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Ans. to the ques. no-1 (a)

Here,

ip address = 150.60.130.0/24

Hosts needed,

Server Farm = 100 Hosts

Administration = 10 Hosts

College of business = 20 Hosts

College of education = 25 Hosts.

Total Hosts needed = 100+10+20+25+8 = 163

Subnet mask = 255.255.255.0

= 11111111.11111111.11111111.00000000

- Subnets = 2^8 = 256

For server Farm,

ip = 150.60.130.0/25

Host = 0, 128

Total Host = 126

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For college of education,

ip = 150.60.130.0/27

Host= 0, 32, 64, 96, 128, 160, 192, 224

Total Host= 30

Host for this section = 129 - 224

For college of business,

ip = 150.60.130.0/27

Host= 0, 32, 64, 96, 128, 160, 192, 224

Total Host = 30

Host for this section = 129 - 224

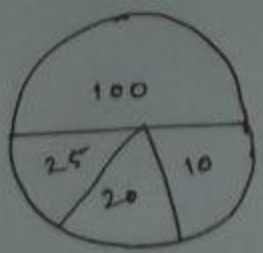
For Administration,

ip = 150.60.130.0/28

Host = 0, 16, 32, 48, 64, 80, 96, 112, 128, 144, 160, 176, 192, 208, 224, 248

Total Host = 14

Host for this section = 225 - 248



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Ans. to the ques. no - 1(b)

For a transition from IPV4 to IPV6 address, there are 3 methods available Those are -

1. Dual-Stack Routers
2. Tunnelling
3. NAT Protocol Translation.

Dual stack Routers: A dual stake network is a network in which all of the nodes are both IPV4 & IPV6 enabled. This is specially important at the routers, as the routers is typically the first node on a given network to receive traffic from outside of the network

Tunnelling: Tunnelling is a middle point or a medium for transition. It is used to communicate the transit network from IPV4 to IPV6 & vise-versa.

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NAT Protocol Translation: In this way, ip addresses don't understand each other as different ip addresses. This protocol removes the barrier so that ip addresses look alike & they can communicate as the same.

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Ans. to the ques. no- 2 (b)

CIDR: classless inter-domain routing is a set of internet protocol (IP) standards that is used to create unique identifiers for networks and individual devices. The IP addresses allow particular information packets to be sent to specific computers. Shortly after the introduction of CIDR, technicians found it difficult to track & label IP addresses, so a notation system was developed to make the process more efficient and standardized. CIDR IP address consists of two groups of numbers, which are also referred to as groups of bits.

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Ans. to the ques no- 4 (a)

Device A: 172.16.17.30/20

subnet: 255.255.240.0

Device B: 172.16.25.15/20

subnet: 255.255.240.0

These devices are in same subnet.

19/1/2005

Ans. to the ques no- 4 (b)

Differences between FDM and TDM are given below:

① TDM stands for Time Division multiplexing & FDM stands for Frequency Division multiplexing.

② TDM has low conflict & FDM has high conflict.

③ TDM is efficient & FDM is quiet inefficient

④ Time is shared in TDM & ~~Fr~~ Frequency is shared in FDM.