

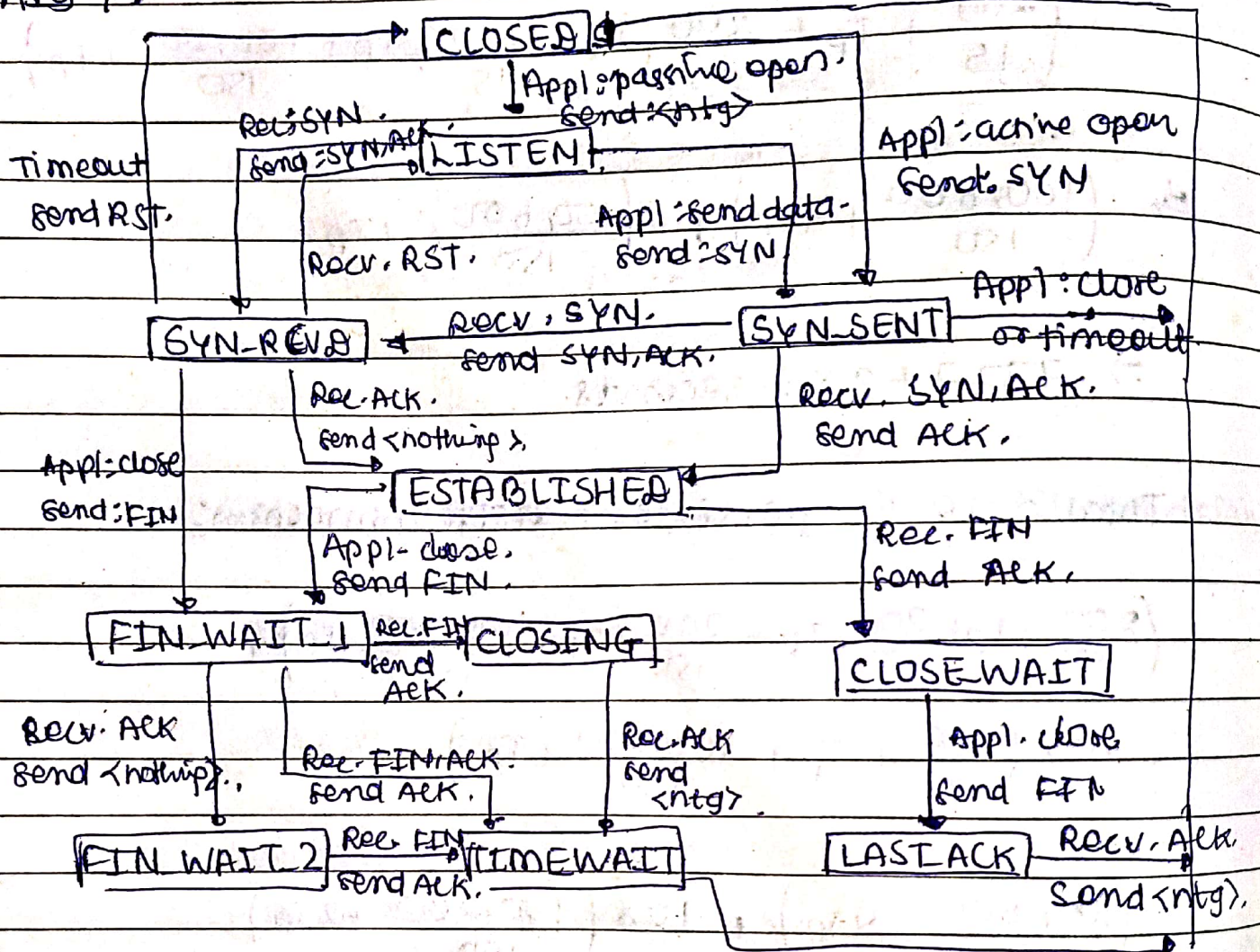
# COMPUTER NETWORKS

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Ans 7.



The two transitions leading to the **ESTABLISHED** state correspond to the opening of a connection, & the two transitions leading from the **ESTABLISHED** state are for the termination of a connection.

The **ESTABLISHED** state is where data transfer can occur, between two ends in both direction.



As act. the LISTEN state, if SYN received go to, SYN SENT state. for that SYN  $\rightarrow$  ACK can be sent from SYN RECEIVED state.

After connection established & reaching to, ESTABLISHED state, it goes to closed state via,

1) This side closes first.

ESTABLISHED  $\rightarrow$  FIN\_WAIT\_1  $\rightarrow$  FIN\_WAIT\_2  $\rightarrow$  TIME\_WAIT  $\rightarrow$  closed.

2). The other side closes first.

ESTABLISHED  $\rightarrow$  CLOSE\_WAIT  $\rightarrow$  LAST\_ACK  $\rightarrow$  CLOSED

3). Both side closes at the same time.

ESTABLISHED  $\rightarrow$  FIN\_WAIT  $\rightarrow$  CLOSING  $\rightarrow$  TIME\_WAIT  $\rightarrow$  CLOSED.

~~How~~ By these means connection get closed.