

ID# 12995

Question No. 3 :-

page # 1

Solution:

The bit rate can be calculated as

$$2 \times 4000 \times 16 = 128,000 = 128 \text{ kbps}$$

Question No. 4 :-

Solution:

Group 1 :-

$$10.100.10.0 \quad \text{to} \quad 10.100.63.127$$

$$10.100.10.0/24$$

$$064.100.10.63/24$$

Group 2 :-

$$10.100.64.0 \quad \text{to}$$

$$10.100.127.0$$

$$10.100.64.0/25$$

$$10.100.127.128/25$$

Group 3 :

$$10.100.128.0 \text{ to } 10.100.159.255$$

$$10.100.128.0/26$$

$$128.100.159.160/26$$

Now:

Group 1 :

128 add $\& (\log_2 256)$

1st customer

$$10.100.10.0/24$$

$$10.100.0.255/24$$

2nd customer

$$10.100.1.0/24$$

$$10.100.1.255/24$$

6th customer:

$$10.100.127.0/24$$

$$10.100.127.255/24$$

total = $127 \times 256 = 32,512$

p#12995

page #3

Group 2:

128 addresses

$7(\log_2 128)$ bits

$$32 - 7 = 25$$

1st customer

10.100.127.0/25

10.100.127.127/25

2nd customer

10.100.127.127/25

10.100.127.255/25

128th customer

10.100.127.128/25

10.100.128.255/25

$$\text{Total} = 128 \times 128 = 1638$$

Group 3:

32 addresses

$6(\log_2 32)$

$$32 - 6 = 26$$



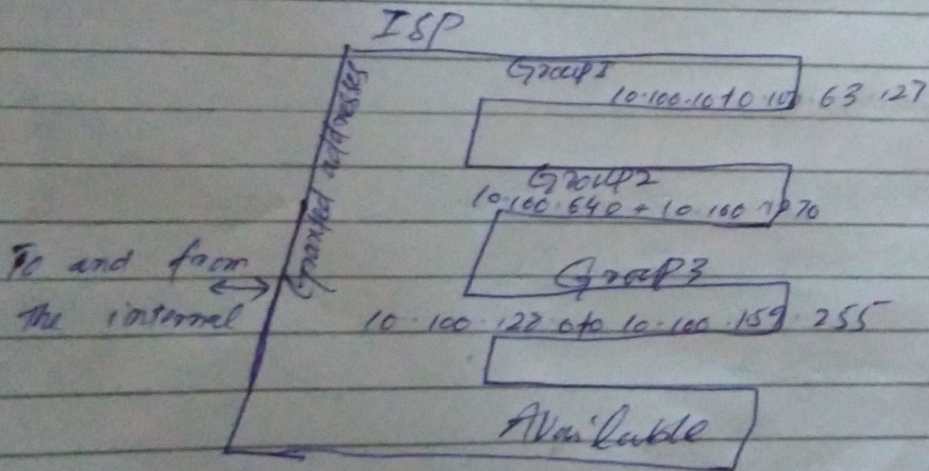
1st Customer: 10.100.128.0/26

2nd Customer: 10.100.128.32/26

128th Customer 10.100.159.160/26

total = 128 x 32 = 4096

~~8192~~



Question No's :

Solution :

