2310040095
SAYOOJ.S

1) IP address 23.192.157.234 is class A

Network ID first 8 octet

: 00010111

Host ID : 11000000 . 10011101 . 11101010

2) Bridge:

Connects two LAN segments, forwarding traffic based on MAC

Router:

Connects different networks, forwarding traffic based on IP address

3) Subnetting is the process of dividing a single IP network into multiple smaller logical sub networks

ex   IP = 192.168.1.0/24

We want to create 4 subnets

↳ 192.168.1.0 /26

192.168.1.64 /26

192.168.1.128 /26

192.168.1.192/26

4)

VERSION	IHL	TOS	TOTAL ENGTH	
IDENTIFICATION			FLAGS	FRAGMENT OFSET
TTL	PROTOCOL		HEADER CHECKSUM	
SOURCE ADDRESS				
DESTINATION ADDRESS				
OPTIONS				
DATA				

5) ARP (Address resolution protocol)

ARP helps in finding correct MAC address for communication

OSPF (open shortst path first)

routing protocol that that calculate shortst path

NAT (Network address translation):

allows multiple devices on a private network to share a single public IP address

PAT (Poot address tsanslation):
    Extends NAT by using post numbers to distinguish between multiple devices

5)   IPV4 is 32 bit addressing system that supports ~ 4.3 billion addresses and is running out of space

    IPV6 is a 128 bit system with virtually unlimited addresses, designed to replace IPV4