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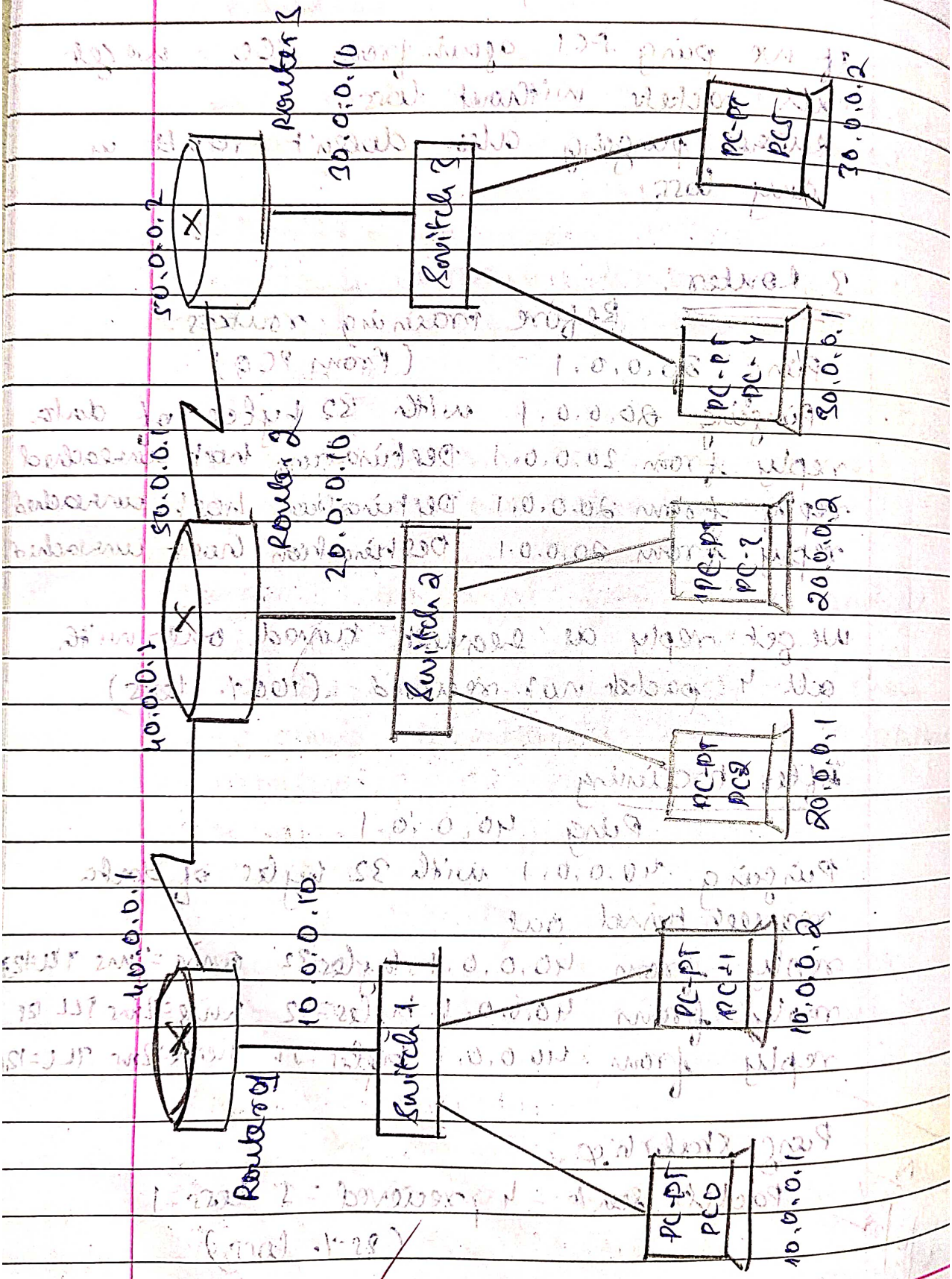
Lab - 3

AIM :- Configuring default route to the routers

TOPOLOGY :-



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PROCEDURE:

→ 3 Routers, 3 switches and 6 PCs are placed in workspace
→ 2 PCs are connected to each switch and each switch to each router using copper straight wire
→ 3 routers connected to each other using serial wire
→ IP address, subnet mask and gateway set from config tab
→ Select router R1, open the CLI and do
en → enable → configure terminal → interface fastethernet 0/0
→ ip address 10.0.0.10 255.0.0.0.
→ no shut to establish connection between PC1 and router R1
→ To establish connection between R2 and R1 open CLI of R1 → config t → interface serial 0/0 → ip address 20.0.0.1 255.0.0.0 → no shut
→ The same commands were executed for other routers to establish the necessary connections
→ Now all the connections established make router R2 as default for R3 and router R3 the network 40 and so series
→ To make R2 the default for router R1, open CLI
→ ip route 0.0.0.0 0.0.0.0 40.0.0.2

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→ To make R2 as default for R3 open CLI of R3 → ip route 0.0.0.0 0.0.0.0 50.0.0.1

→ To reach R2 about the 10 and 30 series network open CLI of router R2 → config → ip route 10.0.0.0 255.0.0.0 40.0.0.1 ip route 20.0.0.0 255.0.0.0 50.0.0.2

→ Ping one PC of a network from another PC of different network

OBSERVATION:

Learning: In the given network router R2 does not have any default router, because R1 and R3 cannot become a default router since only one of R1 and R2 is default then the packets that are supposed to enter router R2 even go to R3/R1 as they are default.

RESULT:

In the command prompt of PC0 → ping 20.0.0.2

Pinging 20.0.0.2 with 32 bytes of data:

Request timed out.

reply from 20.0.0.2 bytes=32 time=1ms TTL=

reply from 20.0.0.2 bytes=32 time=1ms TTL=126

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Reply from 20.0.0.2 bytes = 32 Time = 5ms
TTL = 126

Ping statistics for 20.0.0.2:
Packets sent = 4, Received = 3, Lost = 1
(25% Loss)

Approx round trip time in milliseconds
Minimum = 2ms, Maximum = 11ms Average = 7ms