BIRZEIT UNIVERSITY

Network Laboratory ENCS413
Final Practical Exam (60 min)
Wednesday, July 8, 2020

Student Name:_____ Student ID:_____

Implement the topology in Figure 1, taking into consideration the following points:

1. The IP range for each VLAN and network is shown in Figure 1. Replace **A** and **B** by your university number.
   Example→ if your university number is 1140302 then:
   A = 03 = 3
   B = 02 = 2
   If *A* is equal to 0 then replace it with 1.

2. Configure OSPF routing between Router0, Router1 and the third layer switch. Suppose all networks in AS10 are in area 0 and all networks in AS20 are in area 1.
3. Configure BGP between Router1 and Router2.
4. We need the gateways as follows:
   - Router1 is the gateway for VLAN10 and VLAN20.
   - The third layer switch is the gateway for VLAN30and VLAN40
   - Router0 is the gateway for VLAN50.

5. Access-list **(must be most efficient)**
   - Prevent PC6 from accessing network 192.168.50.0. (***Standard***)
   a. Prevent PC1 from accessing PC0. (***Extended***) (think carefully where to put the rules)
6. Do not miss the configuration for *SVI*, *ROS* and switches to make the VLANs.
7. Add the *loopback* interfaces for Router1 as shown in the topology each with the correct gateway and configure them for OSPF routing protocol (suppose all are in area 0) use summarization when needed.
8. You can add a Fast Ethernet port to a switch or a router when needed using this module (PT-SWITCH-NM-1CFE)

Good Luck

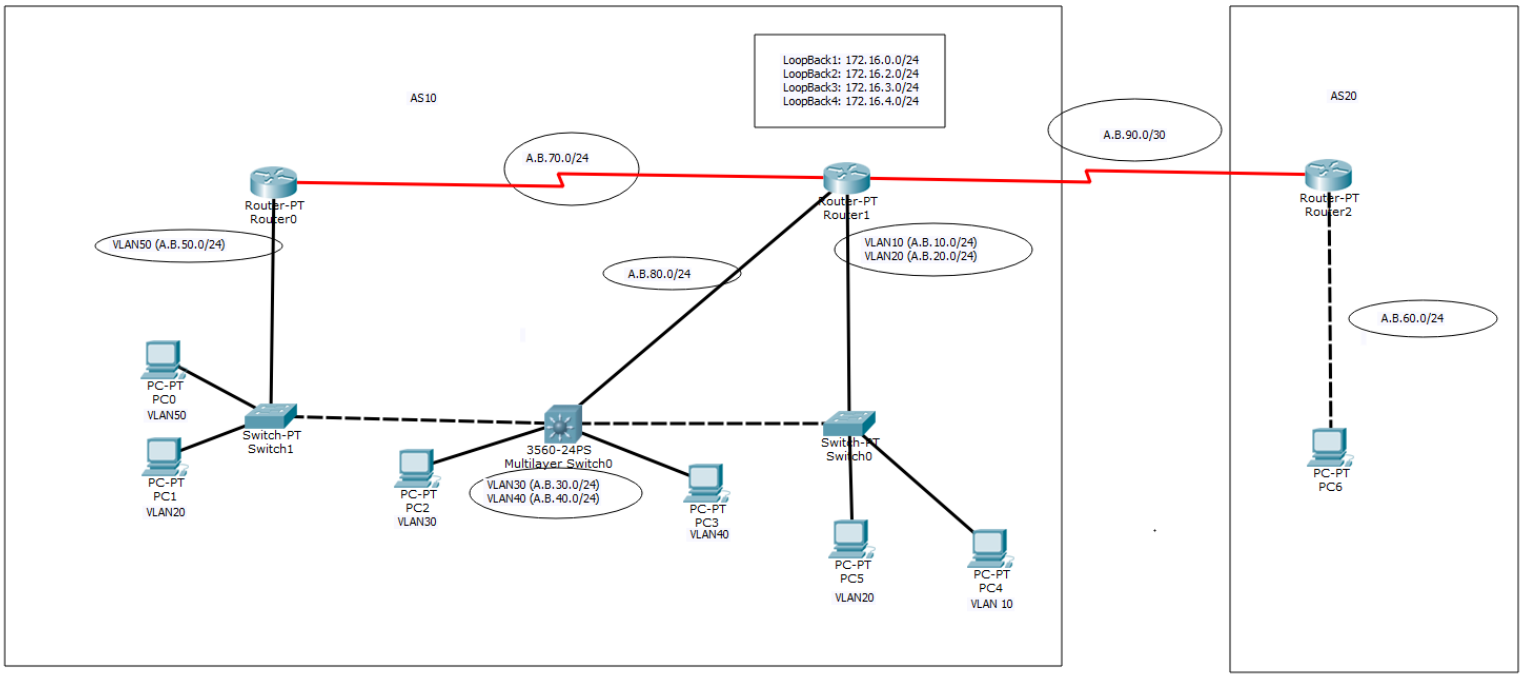

Figure 1 Topology