Tutorial 3

1. Standard ACL - Refer to T4 ACL Workbookv2:
   a) Page 5
   b) Page 17
   c) Page 26-34 (problem 1,3,5, 9)

2. Extended ACL - Refer to T4 ACL Workbookv2:
   a) Page 9
   b) Page 38(problem 1)
   c) Page 44 (problem 5)
   d) Page 50 (problem 9)
   e) Page 60 (problem 15)
   f) Page 64 (problem 19).

3. OSPF configurations were implemented in all routers and all PCs can communicate with each other in Figure 2-1 network topology. Answer the following questions.

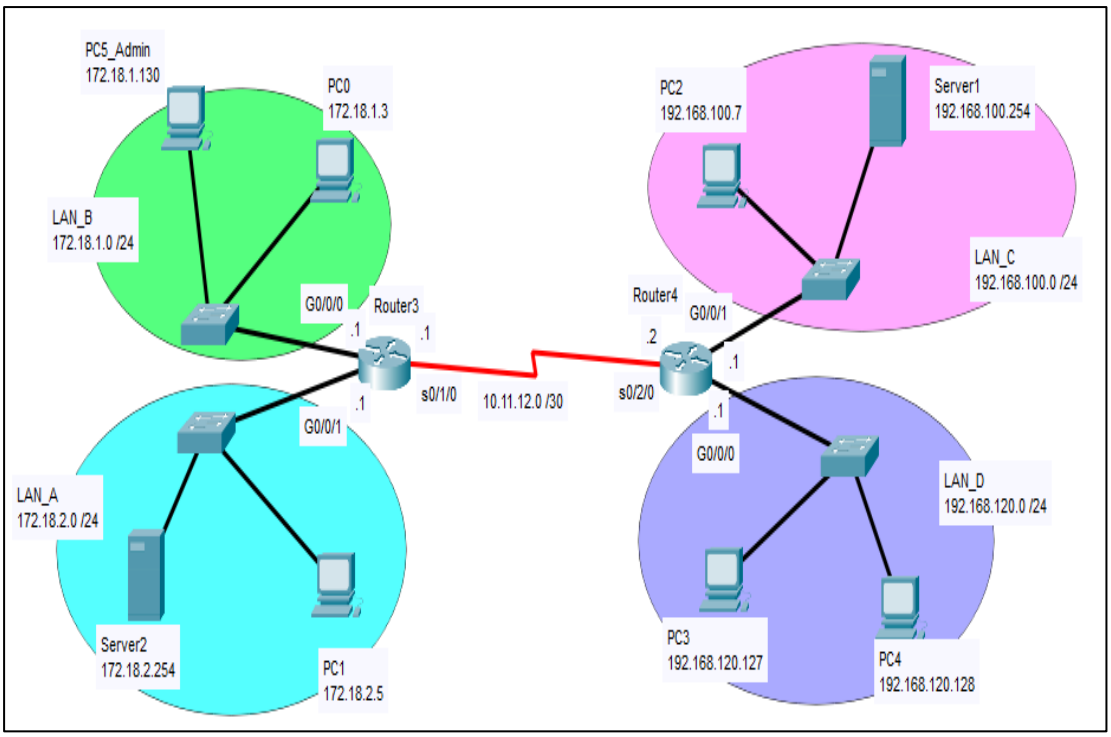

Figure 2-1: A network topology

(i) Write a standard access list numbered 13 to allow **PC5_Admin** to telnet into **Router3**. Deny all other traffic which must be explicitly written in your ACL. Use suitable keyword(s) in the ACL. Indicate the router, interface, and direction to apply the ACL. (6 marks)

(ii) Write an extended access list named **ACCESS_LEVEL** which will allow the second half of **LAN_D** network access to ping hosts with odd numbered IP addresses in **LAN_C**. Deny all other traffic. Use **port number** for **services** and suitable keyword(s) in your ACL. Indicate the router, interface, and direction to apply the ACL. (9 marks)

(iii) Differentiate applying access list on incoming and outgoing port of a router.(4 marks)

4. 202206 BMIT3094 pass year question

An enterprise will implement Access Control List (ACLs) to the router's interfaces to control and secure networks.

