S2/0
IPv4: 10.10.0.2
DNS: 255.0.0.0

S2/0
IPv4: 10.10.0.3
DNS: 255.0.0.0

FE0/0
IPv4: 192.168.1.1
DNS: 255.255.255.0

Router-PT
Router0

Router-PT
Router1

FE0/0
IPv4: 192.168.2.1
DNS: 255.255.255.0

Switch-PT
Switch0

Switch-PT
Switch1

PC-PT
PC0

PC-PT
PC1

Laptop-PT
Laptop0

Laptop-PT
Laptop1

Gateway:192.168.1.1
IPv4: 192.168.1.2
DNS: 255.255.255.0

Gateway:192.168.1.1
IPv4: 192.168.1.3
DNS: 255.255.255.0

Gateway:192.168.2.1
IPv4: 192.168.2.2
DNS: 255.255.255.0

Gateway:192.168.2.1
IPv4: 192.168.2.3
DNS: 255.255.255.0

Router0 — □ ✕

Physical   Config   CLI   Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
INTERFACE
FastEthernet0/0
FastEthernet1/0
Serial2/0
Serial3/0
FastEthernet4/0
FastEthernet5/0

RIP Routing

Network [   ]

_____   Add

Network Address	
10.0.0.0	
192.168.1.0	

Remove

Router1 — □ ✕

Physical Config CLI Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
INTERFACE
FastEthernet0/0
FastEthernet1/0
Serial2/0
Serial3/0
FastEthernet4/0
FastEthernet5/0

RIP Routing

Network [   ]

Add

Network Address
10.0.0.0
192.168.2.0

Remove

```
C:\>ping 192.168.2.3

Pinging 192.168.2.3 with 32 bytes of data:

Reply from 192.168.2.3: bytes=32 time=18ms TTL=126
Reply from 192.168.2.3: bytes=32 time=14ms TTL=126
Reply from 192.168.2.3: bytes=32 time=1ms TTL=126
Reply from 192.168.2.3: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 18ms, Average = 8ms
```

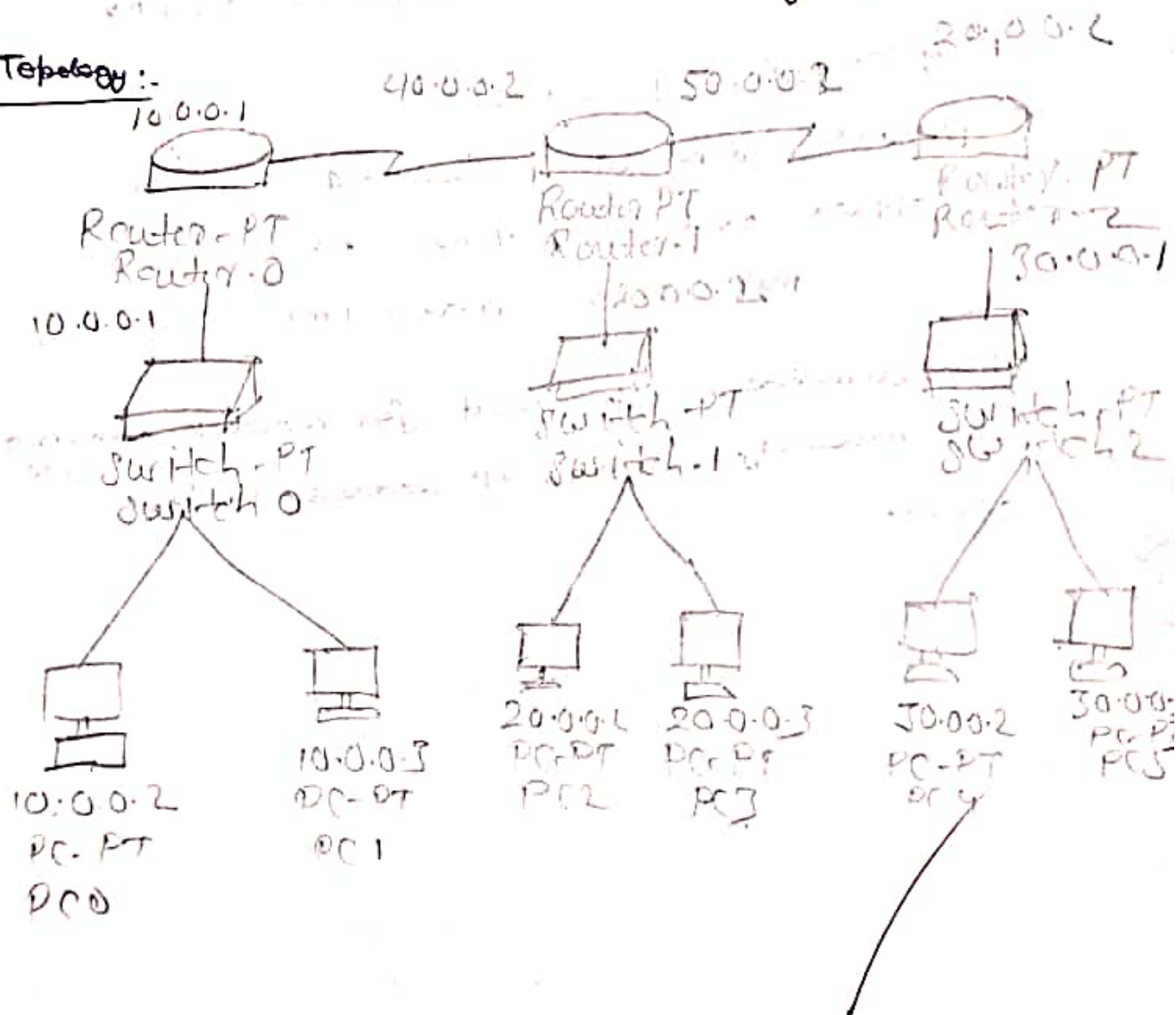| Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC0	Laptop1	ICMP		0.000	N	0	(edit)	

