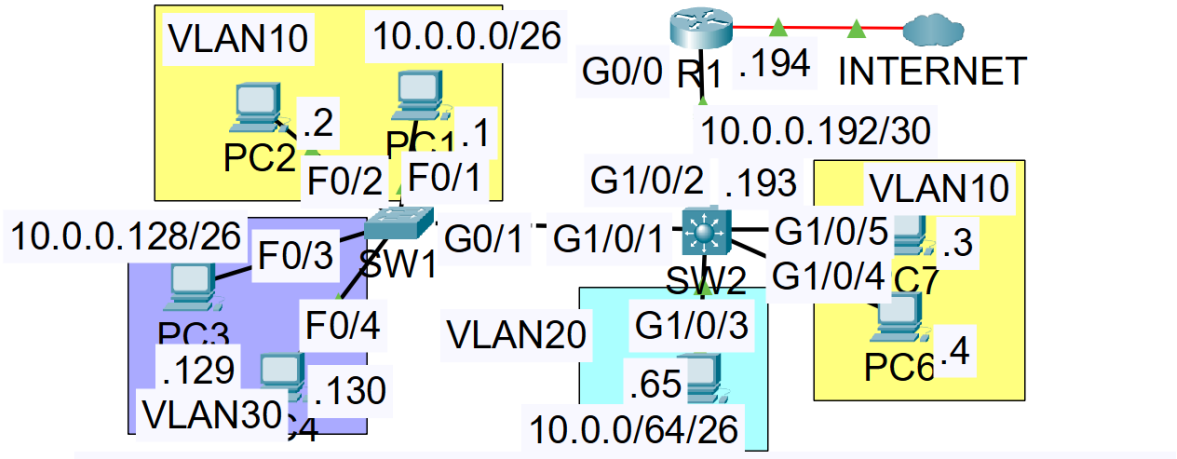
Layer 3 Switches:

Network Topology -



R1 CLI -

R1

Physical | Config | CLI | Attributes

```
R1>en
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#int g0/0
R1(config-if)#no interface g0/0.10
R1(config)#
%LINK-3-UPDOWN: Interface GigabitEthernet0/0.10, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0.10, changed state to down

R1(config)#no interface g0/0.20
R1(config)#
%LINK-3-UPDOWN: Interface GigabitEthernet0/0.20, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0.20, changed state to down

R1(config)#no interface g0/0.30
R1(config)#
%LINK-3-UPDOWN: Interface GigabitEthernet0/0.30, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0.30, changed state to down

R1(config)#do sh ip int br
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0     unassigned      YES NVRAM  up                    up
GigabitEthernet0/1     unassigned      YES NVRAM  administratively down down
GigabitEthernet0/2     unassigned      YES NVRAM  administratively down down
GigabitEthernet0/0/0   1.1.1.2         YES manual up                    up
Vlan1                  unassigned      YES unset  administratively down down
R1(config)#default interface g0/0
Building configuration...


Interface GigabitEthernet0/0 set to default configuration
R1(config)#int g0/0
R1(config-if)#ip address 10.0.0.194 255.255.255.252
R1(config-if)#exit
R1(config)#exit
R1#
%SYS-5-CONFIG_I: Configured from console by console

R1#
```

