

Question 1

Class C

192.168.5.0/24
255.255.255.0

1111 1111 - 1111 1111 - 1111 1111 - 0000 0000

Divided into 4 subnets

2^2 subnets
= 4 subnets

128 64 32 16 8 4 2 1

192.168.5.0/26

Subnet mask 255.255.255.192

Group size = 64

- 0
- 64
- 128
- 192
- 256

Hosts per subnet = 64

1st subnet

Network Address	192.168.5.0	192.168.5.128
1st IP address	192.168.5.1	192.168.5.129
Last IP address	192.168.5.62	192.168.5.190
Broadcast address	192.168.5.63	192.168.5.191

2nd subnet

Network Address	192.168.5.64	192.168.5.192
1st IP address	192.168.5.65	192.168.5.193
Last IP address	192.168.5.126	192.168.5.254
Broadcast address	192.168.5.127	192.168.5.255

Next IP 192.168.6.0

Check stack 128 64 32 16 8 4 2 1 Group size
 128 192 224 240 248 252 254 255 Subnet 22
 128 126 127 123 129 130 131 132

www.practicalnetworking.net
 Search practicalnetworking.net Subnet

Question 2

2 i) 192.168.10.0/25

Subnet mask

255.255.255.128

Number of subnets

= 2

1st Subnet

Network Address

192.168.10.0

1st IP Address

192.168.10.1

Last IP Address

192.168.10.126

Broadcast IP address

192.168.10.127

Hosts per subnet

128

2nd subnet

192.168.10.128

192.168.10.129

192.168.10.254

192.168.10.255

ii) 192.168.10.0/26

Subnet mask

255.255.255.254

No. of subnets

16

1st Subnet

Network address

192.168.10.0

1st IP address

192.168.10.1

Last IP address

192.168.10.14

Broadcast IP address

192.168.10.15

Hosts per subnet

16

424 CNS Lab

* Every group size ends on 128 in size points
 * Multiple by 10
 *

iv) 192. 168. 10. 0 | 29

Subnet mask

255. 255. 255. 248

Host per subnet
8

No of subnets

32

1st Subnet

Network 192. 168. 10. 0

1st IP 192. 168. 10. 1

Last 192. 168. 10. 6

Broadcast 192. 168. 10. 7

iv) 192. 168. 10. 0 | 30

Subnet mask.

255. 255. 255. 252

Host per subnet
4

No of subnets

64.

1st subnet

Network 192. 168. 10. 0

First 192. 168. 10. 1

Last 192. 168. 10. 2

Broadcast 192. 168. 10. 3

Group size 128 64 32 16 8 4 2 1
 128 192 224 240 248 252 254 255 Subnet mask
 1) 125 126 127 128 129 130 131 132
 2) 117 118 119 120 121 122 123 124 CIDR
 3)

v) 172.16.0.0 /17
 128
 254

Subnet mask

Hosts per subnet

255.255.128.0

126

No of subnets

2

Network Address 172.16.0.0

1st IP Address 172.16.0.1

last IP address 172.16.127.254

Broadcast IP address 172.16.127.255

Next IP address 172.16.128.0

v) 172.16.0.0 /19
 32
 64

Subnet mask

Hosts per subnet

255.255.224.0

32

No of subnets

8

Network Address 176.16.0.0

1st IP address 176.16.0.1

last IP address 176.16.31.254

Broadcast IP address 176.16.31.255

Next IP address 176.16.32.0

vii) 172.16.0.0 / 24

Subnet mask

255.255.255.0

No of subnets

255

Network Address 172.16.0.0

1st IP Address 172.16.0.1

Last IP Address 172.16.0.254

Broadcast IP Address 172.16.0.255

Next IP Address 172.16.1.0

viii) 172.16.0.0 / 28

Subnet Mask

255.255.255.240

No of subnets

16

Network Address 172.16.0.0

1st IP Address 172.16.0.1

Last IP Address 172.16.0.14

Broadcast IP Address 172.16.0.15

Next IP Address 172.16.0.16

Group size	128	64	32	16	8	4	2	1	Subnet mask
	128	192	224	240	248	252	254	255	CIDR
	125	126	127	128	129	130	131	132	11
	119	118	119	120	121	122	123	124	12
	119	110	111	112	113	114	115	116	13
	11	12	13	14	15	16	17	18	14

i) 172.16.0.0/30

4
8
12

Subnet mask:

Hops per subnet

255.255.255.252

4

No of subnets

64

Network IP Address

172.16.0.0

1st IP Address

172.16.0.1

Last IP Address

172.16.0.2

Broadcast IP Address

172.16.0.3

Next IP Address

172.16.0.4

x)

10.0.0.0/16

1
2

Subnet Mask

Hops per subnet

1

No of subnets

255

255.255.0.0

Network IP Address

10.0.0.0

1st IP Address

10.0.0.1

Last IP Address

10.0.255.254

Broadcast IP Address

10.0.255.255

Next IP Address

10.1.0.0

10.0.0.0 /16

Subnet mask
255.255.0.0

Hosts per subnet
64

No of subnets
4

Network Address	10.0.0.0
1 st IP Address	10.0.0.1
Last IP Address	10.63.255.254
Broadcast IP Address	10.63.255.255
Next IP Address	10.64.0.0

10.0.0.0 /24

Subnet mask
255.255.255.0

Hosts per subnet
1

No of subnets
255

Network IP Address	10.0.0.0
1 st IP Address	10.0.0.1
Last IP Address	10.0.0.254
Broadcast IP Address	10.0.0.255
Next IP Address	10.0.1.0

X₆) 10.0.0.0 / 30

Subnet Mask 8

255.255.255.252

No of subnet

64

Network Address

10.0.0.0

1st IP Address

10.0.0.1

Last IP Address

10.0.0.2

Broadcast IP Address

10.0.0.3

Next IP Address

10.0.0.4