
Department of Electrical Engineering

Assignment

Date: 07/05/2020

Course Details

Course Title: Computer Communication Network

Module: _____

Instructor: Muhammad waqas

Total Marks: 20

Student Details

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Student ID: 13738

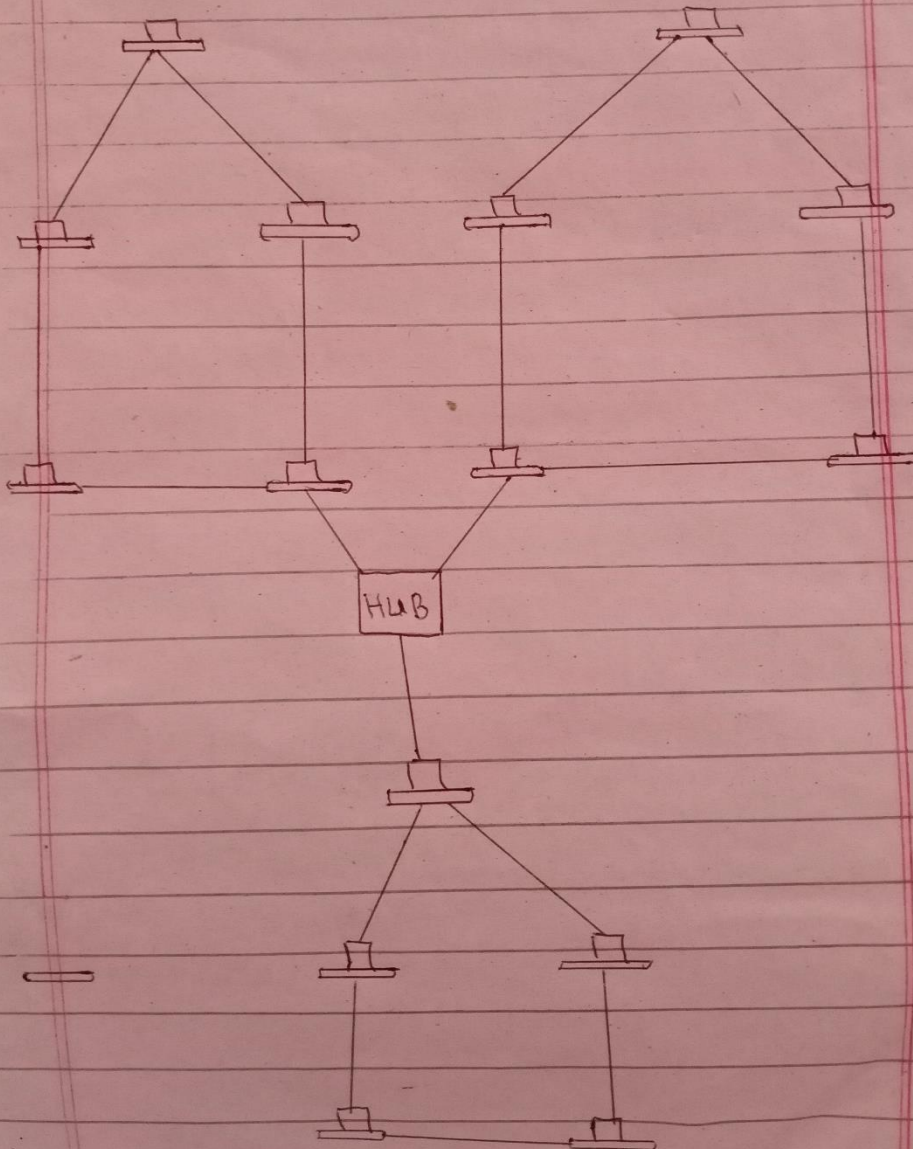
Q1.	(a)	Draw a hybrid topology with a star backbone and three ring networks also simulate the topology in Opnet.	Marks 4 CLO 1
Q2.	(a)	Suppose a computer sends a frame to another computer on a bus topology LAN. The physical destination address of the frame is corrupted during the transmission. What happens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

(81).

Question = (61) :-

Part :- (a) :-

Answer :-



02

Question = 02

Part - (a)

Answer:-

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. So in this case before using the destination address in an intermediate or the destination node, the packet does through error checking that may help the node find the corruption and discard the packet. Normally the upper layer protocol will inform the source to resend the packet.

03

Question = 03:-

Part :- (a):-

Answer :-

Suppose a computer sends a ~~frame~~ packet at the transport ~~and~~ layer to another computer somewhere in the internet. There is no process with the destination port address running at the destination computer. So the process at each machine that communicates at a given layer. Physical layer has a direct link between 2 devices while other layers have to pass the information down to the lower layer on the sender device by adding extra bits at each layer and the receiver device unwraps the message at each layer moving upwards till it finally reaches the corresponding communicating layer.

