Name - Ashutosh Soni
Id - 2018UCP1505

Ques

Ans ⇒ , MNIT IP address = 145.75.0.0/16

1) CSE department.

128 systems and 256 required address.

2) ECE department

128 system and 64 required address.

3) EFF department -

64 system and 128 required address.

find

i) 128 first IP address of ECP.

2). IP address Available wit ISP. after this.

for CSE.

128 system & 256 address needed

Address Range =

145.75.0.0 - 145.75.127.255.

for ECE.

128 system & 64 address needed.

145.75.10000000.00 {rest6bit -

for address contain by

each customer.

→ 1 system group each system)

of ECE

Name-Ashutosh Soni
Id-2018UCP1505

145.75.10000000.01 { rest 6 bit for address of each system }

→ 2nd system of ECE

and so on.

145.75.10011111.11 { rest 6 bit for address contain by each system }.

→ 128 system of ECE

means 145.75.159.192./ for 1st address of 128 system and all 6 bit will be 0's, so.

11000000 = 192) and subnet is 8+8+8+2=26

⇒ so,
145.75.159.192/26.

address contain by CSE = 2^{15}
address contain by ECE = 2^{13}
address contain by EEE = 2^{13}.

address available for ISP service provider.

$= 2^{16} - 2^{15} - 2^{13} - 2^{13} = 16384$

Ans