**Computer Networks Laboratory [In-class assignment 02] Time: 30 minutes Total Marks: 20**

**Student ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Get the values of xxx and yyy using your student ID. ***\*\*\**** *If yyy>255, set yyy = yyy%256 (% denotes MOD/remainder)*

xxx = Trimester ID (mid 3 digits) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ yyy = Trimester ID (last 3 digits) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Example: [011 211 168 => xxx = 211, yyy = 168] [011 201 368 => xxx = 201, yyy = 368%256 = 112]

Q1. Address 10.xxx.yyy.112 and the address is subnetted by 20 bits. [7x1.5=10.5]

Write the following answers:

Subnet Mask:

Network Address:

Broadcast Address:

First available IP address:

Last available IP address:

Total usable host per subnet:

Total number of subnets:

Q2. Given a class-B network subnetted by 6 bits. So, the total network bits are 22. Do the following addresses belong to the same subnetwork? [2]

Address 1: 172.15.36.251

Address 2: 172.15.37.252

Answer: YES / NO. \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q3. What is the maximum number of IP addresses that can be assigned to hosts on a local subnet that uses the /22 and /28 subnet mask? [2.5]

Total usable host in /22: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Total usable host in /28: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q4. Given a host with IP address 160.50.145.189/21. Which subnet does the host 192.168.11.198 with subnet mask 255.255.255.240 belong to? [2.5]

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q5. How many subnets and hosts per subnet can you get from the network 10.0.0.0 with subnet mask 255.255.240.0? [2.5]

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_