04

Question = 04:-

Part:- (a):-

Match the following
to one or more layer
of the OSI model:

a):- Flow determination → Network
layer (Layer 3):-

b):- Flow control →

→ Transport layer :- (Layer 4)

c):- Interface the transmission media:-

→ Physical layer (Layer 1)

d):- Provide access for the end user:-

→ Application layer :- (Layer 7):-

Question:- 05 :-

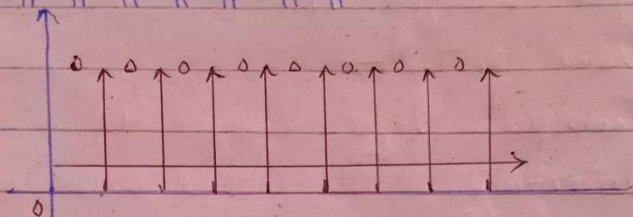
Part:- (a) :-

Answer:-

For NRZ-L

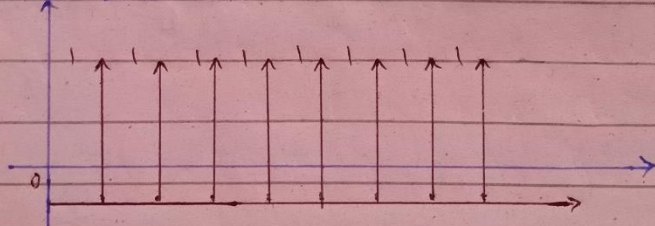
a) :- 0 0 0 0 0 0 0 0

H H H H H H H H



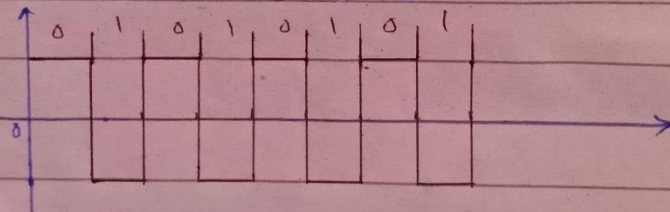
b) :- 1 1 1 1 1 1 1 1

L L L L L L L L



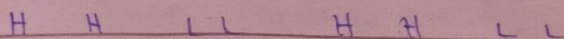
c) :- 0 1 0 1 0 1 0 1

H L H L H L H L

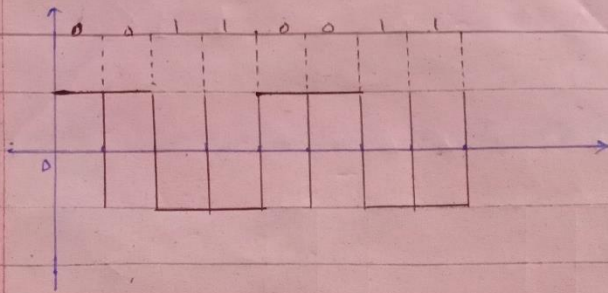


d) :- 0 0 1 1 0 0 1 1

H H L L H H L L

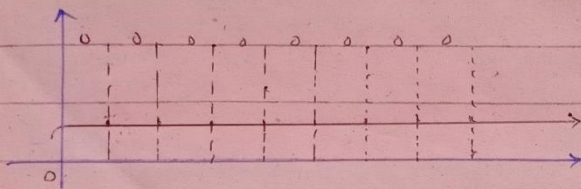


06

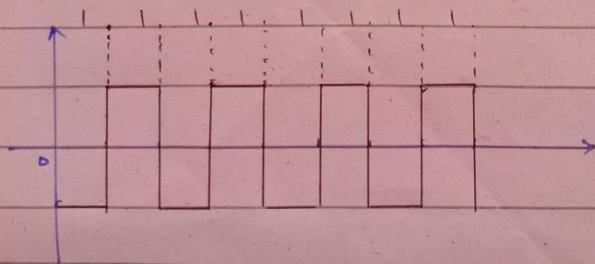


Now for NRZ-I

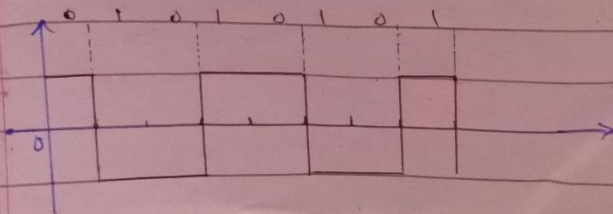
a) 0 0 0 0 0 0 0 0
H H H H H H H H



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

