EE4221 Activities on Routing

A. Activity on InterVLAN Routing

1. Run Packet Tracer program and open the file “InterVLAN2.pkt”.
2. Go to command prompt of 10.10.1.100. Can you ping to 10.10.1.101? Why?
3. From the command prompt of 10.10.1.100, can you ping to 10.20.1.101? Why not?
4. In the multilayer switch, create two vlans 10 (Engineering) and 20 (Sales). Assign appropriate ports to these two vlans.
5. Configure correct ip addresses/subnet masks to the SVIs of vlans 10 and 20.
6. Configure routing protocol RIP.
7. Start ip routing.
8. You should be able to ping from 10.10.1.10 to 10.20.1.100. If not, trouble shoot.

Useful Cisco commands:

ip routing: to start IP routing in the router
router rip: to start routing protocol RIP
  network 144.214.0.0: to include all subnets of 144.214.0.0 in RIP routing operations
interface vlan 10: specify SVI of vlan 10
  ip address 192.168.1.1 255.255.255.0: assign ip address and subnet mask to the SVI

B. Activity on HSRP

1. Run Wireshark and load the capture file “HSRP.cap”.
2. How many routers are involved in this capture file? No. of Routers: _____
3. What devices are addressing to by the address 224.0.0.2?
4. Complete the information about the routers **up to Frame No. 15** in this table:

IP address of the router	HSRP Priority	HSRP Group	HSRP Role	Time between hellos (in seconds)

Is the router with smallest HSRP priority becomes the active router? Why or why not?

5. What is the IP and MAC addresses of the virtual router?
6. Starting from Frame no. 15, the HSRP roles of the routers changed. What triggers this change?
7. Which one becomes the active router? Which one becomes the standby router?