

**INSTITUTE OF INFORMATION TECHNOLOGY  
JAHANGIRNAGAR UNIVERSITY**

**Number of Assignment : 01**

**Name of Assignment :** TCP/IP Protocol Suite.

**Course Code :** ICT – 2109

**Course Title :** Data & Telecommunication

**Submitted To**

Nusrat Zerin Zenia

Lecturer

IIT – JU

**Submitted By**

MD. Shakil Hossain

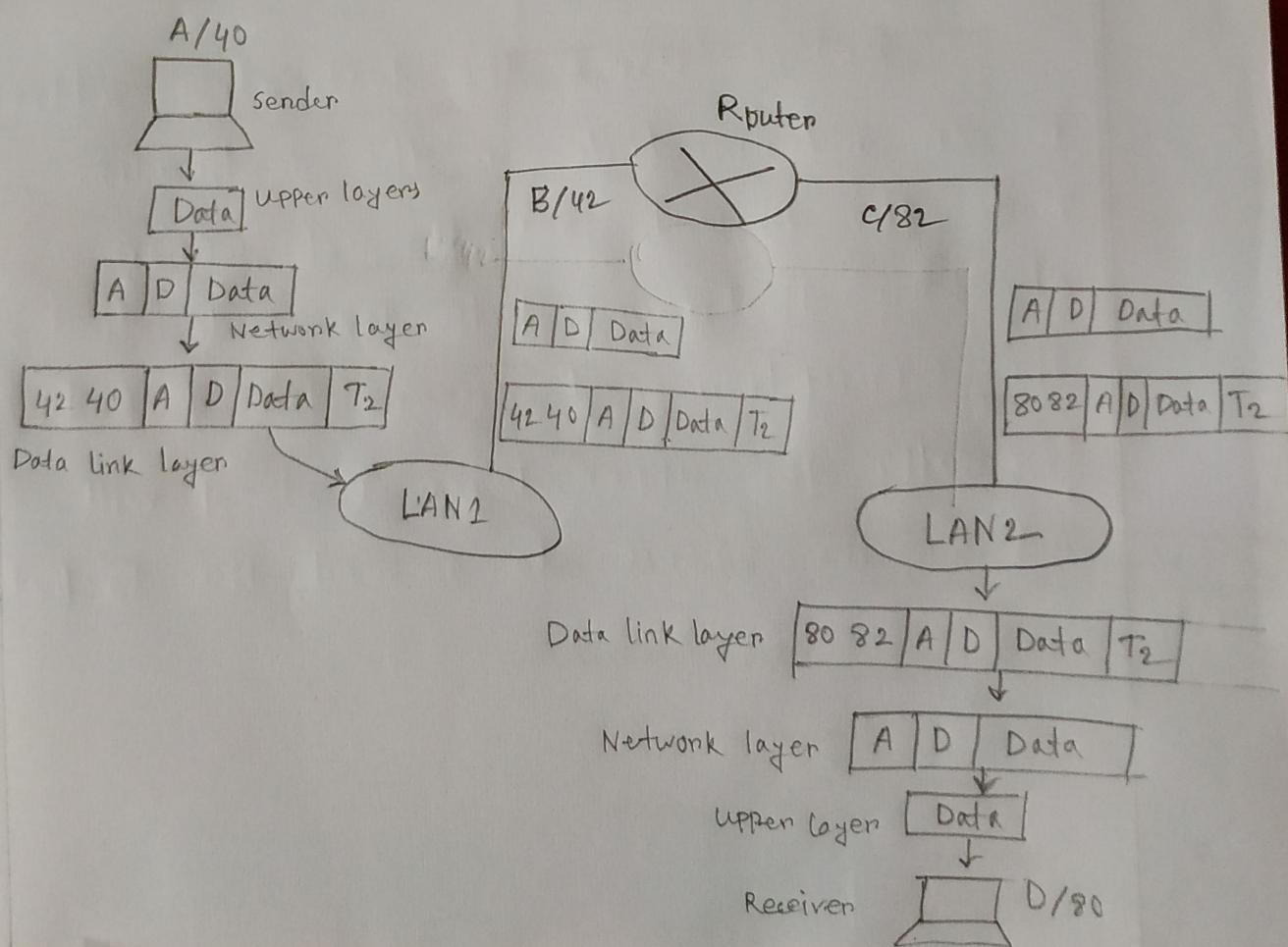
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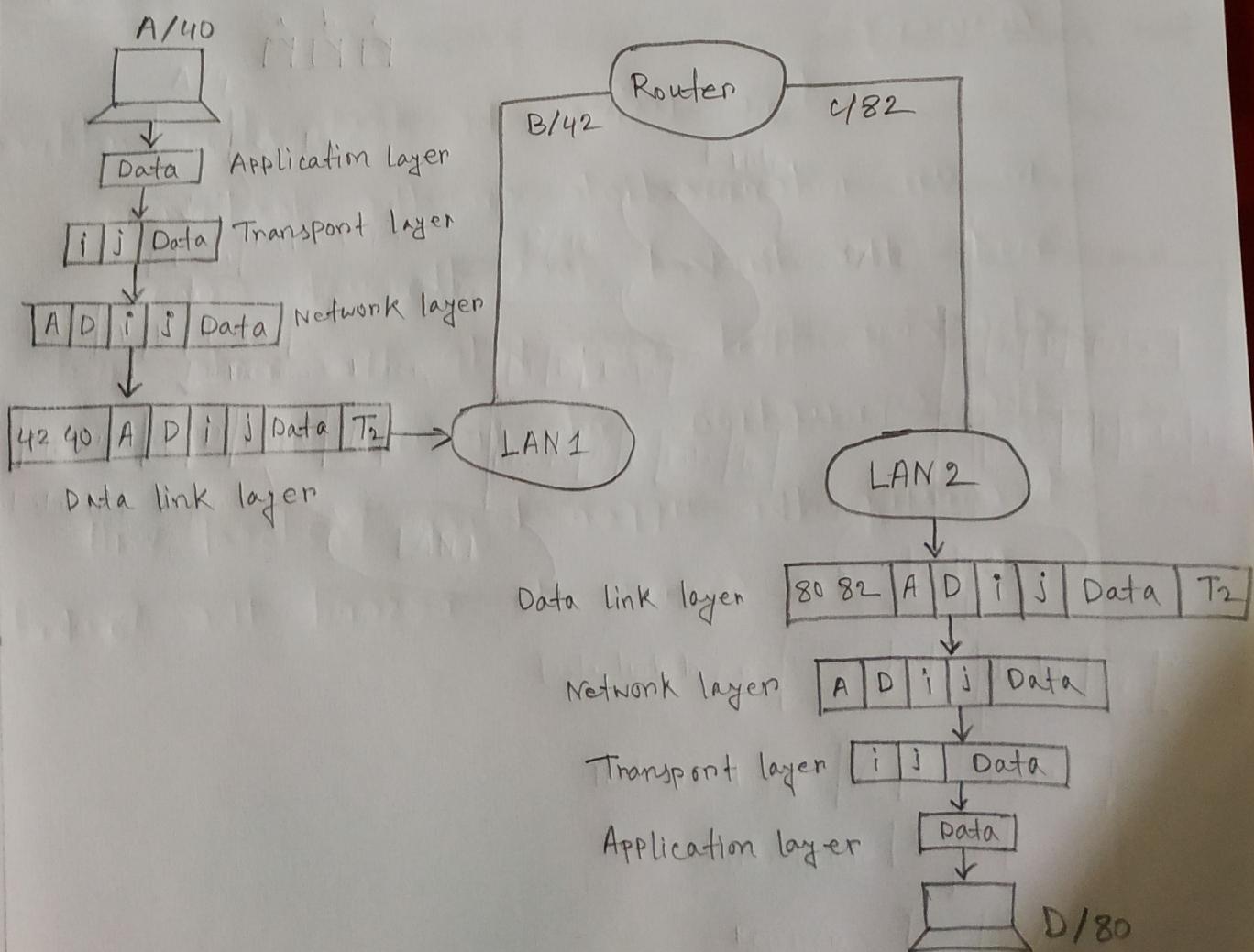
Question : 20

In Figure 2.22 computer A sends a message to computer D via LAN1 router R1 and LAN2. Show the contents of the packets and frames at the network and data link layer for each hop interface.

Answer:

Question: 21

In Figure 2.22 assume that the communication is between a process running at Computer A with Port address i and a process running at Computer D with Port address j. Show the contents of packets and frames at the network, data link, and transport layer for each hop.

Answer:

Question: 22

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?

Answer:

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 stations, 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.

Question: 23Logic mistakes

Suppose a computer sends a packet at the network layer to another computer somewhere in the Internet. The logical destination address of the packet is corrupted. What happens to the packet? How can the source computer be informed of the situation?

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 and discard the packet.

Normally the upper layer protocol will inform the source to resend the packet.

Question : 24

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?

Answer :

Most protocols issue a special error message that is sent back to the source in this case.

Question : 25

If the data link layer can detect errors between hops why do you think we need another checking mechanism at the transport layer?

Answer :

The errors between the nodes can be detected by the data link layer control, but the error of the node cannot be detected by the data link layer.