

$$Ave = \frac{0}{5,174 \times 10^{-3}}$$

= 579.80

discard AM

.83

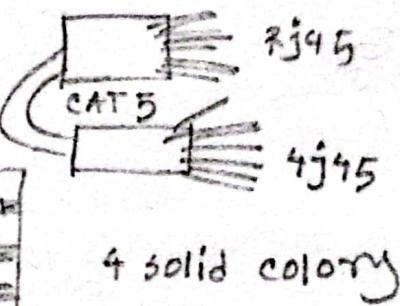
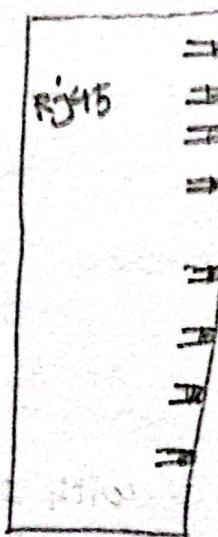
-579

AM

Anisotropic  
LAB EX M  
40% Ave to the 4 01

Straight-through cable (Cat 5): -

1	white orange
2	orange
3	white green
4	blue
5	white blue
6	green
7	white brown
8	brown



560B standard

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ID: 2021-1-60-01

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Ans

Ans to the question no: 02

### Q/ Function of ARP Protocol :-

The Address Resolution Protocol is used to map IP address to physical MAC addresses within a local network. It helps devices communicate efficiently by allowing them to determine each other's MAC addresses. When a device wants to send data to another device in the same network, it uses ARP to find the MAC address associated with the target IP address.



Ans to the question no: 03

- If the TTL value is found to be 121 even though it was initially set to 128 at the time of transmission, it indicates the data packet has traversed 7 network hops ( $128 - 121 = 7$ )

Ans to the question : 6+

(Ans)

- When a ping is performed with IP Address host generates ~~ARP~~ (ARP) requests to map the IP Address to corresponding MAC address of destination device. This is necessary because Ethernet which is commonly used for local network communication, requires MAC addresses to send data between devices.

Ans to the question no 8 Q5

The wildcard mask is inversion of the subnet mask.

255, 255, 255, 255

given subnet: 255, 255, 240, 0  
 $\underline{255}$

wildcard mask: 0, 0, 15, 255

(Ans)

Ans to the question - 6

B class

150, 10, 12, 1

$\frac{128}{64}$   
128  
64  
152

Network IP: 150, 10, 0, 0

→ Network ←                      → subnet ←                      → Host ←  
150, 10, 00000000 00 | 0000000  
subnet mask: 11111111 11111111 11111111 11 | 0000000

decimal notation: 255, 255, 255, 128

255, 255, 255, 255

subnet mask: 255, 255, 255, 128

0, 0, 0, 128



Ans to the question - 7

Implementing a clock in a packet's header to denote its age isn't feasible due to many reasons. One of the key challenges in synchronization.

Including a clock would increase the header size and lead to

the complexity of maintaining and updating the clock information for each packet which significantly impact the processing overhead.

Therefore using TTL as counter

that decrements with each hop is a simpler and packet lifetime in network.

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Ans to que 4 no -08

✓ A crossover cable is needed to connect two (or) PCs directly because it facilitates the exchange of data between devices of the same type, like two computers.

Ans to que 4 no : 0)

- TTL is a unit less feature in networking because it represents the number of hops a network packet can take before being discarded. The concept of hops refers to the number of intermediary devices such as routers, a packet can traverse before reaching its destination or being discarded due to exceeding the TTL value

Ans to que 4 no -10

a) destination IP: 192.168.20.120

source MAC: Fe:26:12:10:D0:F0

Reason:-

\* The destination IP your pc IP 192.168.20.120 because ICMP reply packets are being sent back to your pc in response to your ping request

# The source MAC address is MAC address of COBE server because it indicates the network interface that sent the reply packets.

