East West University
CSE 405 (Computer Networks)
Lab Test
Total Marks: 20
Time: (30min +5min) = 35min

Part A: Please answer the following questions. (10 marks)

1) Why it is necessary to crossover the cables to connect two PCs. (2 marks)

2) In what situation ARP packets are generated and what features does it have? (2 marks)

3) Briefly explain why TTL is unit less. (2 marks)

4) What is subnet mask in decimal notation for the any "A" class IP if 12 bits are taken to create subnets? (2 marks)

5) What is the 'wild card' mask's IP if the subnet mask is 255.224.0.0? (2 marks)

Part B: Please answer the following questions (2 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 packets.
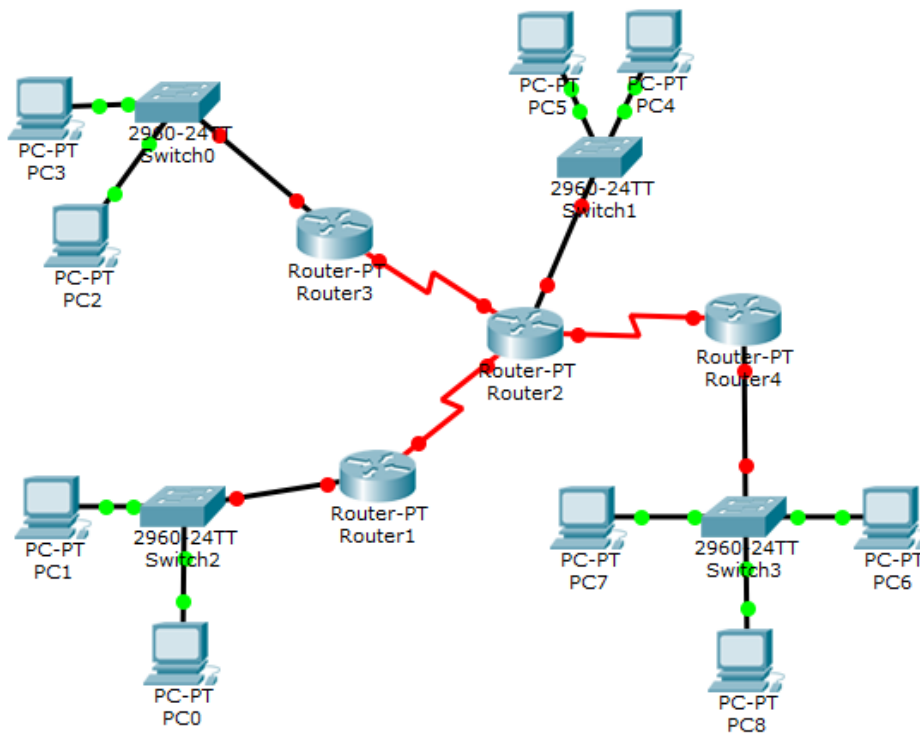
a) What is the IP and MAC address of your computer?
   IP: _____ MAC:_____

b) What is the destination IP and MAC address?
   IP:_____ MAC:_____

Part C: Please answer the following questions. (8 marks)

Draw the following diagram and give IP addresses as you wish from "B" class and answer the following questions.

1. Write the necessary routing tables in router 1 if you follow static routing algorithm.

2. Write the necessary routing tables in router 2 if you follow dynamic routing algorithm.