IQRA NATIONAL UNIVERSITY

Computer Communication Network

Mid Term Assignment Summer 2020

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⇒Question No (1)

⇒ Part (A)

(a) You have two computers connected by an ethernet hub at home Is this LAN, a MAN or a WAN Explain?

Answer This is LAN (Local Area Network) because it is interconneted computers with in a Limited area. A man is a metropolitan Area network that connects together all machine in a town.

(b) In Ring topology in the figure what happens if one of the Station is unpluged

Answer In ring topology unpluging one Station interrupts the ring however most ring networks use a mechanism that bypass the Station.

The ring can continue its operation. But with the figure given in the paper the network would stop functioning because the token has to pass through each station.

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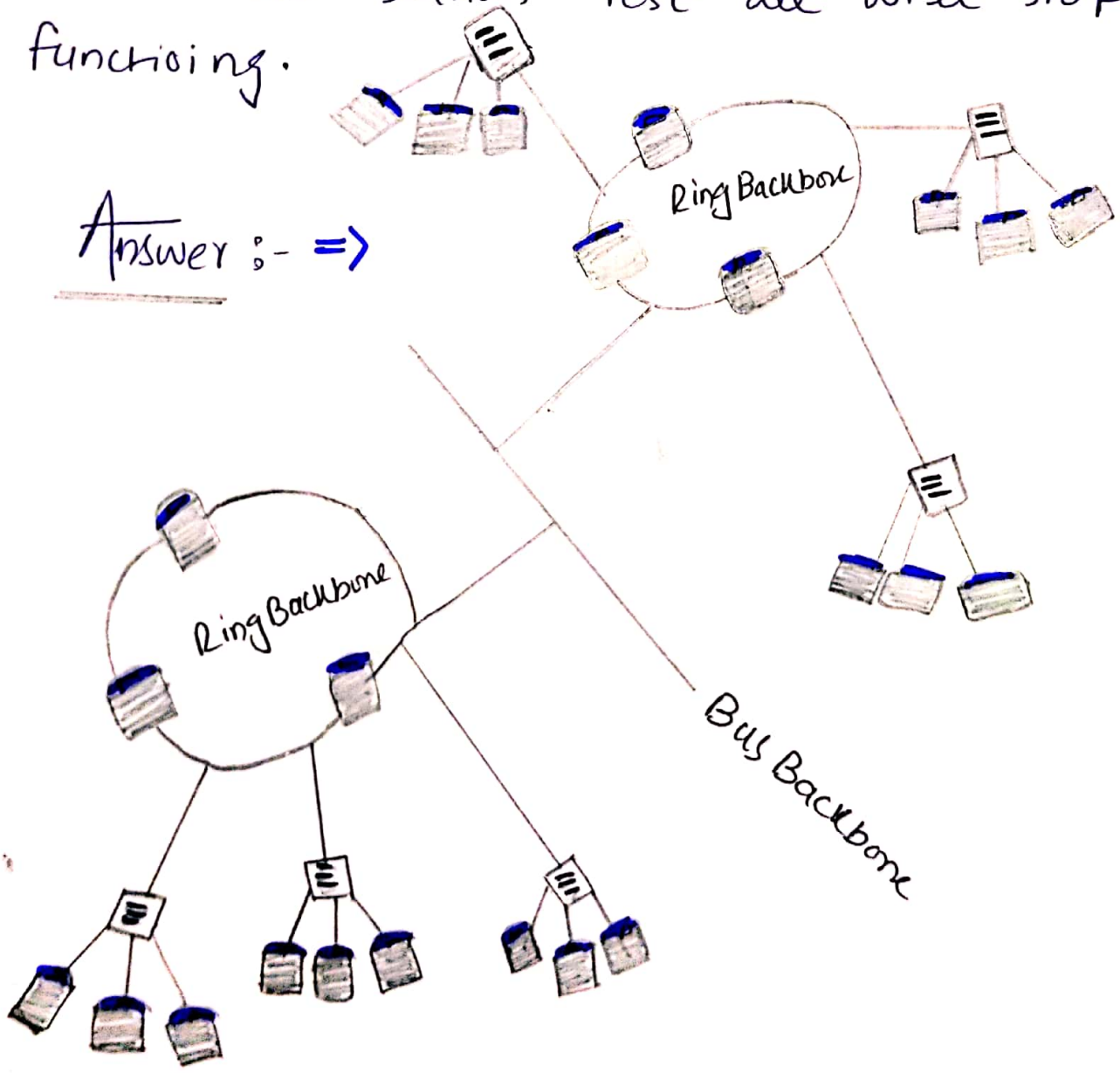
(c) In bus topology in the figure what happen if one of the station is unplugged?

Answer In a bus topology no station is in the path of the signal unplugging a station has no effect on the operation of the rest of the network. From that station rest all will stop functioing.

(d) Answer :- =>



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⇒ Question (2)

➡ Part (A)

① What are headers and trailer and how do they get added and removed?

Answer Additional Information wrapped with the data unit at each layer usally a trailer is added at data link layer Header and trailer Contain information Such as Source destination address, Controll bits, error Correction bits etc These extra bits are added at the the layer at Sender's side and removed at the Corresponding layer at reciever's side.

