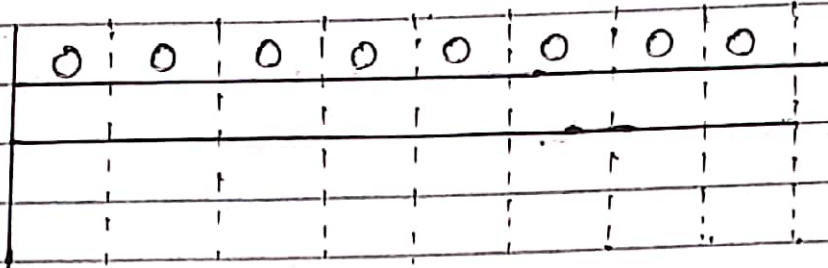
a, 00000000 b, 11111111 c, 01010101

d, 00110011

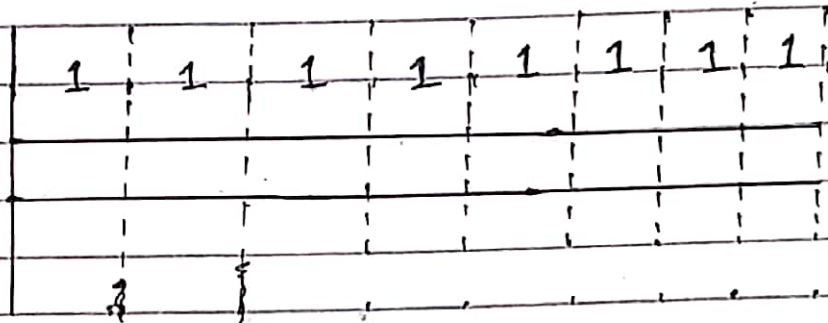
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Average number of changes = $\frac{(0+0+8+4)}{4}$
 = 3 for $N=8$

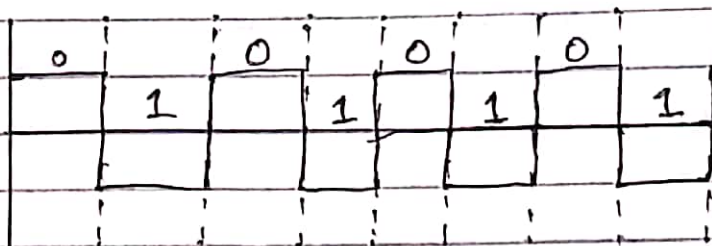
a, 00000000



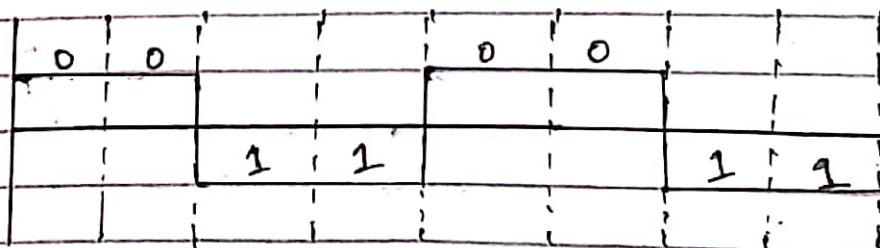
b, 11111111



c, 01010101



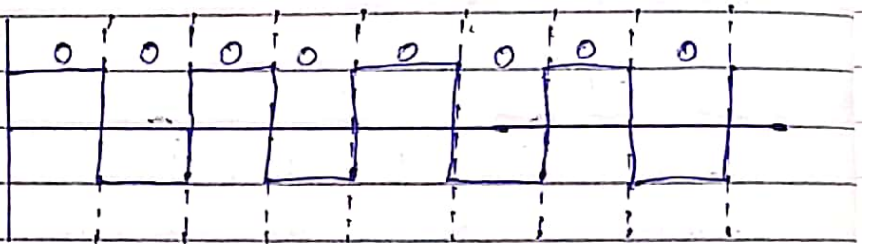
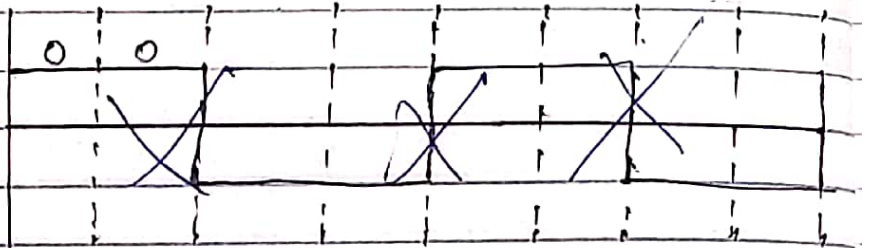
d, 00110011



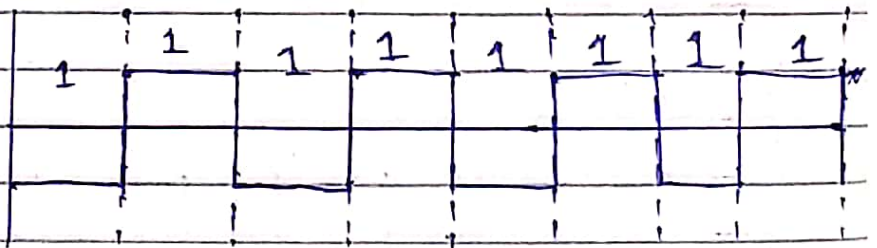
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Repeat Exercise 8 for the Manchester scheme

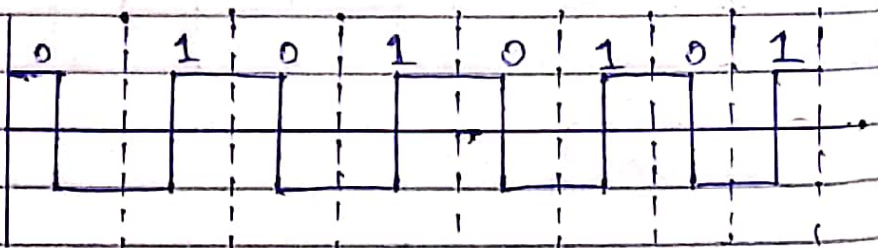
a) 00000000



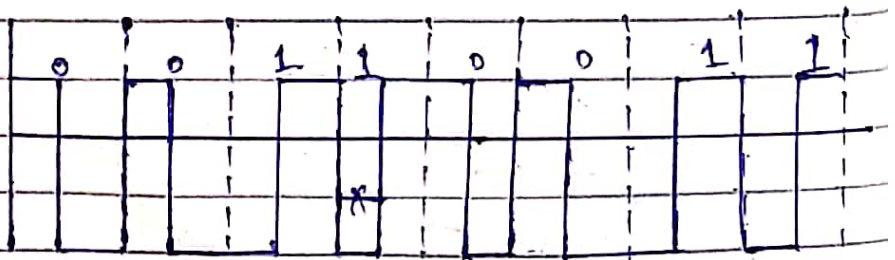
b) 11111111



c) 01010101



d) 00110011



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