Routing Information Protocol
(RIP routing protocol in Routers)

Qus :- Configure RIP routing protocol in Routers

Aim :- To obtain connection in the network of 3 routers 3 switches and 6 PCS using RIP.

Topology :-

Routers :-

Router 0 :-   IP address : 10.0.0.1
           Fa 0/0 with switch 0 (10.0.0.1)
           Se 2/0 with router 1 (40.0.0.1)

Router 1 :   IP address 20.0.0.1
           Fa 0/0 with switch 1 (20.0.0.1)
           Se 2/0 with router 0 (40.0.0.2)
           Se 3/0 with router 2 (50.0.0.1)

Router 2 :-   IP address   30.0.0.1

         Fa 0/0   with   switch 2 (30.0.0.1)

         Se 2/0   with router 1   (50.0.0.2)

Switches

   Switch 0 :   Fa 0/1   :   router 0

               Fa 1/1   :   PC 0

               Fa 2/1   :   PC 1

   Switch 1 :   Fa 0/1   :   Router 1

               Fa 1/1   :   PC 2

               Fa 2/1   :   PC 3

   Switch 2 :-   Fa 0/1 :   Router 2

               Fa 1/1 :   PC 4

               Fa 2/1 :   PC 5

PCs

   PC 0 :-   IP address : 10.0.0.2

               Fa 0 :   switch 0

   PC 1 :-   IP address : 10.0.0.3

               Fa 0 :   switch 0

   PC 2 :-   IP address : 20.0.0.2

               Fa 0 :   switch 1

   PC 3 :-   IP address : 20.0.0.3

               Fa 0 :   switch 1

   PC 4 :   IP address : 30.0.0.2

               Fa 0 :   switch 2

   PC 5 :-   IP address : 30.0.0.3

               Fa 0 :   switch 2

Procedure :-

1. Connect 3 routers, 3 switches and 6 PCs using appropriate connections.

2. Configure end devices i.e. PCs ip address and gateway.

3. Configure the interface of routers until all connections turn green.

4. For each router, configure the rip routes and add all the connection networks

5. Check with show ip route command and ping command.

Observation

→ Router # show ip route

C   10.0.0.0/8 is directly connected, FastEthernet 0/0

R   20.0.0.0/8 [120/1] via 40.0.0.02, 00:00:26 serial 2/0

R   30.0.0.0/8 [120/2] via 40.0.0.2, 00:00:26 serial 2/0

C   40.0.0.0/8 is directly connected, serial 2/0

R   50.0.0.0/8 [120/1] via 40.0.0.2, 00:00:26 serial 2/0

PC 0

Ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data.

Reply from 10.0.0.3 : bytes=32 time=0ms, TTL=128

→ Ping 20.0.0.2

Pinging 20.0.0.2 with 32 bytes of data

Reply from 20.0.0.2 : bytes=32 time=2ms TTL=124

→ Pinging 20.0.0.3

Pinging 20.0.0.3 with 32 bytes of data

Reply from 20.0.0.3 : b......

→ Ping 30.0.0.2

Pinging 30.0.0.2 with 32 bytes of data

Reply from 30.0.0.2 bytes = 32 tmi : 9ms TTL=1

→ Ping 30.0.0.3

Pinging 30.0.0.3 with 32 bytes of data

Reply from 30.0.0.3 bytes = 32 time = 9ms TTL=1

New RIP is installed in routers, every router shares its routing protocol with is neighbour

N

3/1/25