SW2 CLI (1) –

SW2

Physical | Config | CLI | Attributes

IO

```
SW2>en
SW2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
SW2(config)#int g1/0/2
SW2(config-if)#no switchport
SW2(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/2, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/2, changed state to up

SW2(config-if)#exit
SW2(config)#ip routing
SW2(config)#int g1/0/2
SW2(config-if)#default int g1/0/2
Building configuration...



Interface GigabitEthernet1/0/2 set to default configuration
SW2(config)#ip routing
SW2(config)#int g1/0/2
SW2(config-if)#no switchport
SW2(config-if)#ip address 10.0.0.193 255.255.255.252
SW2(config-if)#do sh ip int br
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet1/0/1   unassigned      YES unset  up                    up
GigabitEthernet1/0/2   10.0.0.193      YES manual up                    up
GigabitEthernet1/0/3   unassigned      YES unset  up                    up
GigabitEthernet1/0/4   unassigned      YES unset  up                    up
GigabitEthernet1/0/5   unassigned      YES unset  up                    up
GigabitEthernet1/0/6   unassigned      YES unset  down                  down
GigabitEthernet1/0/7   unassigned      YES unset  down                  down
GigabitEthernet1/0/8   unassigned      YES unset  down                  down
GigabitEthernet1/0/9   unassigned      YES unset  down                  down
GigabitEthernet1/0/10  unassigned      YES unset  down                  down
GigabitEthernet1/0/11  unassigned      YES unset  down                  down
GigabitEthernet1/0/12  unassigned      YES unset  down                  down
GigabitEthernet1/0/13  unassigned      YES unset  down                  down
GigabitEthernet1/0/14  unassigned      YES unset  down                  down
GigabitEthernet1/0/15  unassigned      YES unset  down                  down
GigabitEthernet1/0/16  unassigned      YES unset  down                  down
GigabitEthernet1/0/17  unassigned      YES unset  down                  down
GigabitEthernet1/0/18  unassigned      YES unset  down                  down
GigabitEthernet1/0/19  unassigned      YES unset  down                  down
GigabitEthernet1/0/20  unassigned      YES unset  down                  down
GigabitEthernet1/0/21  unassigned      YES unset  down                  down

SW2(config-if)#exit
SW2(config)#int vlan 10
SW2(config-if)#
%LINK-5-CHANGED: Interface Vlan10, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan10, changed state to up

SW2(config-if)#ip address 10.0.0.62 255.255.255.192
SW2(config-if)#no shutdown
SW2(config-if)#int vlan 20
```

SW2 CLI (2) -

SW2

Physical | Config | CLI | Attributes

```
GigabitEthernet1/0/16  unassigned      YES unset  down                  down
GigabitEthernet1/0/17  unassigned      YES unset  down                  down
GigabitEthernet1/0/18  unassigned      YES unset  down                  down
GigabitEthernet1/0/19  unassigned      YES unset  down                  down
GigabitEthernet1/0/20  unassigned      YES unset  down                  down
GigabitEthernet1/0/21  unassigned      YES unset  down                  down

SW2(config-if)#exit
SW2(config)#int vlan 10
SW2(config-if)#
%LINK-5-CHANGED: Interface Vlan10, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan10, changed state to up

SW2(config-if)#ip address 10.0.0.62 255.255.255.192
SW2(config-if)#no shutdown
SW2(config-if)#int vlan 20
SW2(config-if)#
%LINK-5-CHANGED: Interface Vlan20, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan20, changed state to up

SW2(config-if)#ip address 10.0.0.126 255.255.255.192
SW2(config-if)#no shutdown
SW2(config-if)#int vlan 30
SW2(config-if)#
%LINK-5-CHANGED: Interface Vlan30, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan30, changed state to up

SW2(config-if)#ip address 10.0.0.190 255.255.255.192
SW2(config-if)#no shutdown
SW2(config-if)#exit
SW2(config)#ip routing
SW2(config)#ip route 0.0.0.0 0.0.0.0 10.0.0.194
SW2(config)#do sh ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is 10.0.0.194 to network 0.0.0.0

     10.0.0.0/8 is variably subnetted, 8 subnets, 3 masks
C       10.0.0.0/26 is directly connected, Vlan10
L       10.0.0.62/32 is directly connected, Vlan10
C       10.0.0.64/26 is directly connected, Vlan20
L       10.0.0.126/32 is directly connected, Vlan20
C       10.0.0.128/26 is directly connected, Vlan30
L       10.0.0.190/32 is directly connected, Vlan30
C       10.0.0.192/30 is directly connected, GigabitEthernet1/0/2
L       10.0.0.193/32 is directly connected, GigabitEthernet1/0/2
S*   0.0.0.0/0 [1/0] via 10.0.0.194

SW2(config)#
```

PC1 command prompt –