a) 192.168.20.120:IP and MAC: 46:FC:ED:1B:B6:C0

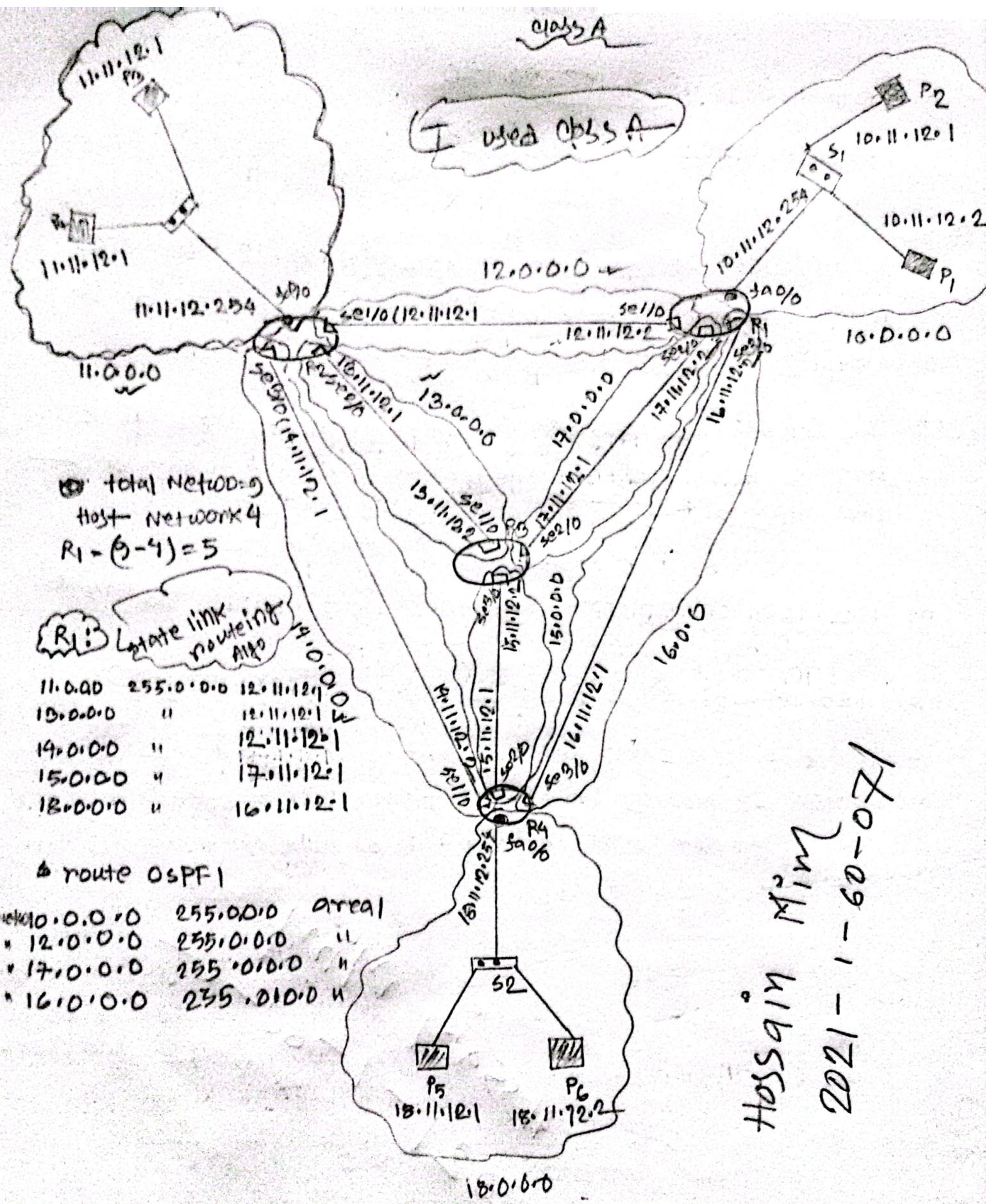
The provided information states that your pc.

