

(i)

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ID : 15050

COURSE TITLE : Computer Communication
& Networks:

PROGRAM : BS (SE)

SEMESTER : 4th

(2)

$$ID = 15050$$

(c) In a block of addresses we know the IP address of one host is $101.10.11.X/ID_{4+5}$ what are the first address (network address) and the last address (limited broadcast address) in this block?

Ans: $ID = 15050$

$$X = 11$$

$$4^{th} = 5$$

$$5^{th} = 0$$

$$4^{th} * 5^{th} = 5$$

In a block of addresses, we know the IP is $101.10.11.11/5$

On host first address - $101.10.02$

Network address - $101.10.0.1$

Last Address - $101.10.11.049$

Limited address - $101.10.11.050$

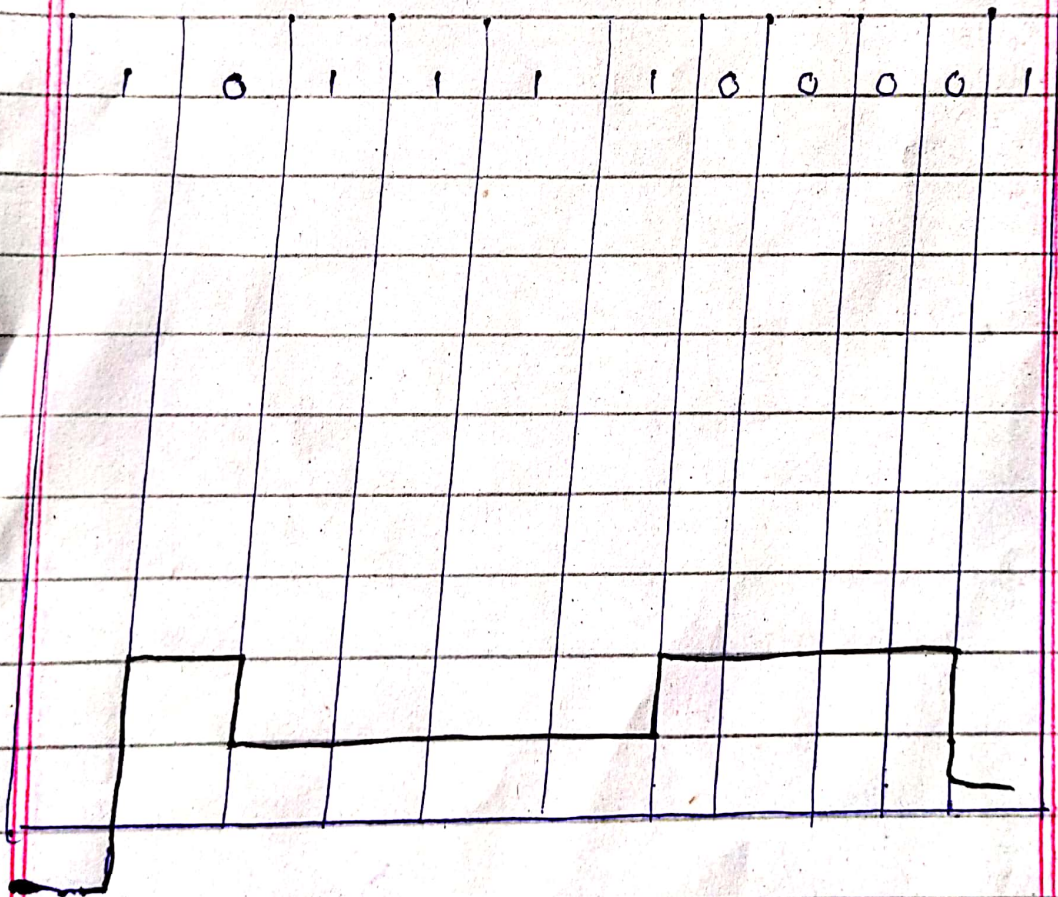
ID = 15050

Q No 2:

Roll No : 15050

In Binary = 1011100001

NRZ - 1



(3)

ID : 15050

Q3 ?

(a) Before any frames

Sender: 0123 456

window of PDU that may
be transmitted = 4 bit window

Receiver

0123 456

Answer b:- After A seconds

0, 1, 2, 3, 4 and receives

acknowledgment from B for

0, 1, 2

Sender = A has shrunk its
window as it has transmitted
5 PDUs but has received ack

for 3 PDUs hence it is

keeping copy of one
PDU

0 1 2 13 45 6

Ac Knowledgegment received for
two bits

(4) ID : 15050

Receiver

0 1 2 3 4 5 6

Receiver has received all data hence the window remain 4 bit size

Answer C:

