Part 1:

a. **VLAN 99 and 999**

Repeat Step 1a on S2 and S3.

Question:
What VLANs are configured on the switches? VLAN 10,20,30
In addition to the default VLANs, which VLANs are configured on S2?

- **VLAN 10,20,30**

Now that you have the ports assigned to VLANs, try to ping from PC1 to PC6.
Was the ping successful? Explain.

- **No, the pings failed because the ports between the switches are in VLAN 1 and PC1 and PC6 are in VLAN 10.**

What will be the result of trunk negotiation between S1 and S2?

- **The negotiation will succeed, and the link will become a trunk.**

On switch S2, verify that the trunk has been negotiated by entering the show interfaces trunk command. Interface GigabitEthernet 0/1 should appear in the output.
What is the mode and status for this port?

- **auto and trunking**

S1# show interfaces trunk

Port Mode Encapsulation Status Native vlan
Gig0/1 desirable n-802.1q trunking 1
Gig0/2 on 802.1q trunking 1
Port Vlans allowed on trunk
Gig0/1 1-1005
Gig0/2 1-1005

Port Vlans allowed and active in management domain
Gig0/1 1,99,999
Gig0/2 1,99,999

Port Vlans in spanning tree forwarding state and not pruned
Gig0/1 1,99,999
Gig0/2 1,99,999

Question:
What is the native VLAN for these trunks currently?

- **Before the configuration it is in VLAN 1**

S1(config)# interface range g0/1 - 2
S1(config-if-range)# switchport trunk native vlan 999
Question:
What messages did you receive on S1? How would you correct it?

- **To correct native VLAN mismatch, configure VLAN 999 as the native VLAN on S2 and S3.**

i. Attempt to ping from PC1 to PC6.

Why was the ping unsuccessful? (Hint: Look at the ‘show vlan brief’ output from all three switches. Compare the outputs from the ‘show interface trunk’ on all switches.)

- **The ping was unsuccessful because the VLAN on S1 was not set up correctly.**