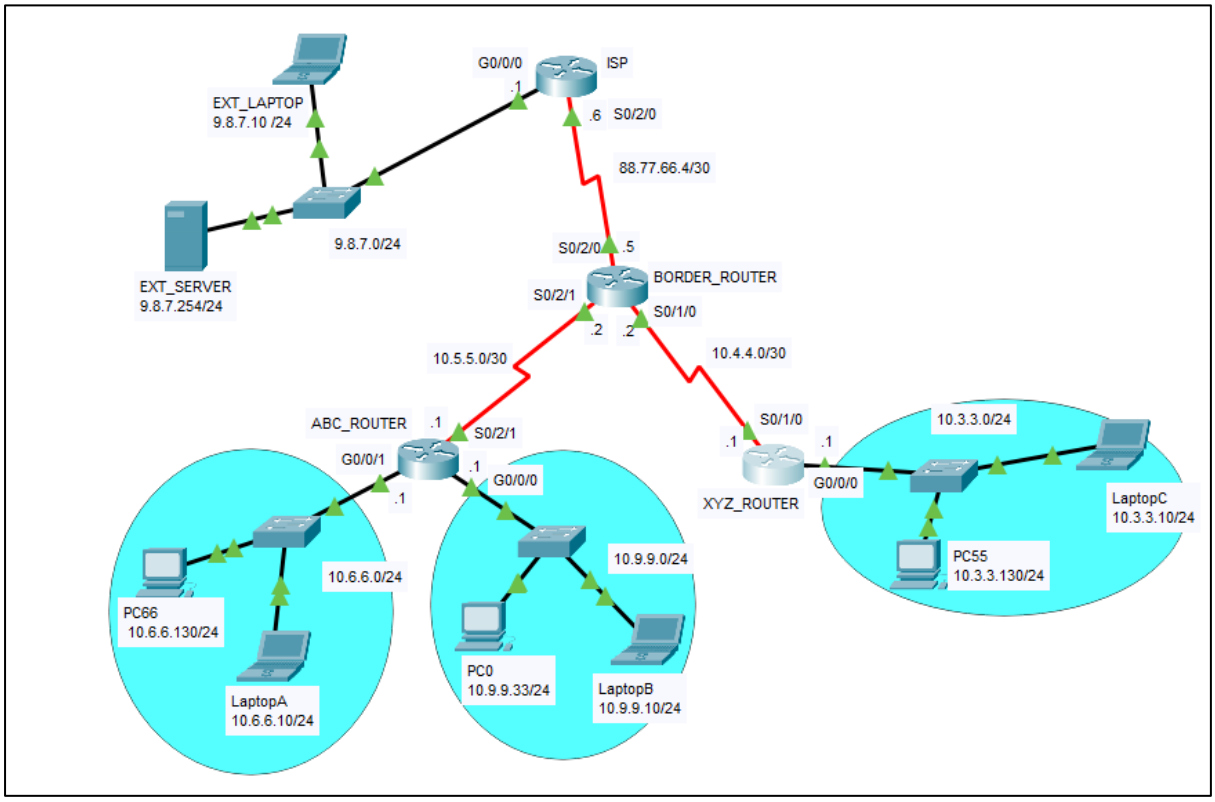

Figure 2-1: A network topology

Analyze Figure 2-1. The network topology has configured with OSPF configurations in all routers and all PCs can communicate with each other**.** Answer the following questions.

(i) Write an access list named **ACCESS_TELNET** to allow **LaptopC** to telnet into **XYZ_ROUTER**. Deny all other telnet traffics which must be explicitly written in your ACL. Use suitable keyword(s) in the ACL. Indicate the router, interface, and direction to apply the ACL. (6 marks)

(ii) Write an extended access list numbered **148** to block **LaptopA** from accessing **EXT_SERVER** for **FTP (port 21)** services. Block the first 31 usable ip addresses in the 10.9.9.0 network to reach the **EXT_SERVER** for **HTTPS (port 443)** services. Permit all other traffics**.** Use **port number** for **services** and suitable keyword(s) in your ACL. Indicate the router, interface and direction to apply the ACL. (11 marks)

5. With reference to Figure 2-1, answer the following questions.

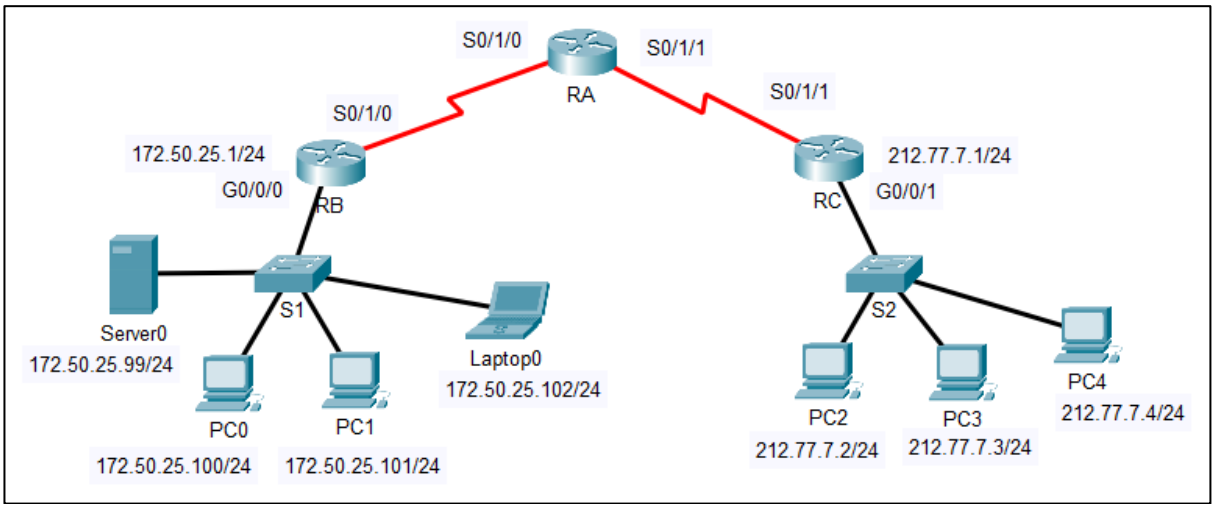

Figure 2-1: A network topology

(i) Write a standard numbered 55 access list to block 172.50.25.101 (PC1) and 172.50.25.102 (Laptop0) from sending information to the 212.77.7.0/24 network, but will allow all other traffic. Use **keyword** in your ACL. Indicate the router, interface and direction to apply the ACL

(ii) Write a standard named access list to permit traffic from the upper half of the 212.77.7.0/24 network to reach 172.50.25.0/24 network; block the lower half of the addresses. But allow only host 212.77.7.2 to reach network 172.50.25.0/24. Permit all other traffic.
The name of the standard ACL is **Permit_Upper.** Use **keyword** in your ACL. Indicate the router, interface and direction to apply the ACL

(iii) Write an extended numbered 185 access list by using **keyword** to permit HTTP traffic from 212.77.7.0 network to web Server0 172.50.25.99 but deny first 15 usable addresses HTTP traffic in 212.77.7.0 network intended for web Server0 172.50.25.99. Deny all other traffic. Indicate the router, interface and direction to apply the ACL.