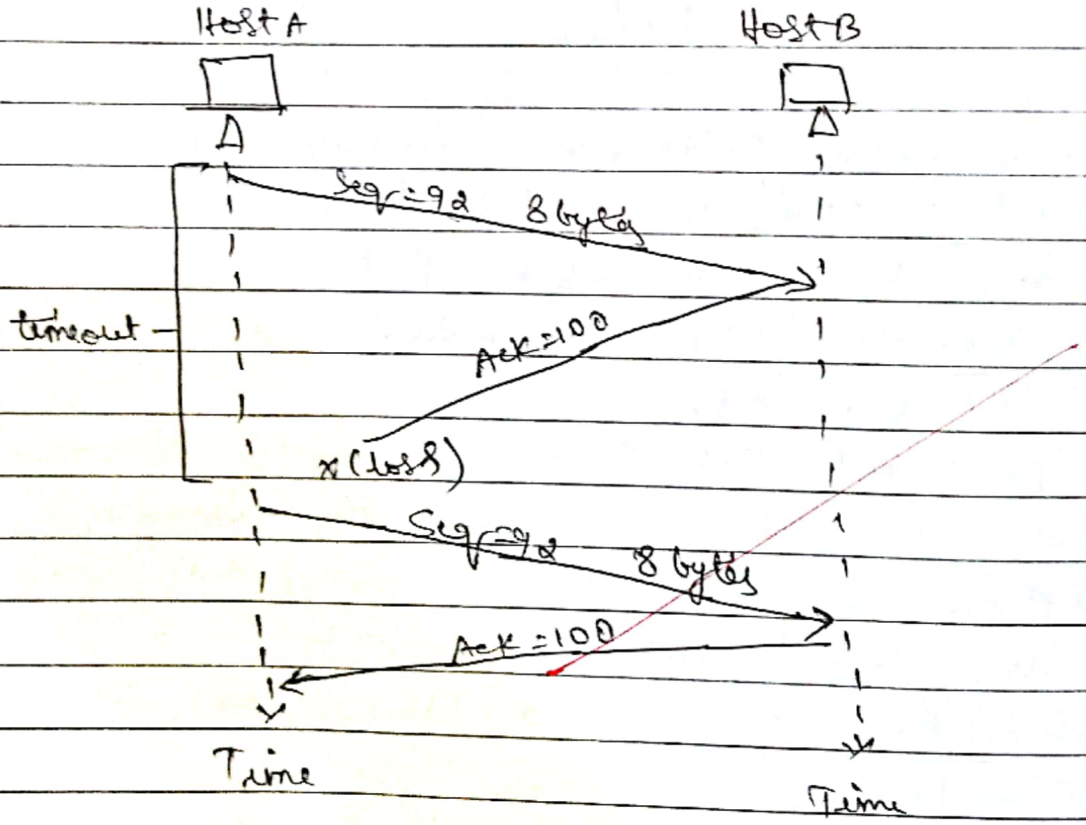
30/12/21

PAGE NO.

unit - test 02

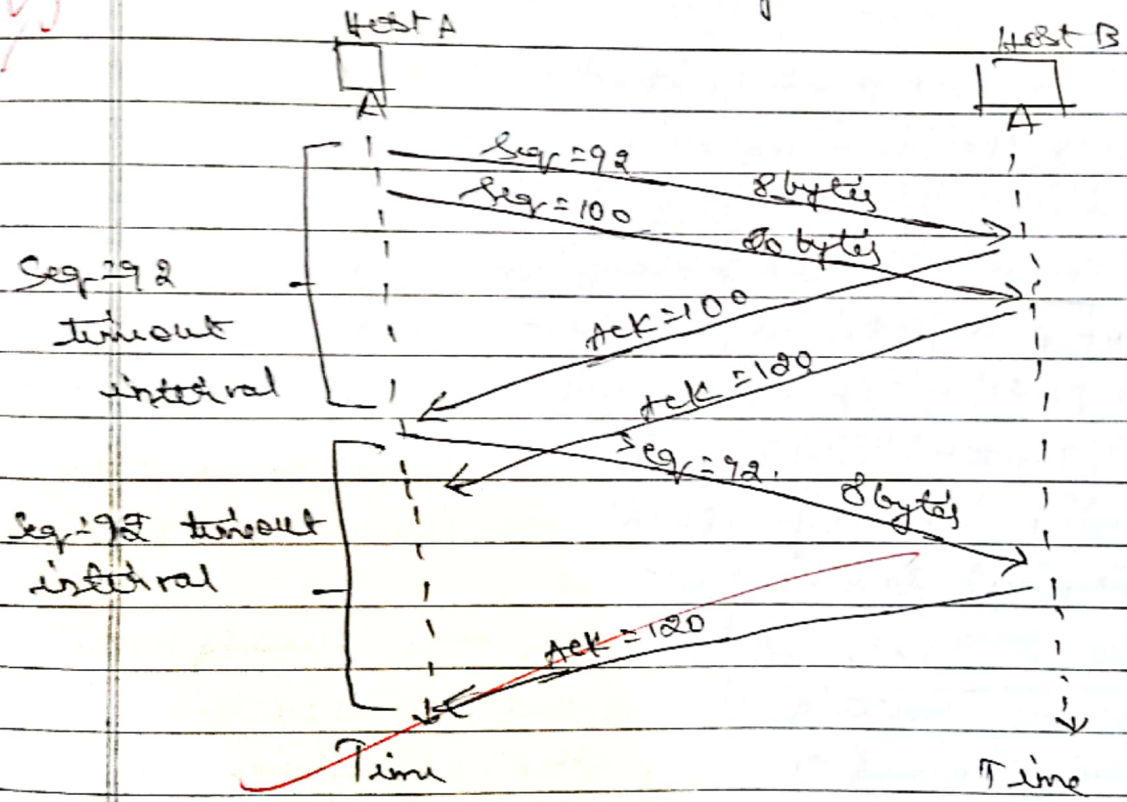
(1) with a neat diagram explain Reliable Data transfer with few interesting scenarios.

