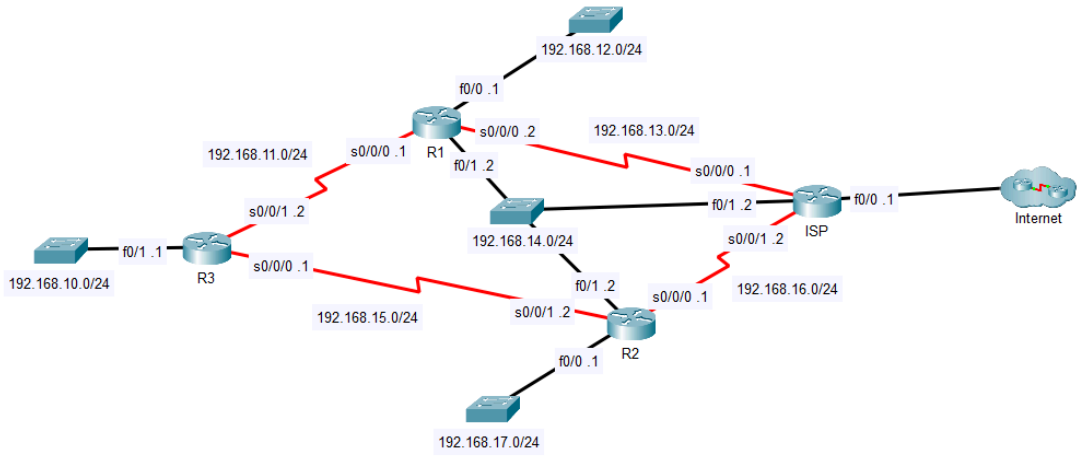
CSE421 Assignment 06 [MSMA | 2024 Fall]

Total points 100/100

Answer all the questions in this form. **You can submit only once even if you submit by mistake. So, make sure that your answers are put correctly by refreshing the page. Deadline: January 01, 2025 (Wednesday) 11:59:59pm**

The respondent's email (**shreya.adrita.banik@g.bracu.ac.bd**) was recorded on submission of this form.

Answer Q1 to Q8 based on the following topology. (S0/0/0 .2 means interface name S0/0/0 and last octet value of this interface's IP address is 2)



✓ **Q1. In which routers we need to configure default static route? *** 5/5

- [x] R1 ✓
- [x] R2 ✓
- [x] R3 ✓
- [ ] ISP

✓ **Q2. How many static routes we need to configure for R3? (don't consider internet to be a network)** *5/5

5 ✓

✓ **Q3. After setting up the IP addresses to all the interfaces of R2, how many C's will be present in R2's routing table?** *5/5

4 ✓

✓ **Q4. Write the command to create a static route from R1 to R2's Lan using next hop IP address. (The path should be R1->R3->R2)** *10/10

ip route 192.168.17.0 255.255.255.0 192.168.11.2 ✓

✓ **Q5. Write the command to create a floating static route having AD=5 from R1 to R2's Lan using next hop IP address. (The path should be R1->ISP->R2)** *10/10

ip route 192.168.17.0 255.255.255.0 192.168.13.1 5 ✓

✓ **Q6. Create a floating default static route having AD=5 on R3 using exit interface. (The path should be R3->R1->ISP)** *10/10

ip route 0.0.0.0 0.0.0.0 s0/0/1 5 ✓

✓ **Q7. How many iterations would be needed for the ISP router to know about R3's LAN if Distance Vector Routing Algorithm is used?** *5/5

2 ✓

✓ **Q8. How many iterations would be needed for the ISP router to know about R3's LAN if Link State Routing Algorithm is used?** *5/5

1 ✓

Answer Q9 to Q14 based on the following scenario.

```
      192.168.0.0/25 is subnetted, 2 subnets
S        192.168.0.0/25 is directly connected, Serial0/1/0
S        192.168.0.128/25 [1/0] via 192.168.1.241
      192.168.1.0/24 is variably subnetted, 11 subnets, 6 masks
S        192.168.1.0/25 is directly connected, Serial0/1/0
S        192.168.1.128/26 is directly connected, Serial0/1/0
C        192.168.1.192/28 is directly connected, FastEthernet0/0
L        192.168.1.193/32 is directly connected, FastEthernet0/0
C        192.168.1.208/28 is directly connected, FastEthernet0/1
L        192.168.1.209/32 is directly connected, FastEthernet0/1
S        192.168.1.224/29 is directly connected, Serial0/1/0
S        192.168.1.232/29 is directly connected, Serial0/1/0
C        192.168.1.240/30 is directly connected, Serial0/1/0
L        192.168.1.242/32 is directly connected, Serial0/1/0
S        192.168.1.244/30 is directly connected, Serial0/1/0
S*    0.0.0.0/0 [1/0] via 192.168.1.241
```

✓ **Q9. Which networks are directly connected to the router?** * 10/10

- [ ] 192.168.0.0/25
- [ ] 192.168.0.128/25
- [ ] 192.168.1.0/25
- [ ] 192.168.1.128/26
- [x] 192.168.1.192/28 ✓
- [ ] 192.168.1.193/32
- [x] 192.168.1.208/28 ✓
- [ ] 192.168.1.209/32
- [ ] 192.168.1.224/29
- [ ] 192.168.1.232/29
- [x] 192.168.1.240/30 ✓
- [ ] 192.168.1.242/32
- [ ] 192.168.1.244/30
- [ ] 0.0.0.0/0

✓ **Q10. Which networks static routing was done using exit interface? *** 10/10

- [x] 192.168.0.0/25 ✓
- [ ] 192.168.0.128/25
- [x] 192.168.1.0/25 ✓
- [x] 192.168.1.128/26 ✓
- [ ] 192.168.1.192/28
- [ ] 192.168.1.193/32
- [ ] 192.168.1.208/28
- [ ] 192.168.1.209/32
- [x] 192.168.1.224/29 ✓
- [x] 192.168.1.232/29 ✓
- [ ] 192.168.1.240/30
- [ ] 192.168.1.242/32
- [x] 192.168.1.244/30 ✓
- [ ] 0.0.0.0/0

✓ **Q11. Which networks static routing was done using next hop ip address?** *10/10

- [ ] 192.168.0.0/25
- [x] 192.168.0.128/25 ✓
- [ ] 192.168.1.0/25
- [ ] 192.168.1.128/26
- [ ] 192.168.1.192/28
- [ ] 192.168.1.193/32
- [ ] 192.168.1.208/28
- [ ] 192.168.1.209/32
- [ ] 192.168.1.224/29
- [ ] 192.168.1.232/29
- [ ] 192.168.1.240/30
- [ ] 192.168.1.242/32
- [ ] 192.168.1.244/30
- [x] 0.0.0.0/0 ✓

✓ **Q12. Select the IP address of the FastEthernet 0/0 interface?** * 5/5

- [ ] 192.168.0.0/25
- [ ] 192.168.0.128/25
- [ ] 192.168.1.0/25
- [ ] 192.168.1.128/26
- [ ] 192.168.1.192/28
- [x] 192.168.1.193/32 ✓
- [ ] 192.168.1.208/28
- [ ] 192.168.1.209/32
- [ ] 192.168.1.224/29
- [ ] 192.168.1.232/29
- [ ] 192.168.1.240/30
- [ ] 192.168.1.242/32
- [ ] 192.168.1.244/30
- [ ] 0.0.0.0/0

✓ **Q13. What is the value of cost for the 0.0.0.0/0 route?** * 5/5

0 ✓

✓ **Q14. What is the value of AD for the 0.0.0.0/0 route?** * 5/5

1 ✓