# CSE421 Quiz 3

Marks: 15      Time: 20 min

| ID: | Name: | Section: |
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1. Suppose that host A is connected to a router R1, R1 is connected to another router, R2, and R2 is connected to host B. Suppose that a TCP message that contains 900 bytes of data and 20 bytes of TCP header is passed to the IP code at host A for delivery to B. Show the Total length, MF, and Fragment offset fields of the IP header in each packet transmitted over the three links. Assume that link A-R1 can  support a maximum frame size of 1024 bytes including a 14-byte frame header, link R1-R2 can support a maximum frame size of 512 bytes, including an 8-byte frame header, and link R2-B can support a maximum frame size of 512 bytes including a 12-byte frame header.          **[10]**

2. One day you wished to figure out how your home network is configured and you found the following information:
   IP address: **172.16.15.2**
   Subnet mask: **255.255.240.0**
   a. What is the prefix mask?      **[1]**
   b. What is the network address?         **[1]**
   c. What is the first usable IP of your network?  **[1]**
   d. What is the broadcast address?       **[1]**
   e. How many PCs can be connected to your network?   **[1]**