Department of Electrical Engineering
Assignment
Date: 07/05/2020
Course Details

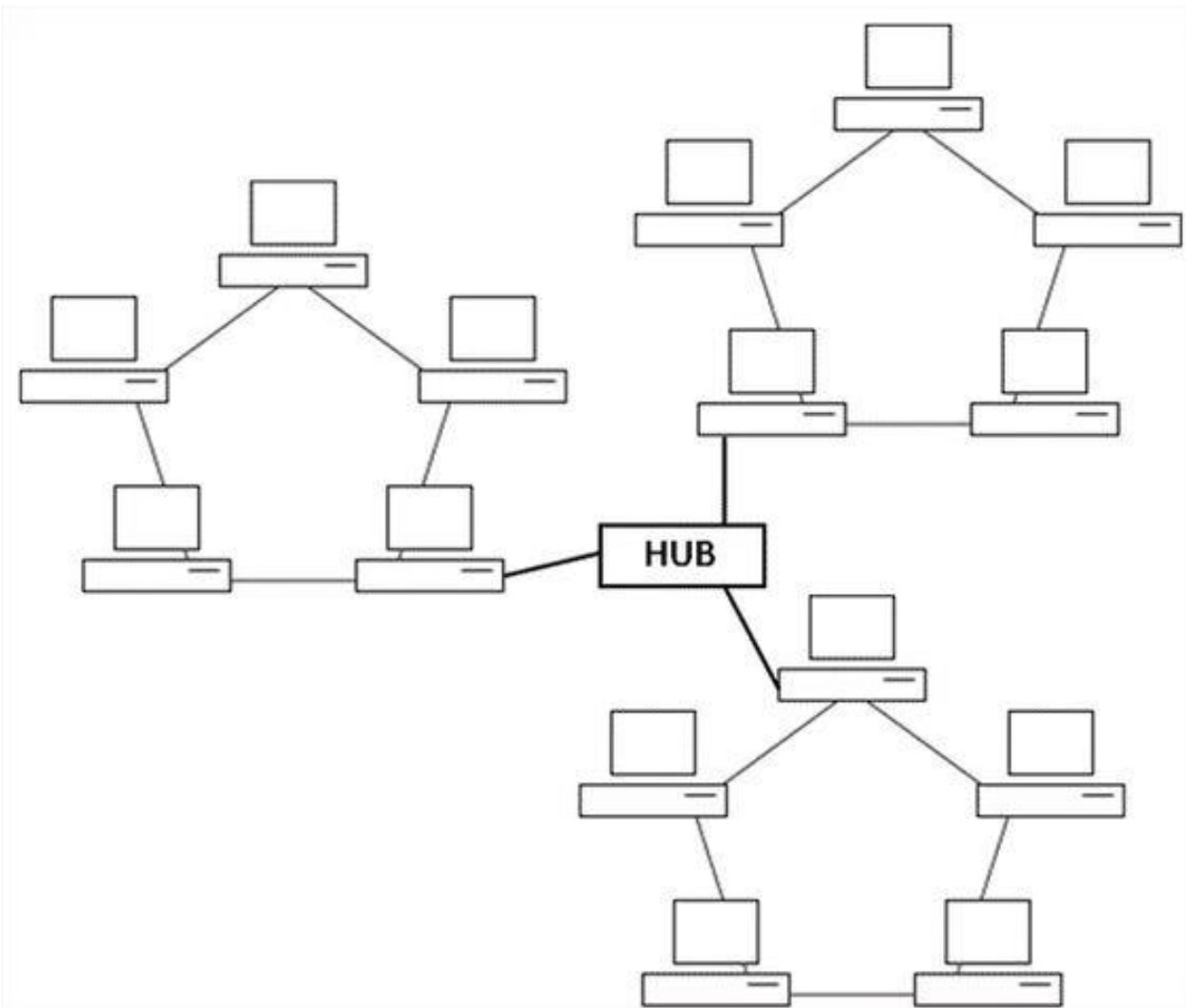|		
Course Title:	~~Computer Communication Network~~	**Module:** ~~6th (BE)~~
Instructor:	**Sir muhammad waqas.**	**Total Marks:** ~~20~~

Student Details

Name:	Talha khan	**Student ID:** 13845

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 signal1evel 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

Q1.: Answer

Q2.: Answer

Q 2:-(a)

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 station, the frame is delivered to the wrong station. In this 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.