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⇒ ② What is the difference between a port address and a Logical address and how they get added and removed?

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Answer: port address - transport layer logical address - network layer, physical address - data link and physical layer

Port address is the address of the process on a host A logical address (IP) in the internet is currently a 32 bit address that can uniquely define a host connected to the internet Physical address is address of node as defined by its LAN or WAN

⇒ Basically the port address is used to identify the particular application runing on the destination machine.

⇒ The IP address of System is called logical address It is used by

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=> it is used by network layer to identify a particular network (Source to destination Among the network).

=> Each System have (Network Interface Card) through which two system physically connected with each other NIC is called Physical address it is used by data link layer.

=> (3) How do the layer of Internet modal do collerate with the layer of OSI modal?

Answer:- The TCP/IP Protocol Suite was developed prior to the OSI modal Therefore the layers in TCP/IP Protocol Suite do not exactly match those in the OSI modal The

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⇒ orignal TCP/IP protocol suite was defined as having four layer is equivalent to the combination of the physical and data link layers The Internet layer is equivalent to the network layer and the application layer is roughly doing the job of the session, presentation, and application layers with the transport layer in TCP/IP taking care of part of duties of the session layer So we assume that TCP/IP protocol suite is made of five layers provide standards and physical standards network interfaces Internet working and transport functions that corrospond to the first four

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=> Four layers of the OSI modal

The three top most layers in OSI modals however are represented in TCP/IP by a single layer called application layer.

=> (4) Match the following to one or more layers of the OSI modals.

Answer:

(a) Reliable process to process message delivery.

=> (Transport) Layer

(b) Route Selection

=> (Network) Layer

(c) Define Frames

=> (Data link) Layer

(d) Provide user Service email and file transfer.

=> (Application) Layer.

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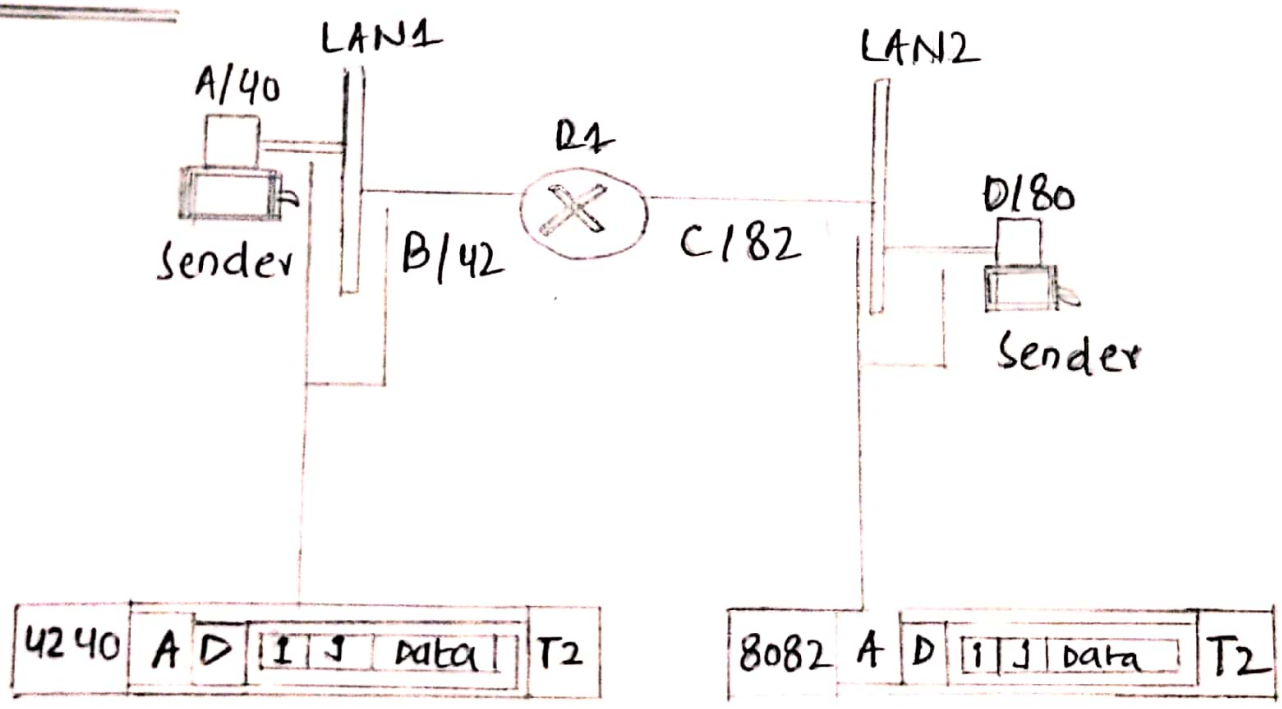
(e) Transmission of bit stream across Physical medium.

=> (Physical) Layer.

-> Question No (3)

=> Part (A)

Answer :-



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=> Question (3)

=> Part (B)

Answer :- 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 Protocal will inform the source to resend the packet.

=> The data link layer is concerned with the transfer of frames of information across a single

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=) hop The network layer involves the transfer of information across a network using multiple hops per path in general The connection from a radio antenna to the laptops is direct and thus a data link layer protocol is more suitable for this situation.

Thank You