Sender

0 1 2 3 4 5 6 7 0 1

Receiver

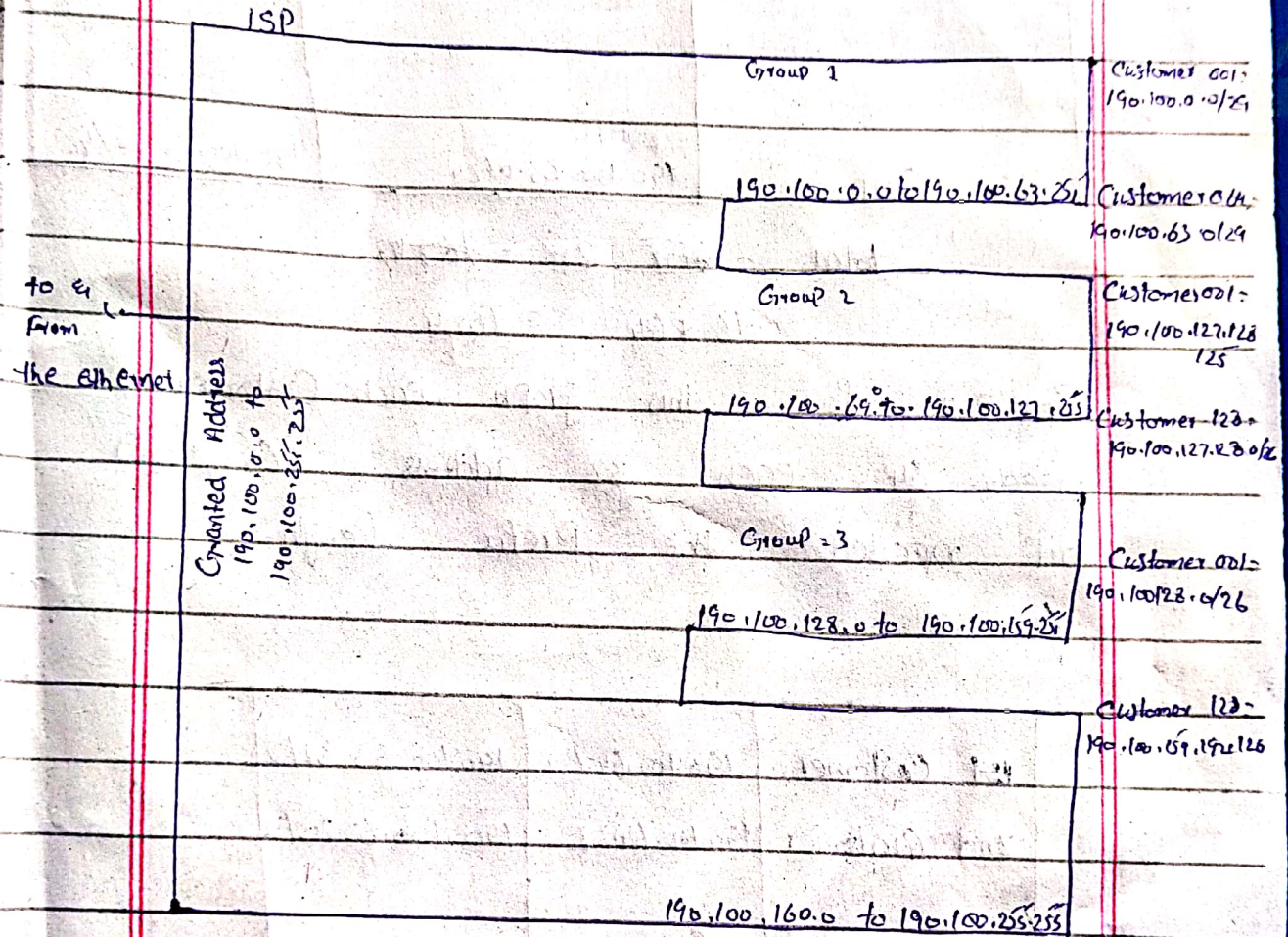
ACK received for one bit

0 1 2 3 4 5 6 7 0 1

(5)

ID - 15050

Q4



Group 1 for this group each customer needs 160 address this means that $(\log_2 160)$ bit needs prefix length $16 - 64 = 48$

(6)

ID : 15050

1st Customer	190.100.0.0/48	190.100.255/48
...		
2nd Customer	190.100.0.0/48	190.100.1.255/48
64th Customer	190.100.63.0/24	190.100.63.255/48

total = ~~64~~ 256 = ~~163~~ 48

16 x 64 = 1024

Group 2 - For this graph, each Customer needs 64, each 32 address (log 64/32) bit needed the Prefix length.

64 - 32 = 32

1st Customer	190.100.64.1/32	190.100.63.32/32
2nd Customer	190.100.64.32	190.100.63.255/32
64th Customer	190.100.159.192/26	190.100.159.255/26

total = 16 x 64 = 1088

(7) ID = 15050

(C) Group 64 Customer 16

address

$$4 (2^4 = 16)$$

$$32 - 4 = 28$$

usable address

total number of address = 16

Mask 160.21.7.0 /16

Network 160.21.7.16 /28

Last 160.21.7.15 /27

total 64 x 10 = 1024

“The End”