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**Department of Electrical Engineering**

**Assignment**

**Date: 07/05/2020**

**Course Details**

**Course Title:** Computer Communication Network

**Module:** \_\_\_\_\_

**Instructor:** **MUHAMMAD WAQAS**

**Total Marks:** 20

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**Student Details**

**Name: RAFAQAT ULLAH KHAN**

**Student ID: 14107**

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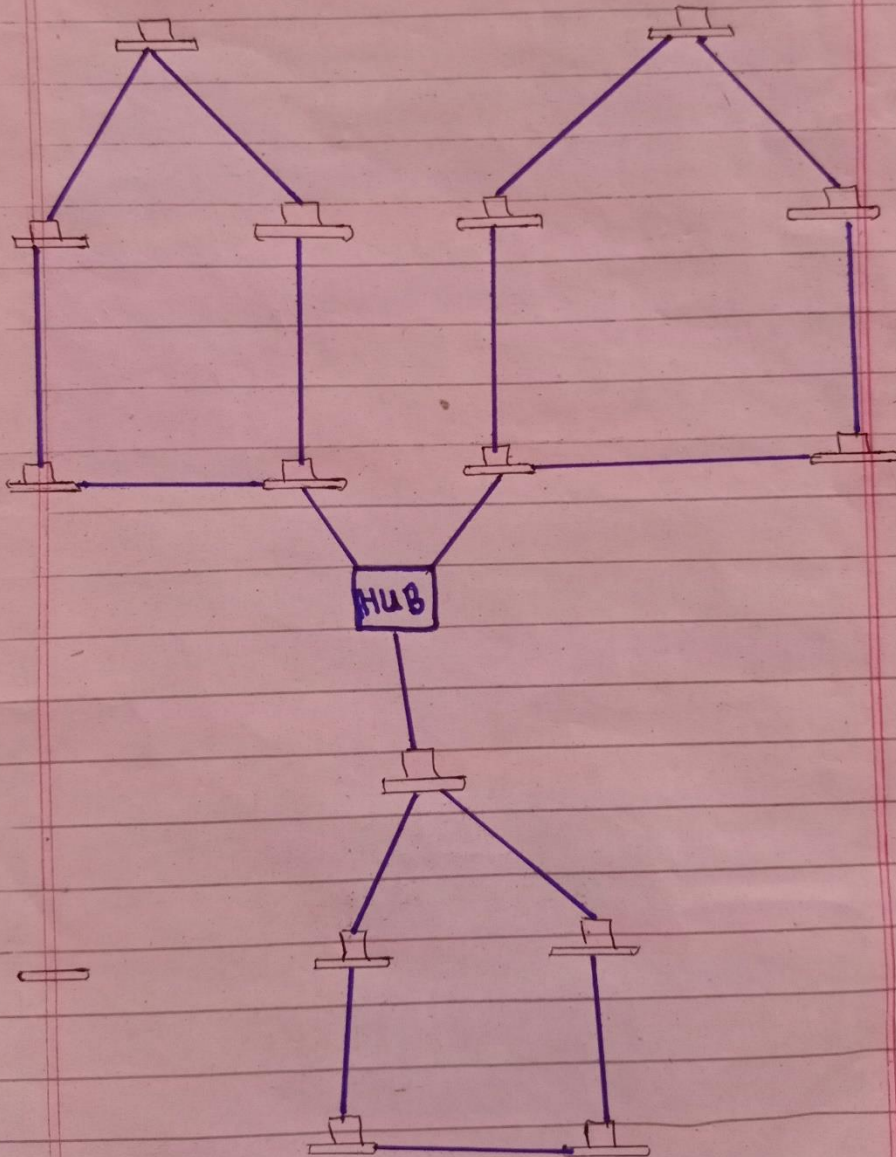
Q1.	(a)	Draw a hybrid topology with a star backbone and three ring networks also simulate the topology in Opnet.	Marks 4
			CLO 1
Q2.	(a)	Suppose a computer sends a frame to another computer on a bus topology LAN. The physical destination address of the frame is corrupted during the transmission. What 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

(61):-

Question = (61):-

Part:- (a):-

Answer:-



(02):-

Q Number 3

Part No A

Answer :

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. So in this case,

the process at each machine that communicates at a given layer. Physical layer has a direct link between two devices, while other layers have to pass the information down to the lower layers on the sender device by adding extra bits of each layer and the receiver device unwraps the message at each layer moving upwards till it finally reaches the corresponding communication layer.



(03).-

Question No: 2

Part No: A

Ans:.

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

Before using the destination address in an intermediate or the destination node, the packet goes through error checking that may help the node find the corruption (with a high probability) and discard the packet. Normally the upper layer protocol will inform the source to resend the packet.

(04):-

Q Number 4

Part No A

Answer :

Match The following to one or more layers of The OSI Model.