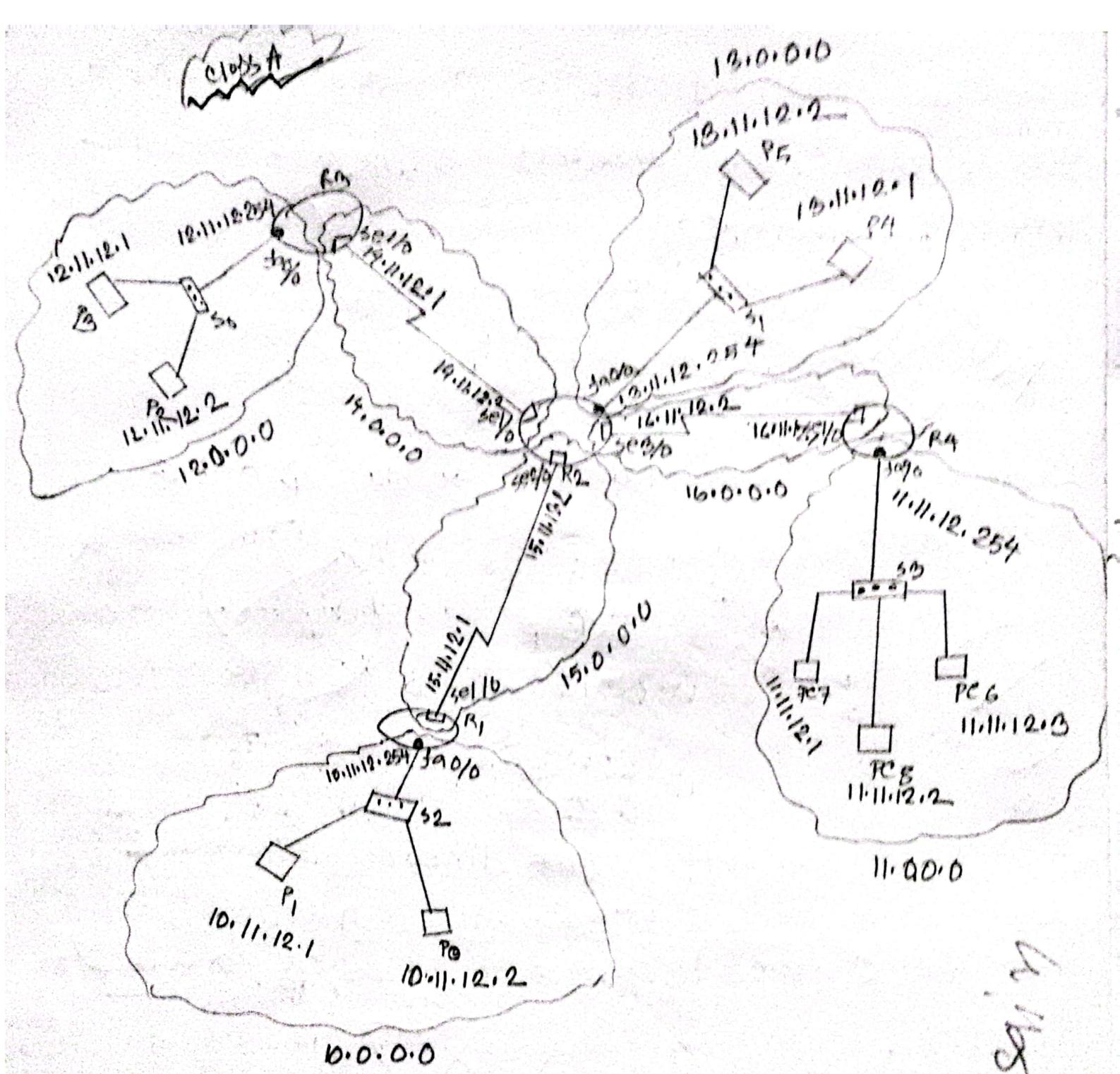
b) 120.106.136.127:IP and MAC: FC:26:12:10:D0:F0

when we ping a ICMP server from my pc the destination IP address in the ICMP packets should be the IP address of the COBE server. and the network interface that MAC address.

Hosain Mirza  
2021-1-60-071

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Router	Destination	Subnet mask
I)	11.0.0.0	255.0.0.0
II)	12.0.0.0	255.0.0.0
III)	13.0.0.0	255.0.0.0
IV)	14.0.0.0	255.0.0.0
V)	16.0.0.0	255.0.0.0

Next Hop

- 15.11.12.2
- 15.11.12.2
- 15.11.12.2
- 15.11.12.2
- 15.11.12.2

Min Bin May 2017

R2:-

destination	subnet mask	next hop
I) 10.0.0.0	255.0.0.0	15.11.12.1
II) 11.0.0.0	255.0.0.0	16.11.12.1
III) 12.0.0.0	255.0.0.0	17.11.12.1
IV)		

