Fall 2016

CSE421
Lab Final

Name: **ID:**

Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
R1	**Fa0/0**	172.17.50.1	255.255.255.0	N/A
	Fa0/1.10	172.17.10.1	255.255.255.0	N/A
	Fa0/1.20	172.17.20.1	255.255.255.0	N/A
	Fa0/1.30	172.17.30.1	255.255.255.0	N/A
	Fa0/1.99	172.17.99.1	255.255.255.0	N/A
S1	**VLAN 99**	172.17.99.31	255.255.255.0	172.17.99.1
S2	**VLAN 99**	172.17.99.32	255.255.255.0	172.17.99.1
S3	**VLAN 99**	172.17.99.33	255.255.255.0	172.17.99.1
PC1	**NIC**	172.17.10.21	255.255.255.0	172.17.10.1
PC2	**NIC**	172.17.20.22	255.255.255.0	172.17.20.1
PC3	**NIC**	172.17.30.23	255.255.255.0	172.17.30.1
Web/TFTP Server	**NIC**	172.17.50.254	255.255.255.0	172.17.50.1

Task 1: Configure basic commands.

Configure the router and each switch with the following basic commands.

- Hostnames: Give respective names as shown in the network topology
- Banner MOTD (for R1, S1, S2, S3): **This is going to be a long exam**
- Enable Secret Password (for R1, S1, S2, S3): **CCNA**
- Console Password (for R1, S1, S2, S3): **cisco**
- Virtual Terminal Password (for R1, S1, S2, S3): **ExAm**
- Configure Switch Default Gateways from Addressing Table

Task 2: Configure the management VLAN interface on S1, S2, and S3.

Create and enable interface VLAN 99 on each switch. Use the addressing table for address configuration.

Task 3: Configure trunking on S1, S2, and S3.

Configure the appropriate interfaces in trunking mode and assign VLAN 99 as the native VLAN.

Task 4: Create the VLANs on S1.

Create and name the following VLANs on S1 only.

- VLAN 10 **Faculty/Staff**
- VLAN 20 **Students**
- VLAN 30 **Guest(Default)**
- VLAN 99 **Management&Native**

Task 5: Assign VLANs to access ports on S2.

Assign the PC access ports to VLANs:

- VLAN 10: PC1 connected to Fa0/11
- VLAN 20: PC2 connected to Fa0/18
- VLAN 30: PC3 connected to Fa0/6

Task 7: Configure Router-on-a-Stick Inter-VLAN Routing

Configure Fa0/0 and Fa0/1 sub-interfaces on R1 using the information from the addressing table.

Task 8: Verify End-to-End Connectivity

Step 1: Verify that PC1 and Web/TFTP Server can ping each other.

Step 2: Verify that PC1 and PC2 can ping each other.

Step 3: Verify that PC3 and PC1 can ping each other.

Step 4: Verify that PC2 and PC3 can ping each other.

Step 5: Verify that the switches can ping R1.