- a) Reach determination → Network layer (layer 3) .
- b) Flow control → Transport layer (layer 4)
- c) Interface to transmission media :-  
→ Physical layer (layer 1)
- d) Provides access for The end users  
→ Application layer (layer 7)



(05):-

Question:- 05 :-

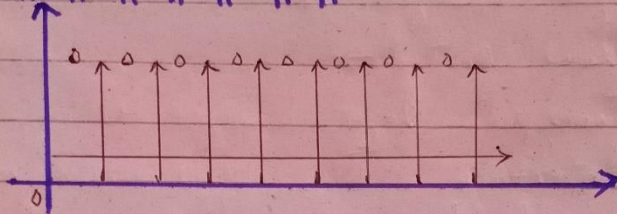
Part:- (a):-

Answer:-

For NRZ-L

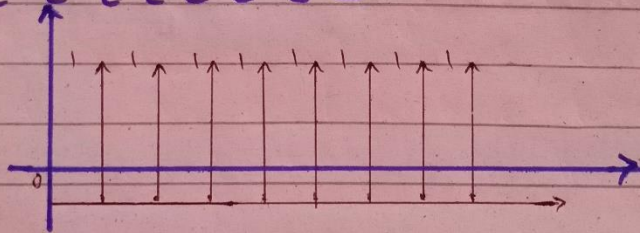
a) 0 0 0 0 0 0 0 0

H H H H H H H H



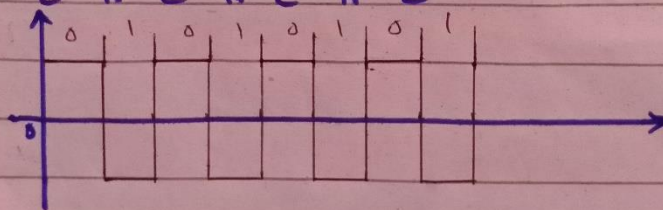
b) 1 1 1 1 1 1 1 1

L L L L L L L L



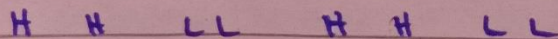
c) 0 1 0 1 0 1 0 1

H L H L H L H L

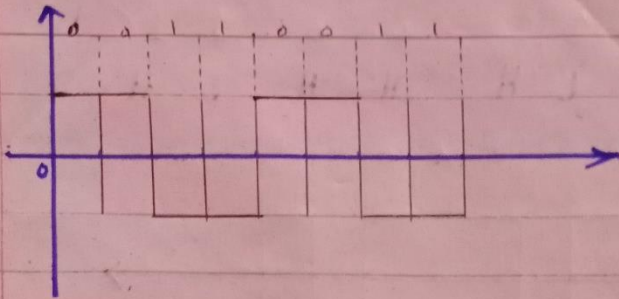


d) 0 0 1 1 0 0 1 1

H H L L H H L L

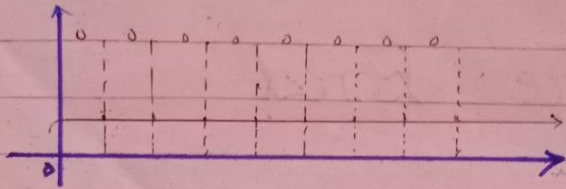


(06):-

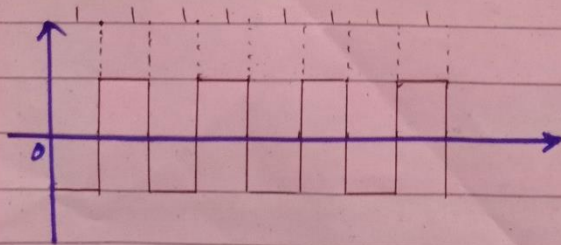


Now for NRZ-I

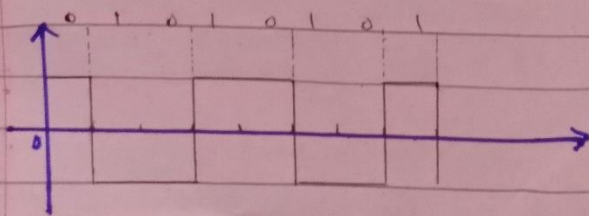
a): 0 0 0 0 0 0 0 0  
H H H H H H H H



b): 1 1 1 1 1 1 1 1  
L H L H L H L H

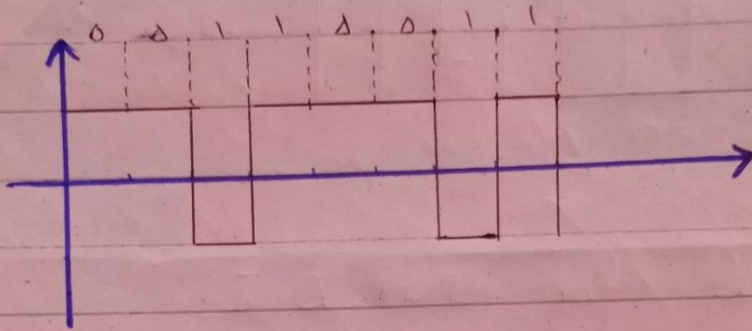


c): 0 1 0 1 0 1 0 1  
H L L H H L L H



(07):-

d). 0 0 1 1 0 0 1 1  
H H L H H H L H



The End