East West University
CSE 405 (Computer Networks)
Lab Test
Total Marks: 20
Time: (35min +5min) = 40min

Part A: Please answer the following questions. (6 marks)

1) Why hosts generate ARP protocol when ping is performed with IPs? (2 marks)
2) What does it mean if TTL is found to be 121, whereas it is set 128 at the time of transmission? (2 marks)
3) What is the subnet mask and wild card mask in decimal notation for the any "A" class IP if 12 bits are taken to create subnets? (2 marks)

Part B: Please answer the following questions. (4 marks)

1. Followings are the information of your PC, your gateway and a distant WEB server.

   Your PC: 192.168.20.120 (IP) ---------- 46:FC:2D:10:36:C0 (MAC)

   Your Gateway: 192.168.20.254 (IP) --------- FC:2F:3A:25:36:F0 (MAC)

   WEB servers: 120.136.36.127 (IP) --------- FC:26:12:10:D0:F0 (MAC)

Assuming you have captured all the packets while pinging the WEB server from your PC, fill in the following information that you will get in the captured ICMP reply packets.

a) Write the IP and MAC address?
   Destination IP:_____

   Source MAC:_____

b) Give reasons of your given answer

Part C: Please answer the following question. (10 marks)

1) Draw the following network diagram on paper and fill in the IP addresses manually to all the interfaces and devices. Choose IP addresses ONLY from "A" classes as you wish and write it down where applicable; circle all the networks and its associated network addresses. Write down ONLY the routing tables for router R1 following static routing algorithm as well as considering OSPF. (Note: As you are choosing IP addresses as you wish, the orientation and design should be unique)