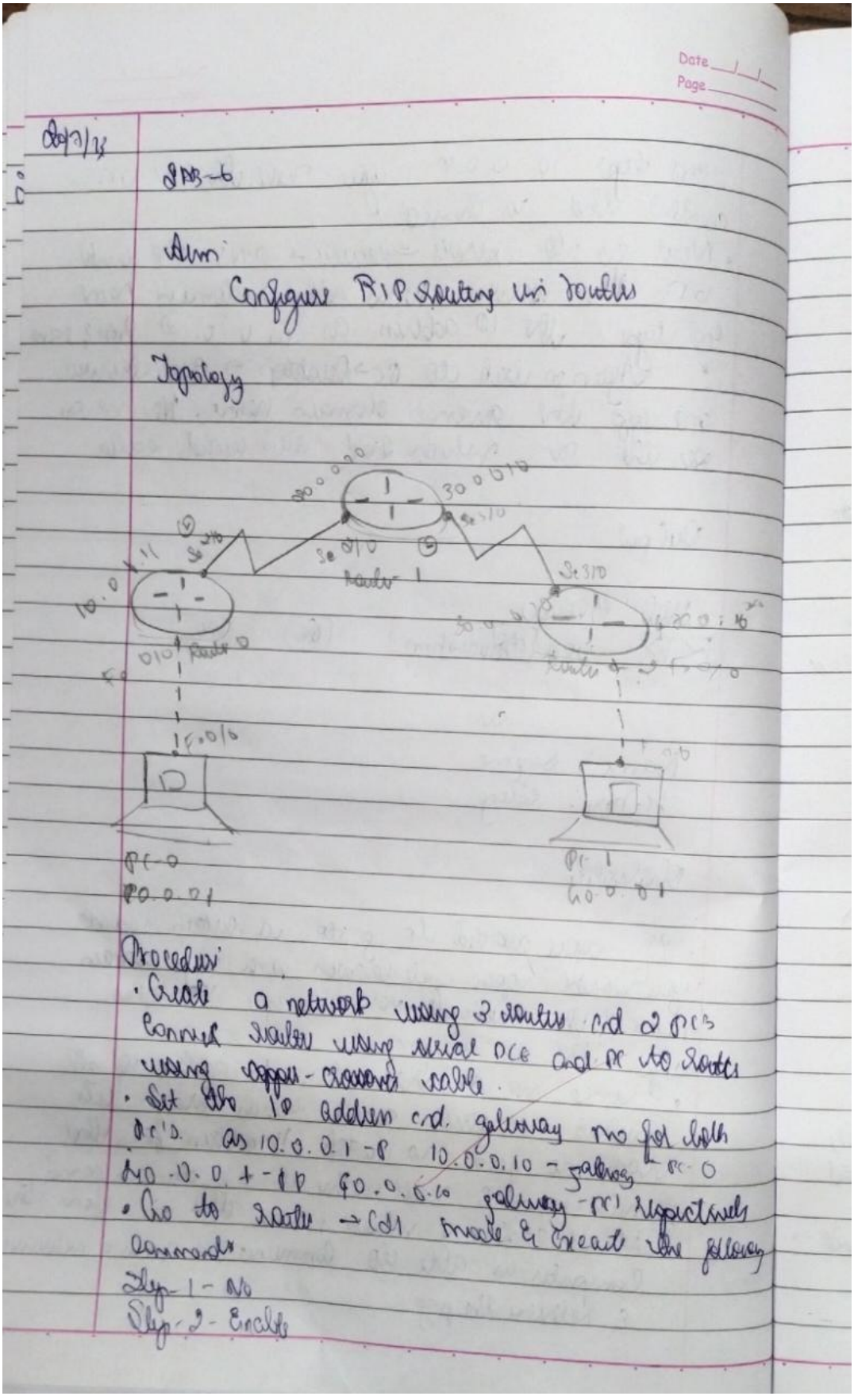
**CN LAB-6**

**OBSERVATION**



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Aim:
Configure RIP routing in routers

Topology



Procedure:
- Create a network using 2 routers and 2 PCs
Connect routers using serial DCE and DTE to routers using copper-crossover cable.
- Set the IP address and gateway no for both PC's as 10.0.0.1 - IP 10.0.0.10 - gateway - PC-0
60.0.0.1 - IP 60.0.0.10 gateway - PC1 respectively
- Go to router → CLI mode & Create the following commands

Step 1 - no
Step 2 - Enable

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Step-3 - Config T
Step-4 - Interface fastEthernet 0/0
Step-5 - IP address 10.0.0.10 255.0.0.0
Step 6 - No shut
Step 7 - Exit
Step 8 - Interface se 2/0
Step 9 - IP Address 20.0.0.10 and 255.0.0.0
Step 10 - Encapsulation PPP
Step 11 - Clock rate 64000
Step 12 - No shut.
• Now for router with fastEthernet execute only upto Step 9 and type NoShut
• Only for Router to Router connection execute all steps, also execute the step 11 only for that router connection which has to clock symbol at start
Repeat these steps for all routers
• Again go to Router 0 → CLI mode and type these steps
• Step 1 : Config T
Step-2 : Router RIP
Step-3 : Network 10.0.0.0
Step-4 : Network 20.0.0.0
Step-5 : Exit
• Repeat these steps for all routers
• Atlast now go to each router and type show IP Route. Now the IP address associated with the router will be labelled as C and other IP addresses are labelled as R.
• Lastly go to go to PC0 and ping a message to PC1 using ping destination IP address command.

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Output

PC>PING 40.0.0.1
Pinging 40.0.0.1 with 32 byte of data

Request timed out
Reply from 40.0.0.01 bytes=32 time=8ms TTL=125
Reply from 40.0.0.1 bytes=32 time=5ms TTL=125
Reply from 40.0.0.01 bytes=32 time=10ms TTL=125

Ping statistics for 40.0.0.1
Packets Sent=4, Received=3 Lost=1 (25% loss)
Approximate round trip times in milli seconds
Minimum=5ms Maximum=10ms Average=7ms

Observation

- Routing information protocol is a dynamic routing protocol that uses hop count as a routing metric to find the best path between source & destination. It is a distance vector routing protocol
- Hop count is the number of routers coming in between source & destination. The path with least hop count is selected
- Updates of the network are exchanged periodically
- Updates of routing info are always broadcast
- Full routing tables are sent in updates
- Routers always trust routing info received from neighboring routers.

# TOPOLOGY & OUTPUT