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PAPER: Computer Networks

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Question No 1.

(a) 1.

Answer: This is Lan (Local Area Network). because it is interconnected computers within a limited area.

2.

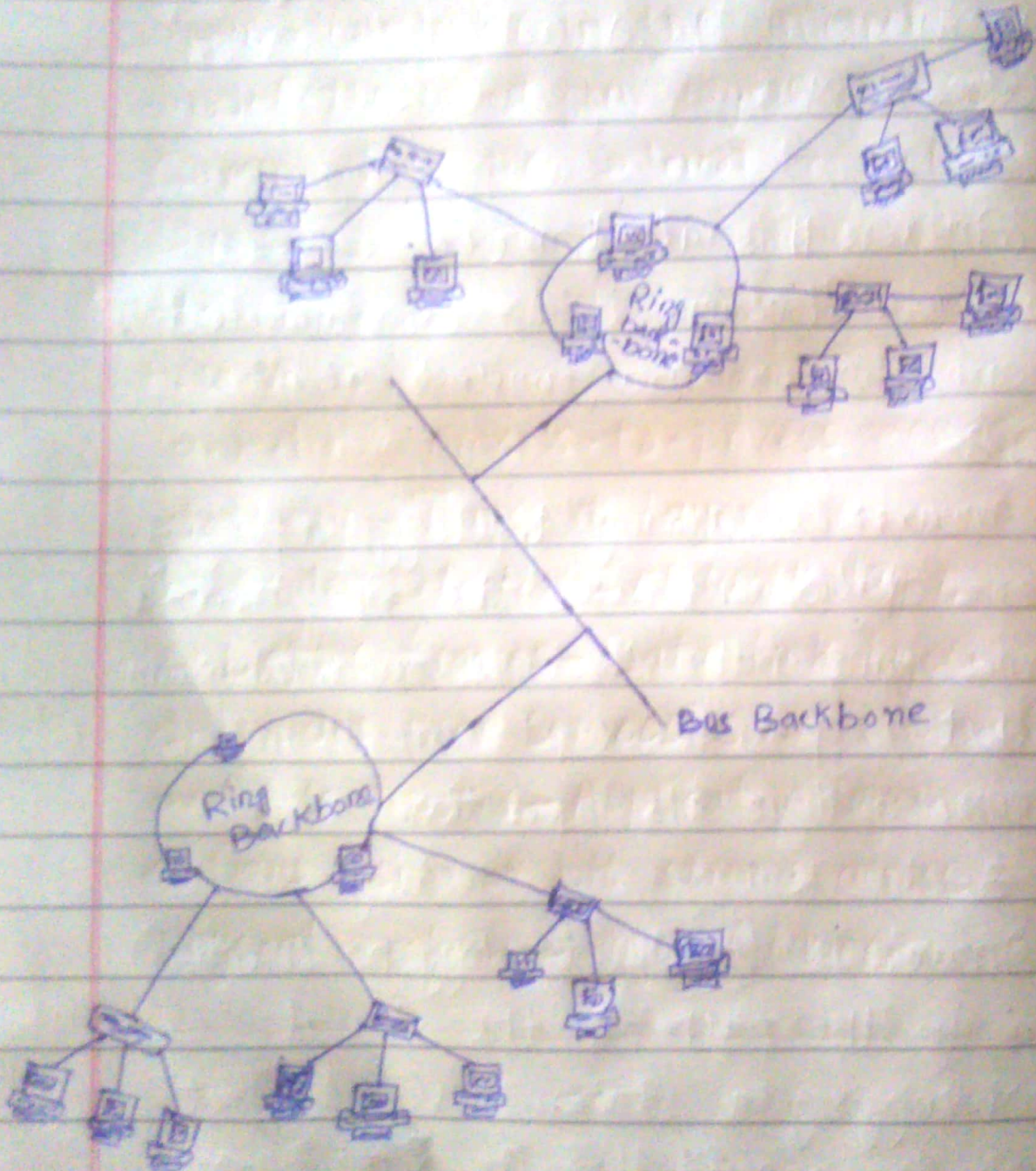
Answer: In a ring topology, unplugging one station interrupts the ring, however most ring networks use a mechanism that bypasses the station; the ring can continue its operation.

3.

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.

4.

Answer: Diagram:-



P - T - O

Question No 2.

1a) 1.

Answer: Headers and trailers are control data added at the beginning and the end of each data unit at each layer of the sender and removed at the corresponding layers of the receiver. they provide source and destination addresses, synchronization points, information for error detection.

2.

Answer: → The port address is used to identify the particular application running on the destination machine.
→ The IP address of the system is called logical address. It is used by network layer to identify a particular network (source to destination) among the networks.

→ Each system have NIC (Network Interface Card) through which two systems physically connected with each other with cables. the address of NIC is called physical address. It is used by data link layer.

3.

Answer: The application, presentation, and session layers of the OSI model are represented by the application layer in the internet model. The lowest four layers of OSI correspond to the internet model layers.

4.

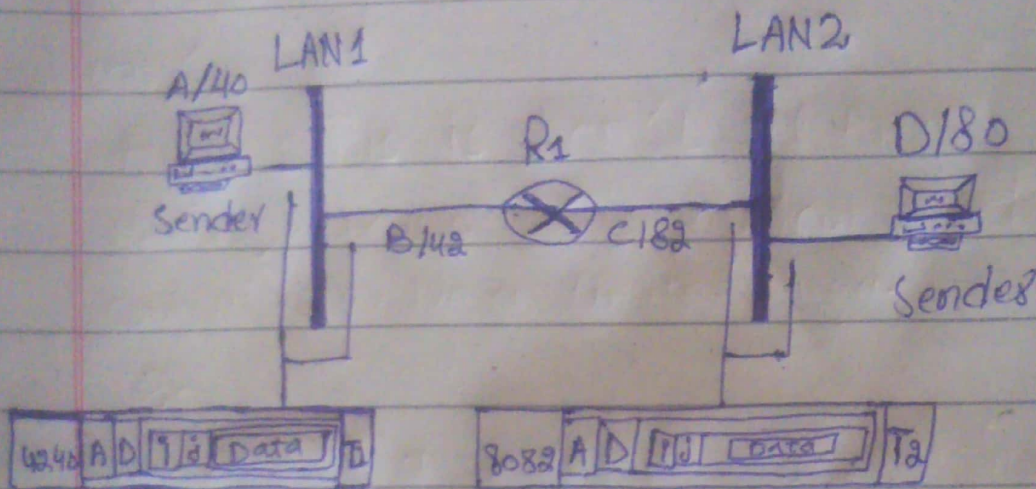
Answer:

- a. Reliable process-to-process message delivery - Transport Layer.
- b. Route selection - Network Layer.
- c. Define frames - Data Link Layer.
- d. Provides user services such as e-mail and file transfer - Application Layer.
- e. Transmission of bit stream across physical medium - Physical Layer.

Question No 3.

(a):

Answer: Diagram:



(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 protocol will inform the source to resend the packet.

"The End"