

Sahil Dattatray Mohite

B1-30

12010501

classmate

Date

Page

Q.1) subnet the class IP address 195.1.1.0 so that you have 10 subnets each with a maximum 12 hosts in each with a maximum 12 hosts in each subnet list every 1st IP of each subnet.

→

current mask = 255.255.255.0

Bits needed for 10 subnets = 2^4
= 16 possible subnet

Bits needed for 12 host = 4
= 2^4
= 16 - 2 = 14 possible hosts

So, mask in binary = 11110000
= 240 decimal

Final mask = 255.255.255.240.

Subnet host IP address

0	1	195.1.1.1	0000	0001
1	1	195.1.1.17	0001	0001
2	1	195.1.1.33	0010	0001
3	1	195.1.1.49	0011	0001
4	1	195.1.1.65	0100	0001
5	1	195.1.1.81	0101	0001
6	1	195.1.1.97	0110	0001
7	1	195.1.1.113	0111	0001
8	1	195.1.1.129	1000	0001
9	1	195.1.1.145	1001	0001
10	1	195.1.1.161	1010	0001
11	1	195.1.1.177	1011	0001
12	1	195.1.1.193	1100	0001

B1

30

Q.2) write the IP address 135.1.1.25 mask 255.255.248.0 in CIDR notation.



Decimal 248 = 11111000 binary which means that 3 bits of this octet are used for the subnet.

Now add the 16 bits 255.255. and we have 21 bits.

so we write 135.1.1.25/21

Q.3) write 222.1.1.20 IP & mask 255.255.255 in CIDR notation



Decimal 192 = 11000000 binary which means 2 bits of this octet are used for the subnet. Now add the 24 bits

255.255.255 and we have 26 bits.

so we write 222.1.1.20/26

Q.4) CIDR block 192.1.16.0/27 is given by the PS create subnets for internal routing & write 1st IP & last IP of each subnet given. Find subnet mask for the following IP address.

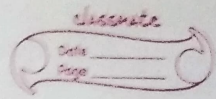


1) 10.10.10.108

→ 255.0.0.0

B1

30



$$\begin{array}{l} 2) \quad 172.168.1.116 \\ \rightarrow \quad 255.255.0.0 \end{array}$$

$$\begin{array}{l} 3) \quad 192.168.1.124 \\ \rightarrow \quad 255.255.255.0 \end{array}$$

$$\begin{array}{l} 4) \quad 192.168.1.28 \\ \rightarrow \quad 255.255.255.244 \end{array}$$