> 1, Host A sends one segment to Host B, Segment has sequence number 92 and containing 8 bytes of data. After sending this segment, Host A waits for a segment from B, with acknowledgment number 100. The acknowledgment from B to A gets lost. The timeout Event occurs, & Host A retransmits the same segment. When Host B receives the retransmission, it observes from the sequence number that the segment containing the data that has been already been received.



2, Host A sends two segments back to back. The 1st segment has sequence number 92 and has 8 bytes of data. The second segment has sequence number 100

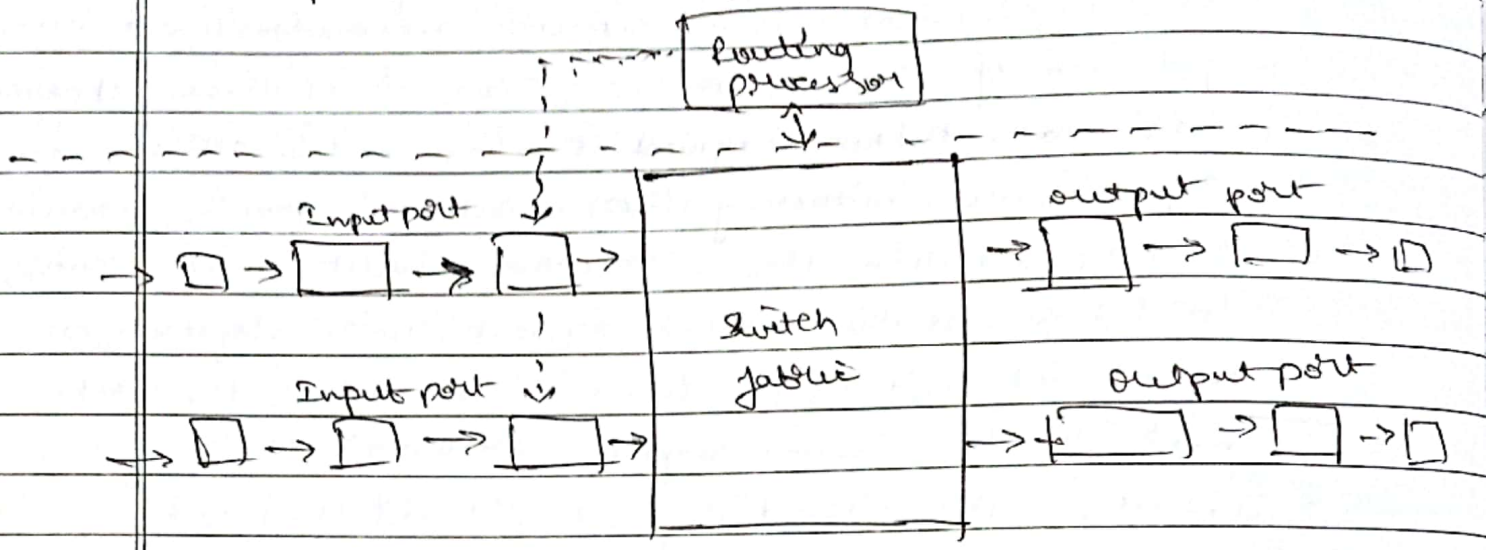
and has 20 bytes of data. Both segments arrive intact at B. & B sent two separate acknowledgement numbers for each of these segments. The 1st of these acknowledgment has acknowledgment number 100 & 2nd has 120. Suppose now neither of these acknowledgments arrive at Host A before timeout. When the timeout event occurs, Host A resends the first segment with sequence number 92 and restarts the timer. As long as the acknowledgment for the second segment arrives before the new timeout, the second segment will not be retransmitted.



(5) with a neat diagram, Explain 4 components of router architecture.

> input ports: An input port performs several key function It performs physical layer function of terminating an incoming physical link of router.

An input port also performing link-layer functions



needed to interoperate with the link layer at the other side of the incoming link.

Switch fabric: Switch fabric connects router's input port to its output port.

output port: It stores the packet received from the switch fabric, transmits these packets to the outgoing link by performing the necessary link layer and physical layer functions.

Routing processor: It executes the routing protocols maintains routing tables and attached link state information and computes the forwarding table for the router. It also performs the network management functions.

10/10 B 31/12/23