###### *CSE 473 – Introduction to Computer Networks*

Review Questions 7

##### ***Your Name****:*

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Please print out this form (two-sided, if you can) and write your answers *legibly* in the spaces provided. If you can’t write legibly, type.

1. Run traceroute network towards a handful of different destinations, preferably geographically distributed. (On Linux, the traceroute utility should be natively available. On Windows you should use tracert, on MAC OSX it should be available under Network Utility (usually in the utilities folder of the Applications folder).
   1. Carry out the experiment first from a computer connected to the university’s network. What do you notice and what do the results imply?
   2. Repeat the experiment for the same set of destinations but now connected to your home (apartment, dorm, etc.) network. How are the results different and what do they tell you?
   3. Finally, repeat the experiment but now using one of the traceroute servers that you can find listed at traceroute.org. Choose one located on a different continent and observe the differences.
2. Under what circumstances is the DHCP discover message required? In what common situation is it *not* required?
3. Consider the network on slide entitled “A Closer Look At NAT” (slide 20), and assume that a webserver is running on the host with address 10.0.0.2.

What would be an appropriate entry in the NAT table at the router to facilitate external connectivity to the webserver?

Suppose a remote host sent a packet intended for the web server? What would it use as the destination address and port number?

What destination address and port number would the router substitute when forwarding the packet on the local network?