Q 3:-(a)

Ans:- Most Protocols issue a special error message that is sent back to the source in this case.
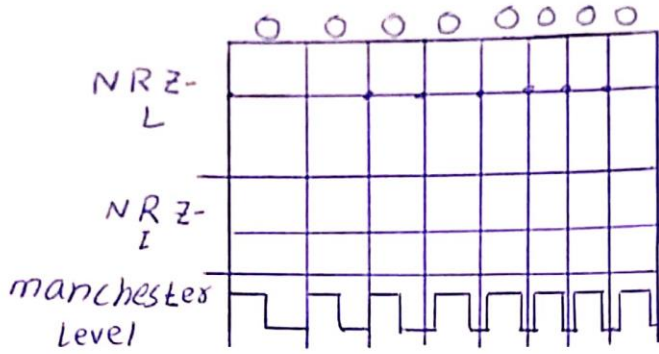
Q4.: Answer

Q4:- (a)

Ans:-

a: Reliable process to process message delivery - Transport Layer (Layer 4)

b: Route selection - Network Layer (Layer 3)

c: Defines frame - Data Link Layer (Layer 2)

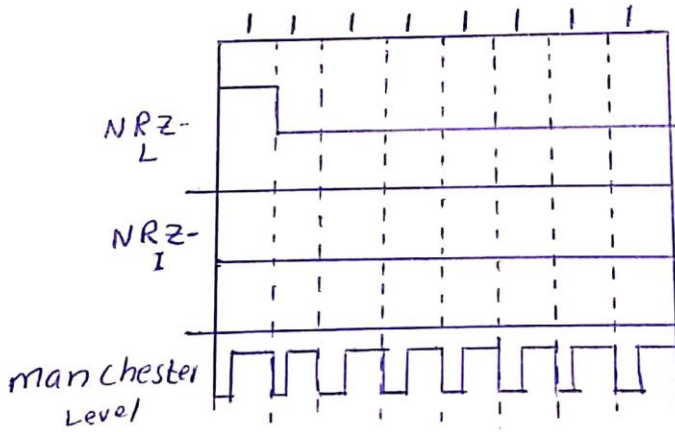d: Provides user services such as email and file transfer - Application Layer (Layer 7)

Q5:- (a)

Ans:- Average Number of changes =
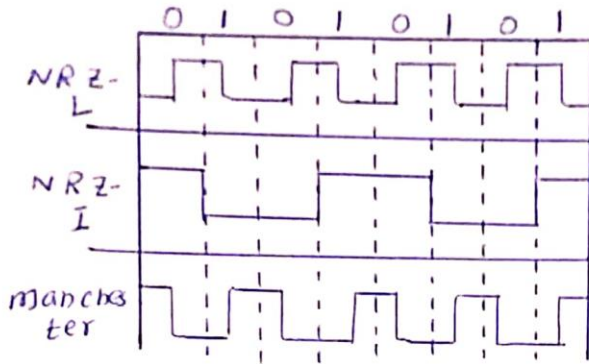
$$(0 + 0 + 8 + 4) / 4 = 3$$
$$\text{for } N = 8$$

(a) (0 0 0 0 0 0 0 0)

NRZ-L

NRZ-I

manchester Level

(b) (1 1 1 1 1 1 1 1)

NRZ-L

NRZ-I

man chester Level

c:- (01010101)

0 1 0 1 0 1 0 1

NRZ-L

NRZ-I

manchester

d:- (00110011)

0 0 1 1 0 0 1 1

NRZ-L

NRZ-I

manchester