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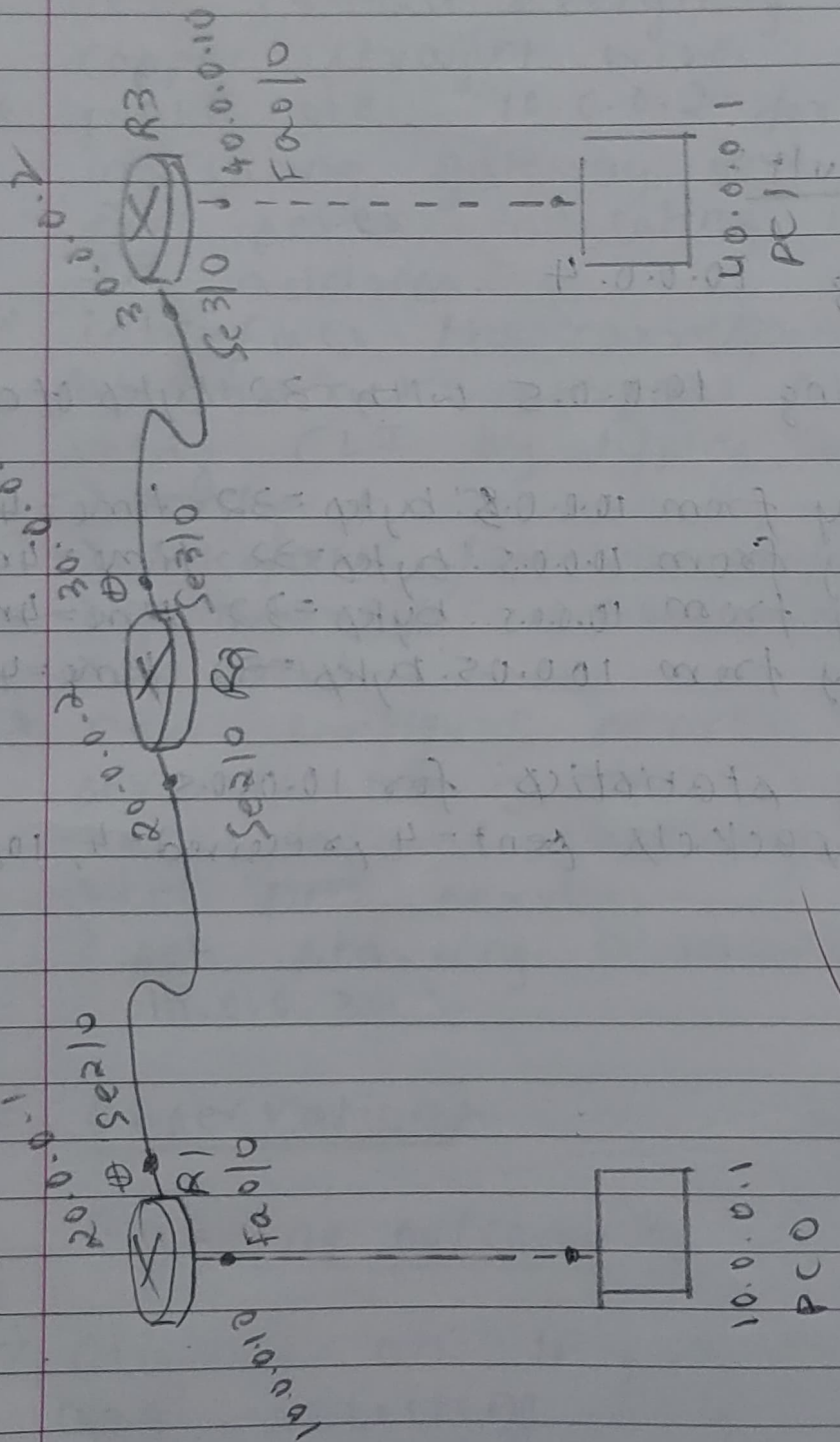
Aim:- Configuring RIP routing protocol in routers

Topology :-



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Procedure:-

* RIP is routing information protocol which finds best (shortest) path between source and destination network.
→ It is a distance vector routing protocol.

Procedure:-

* place 3 generic-routers, 2 generic-PC and place notes to indicate respective IP addresses.
* use serial DCE cable to connect routers and use copper cross over cable to connect PC with router 1 and router 3
* set IP address, gateway and subnet mask as 10.0.0.1, 10.0.0.10, 255.0.0.0 for PC0 and respectively set 40.0.0.1, 40.0.0.10, 255.0.0.0 for PC1
* interface PC0 and router 1 using following commands
→ interface fastethernet 0/0
→ ipaddress 20.0.0.10 255.0.0.0
→ no shut
* for interfacing serial 2/0 of router 1 use following commands
→ interface serial 2/0
→ ip address 20.0.0.1 255.0.0.0
→ encapsulation PPP

DCE

→ clock rate 64000
→ no shut

* use above commands for interfacing router which has clock symbol in cable near to it and for other interfaces of routers use same above command except "clock rate 64000" command

* once all the green lights are visible, follow the commands below for each router,
→ router rip
→ network 10.0.0.0
→ network 20.0.0.0
→ exit
* repeat above commands for router 2 and router 3 with respective network addresses.

→ observation:-

* instead of using static IP routing for all routers, by using RIP, routing becomes easy when large number of routers are present.

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→ Result :-

pinging 10.0.0.1 with 32 bytes of data:

reply from 10.0.0.1 : byte=32
reply from 10.0.0.1 : byte=32
reply from 10.0.0.1 : byte=32
reply from 10.0.0.1 : byte=32

ping statistics for 10.0.0.1 :
Packets : sent=4, received=4, lost=0

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