X07 going to R3

R3:-

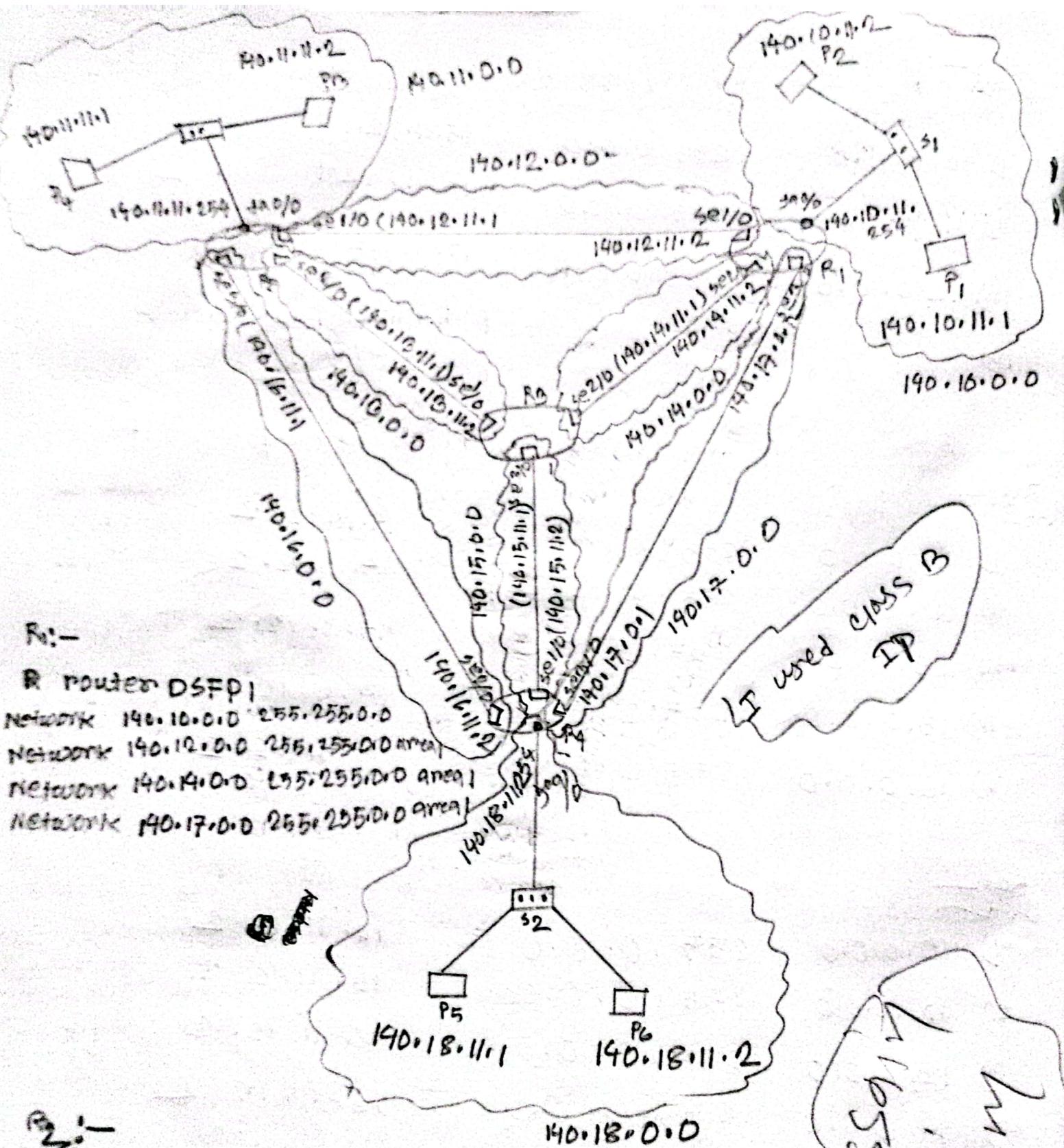
I) 10.0.0.0	255.0.0.0	14.11.12.2
II) 11.0.0.0	255.0.0.0	14.11.12.2
III) 12.0.0.0	255.0.0.0	14.11.12.2
IV) 13.0.0.0	255.0.0.0	14.11.12.2
V) 14.0.0.0	255.0.0.0	14.11.12.2

R4:-

1) 10.0.0.0	255.0.0.0	16.11.12.2
2) 11.0.0.0	255.0.0.0	16.11.12.2
3) 12.0.0.0	255.0.0.0	16.11.12.2
4) 13.0.0.0	255.0.0.0	16.11.12.2
5) 14.0.0.0	255.0.0.0	16.11.12.2

(Ans)

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Host S1, 2

Miny