

CNT3004: Computer Network Concepts (Spring 2011)

Homework 4: Chapter 26, 27

(assigned 04/13; due: 04/25 in class with hardcopy handed in)

Name: _____ PID: _____

Note: You need to compute the final numerical results for all computing questions (i.e., you cannot just list the formula as the final result).

1. Knowledge questions:

- a. What is the default service port used by telnet? What is the service port used by Email server? What is the service port used by SSH server? What is the service port (unencrypted one) used by HTTP server?
- b. Why an email with a 9MB file attachment cannot be accepted by a receiving email server if the server imposes a rule that it rejects any email that is larger than 10MB?
- c. Does an email user agent rely on SMTP protocol for both sending and receiving email from an email server?
- d. When a browser gets a webpage, does it set up connections only to that web server?
- e. What is the biggest change of HTTP 1.1 from its prior version HTTP 1.0?

2. Use DNS query by either “nslookup” (under windows) or “dig” (under unix) to find out what is the email server’s name and its IP address(es) of our UCF knights student email system. For how to use nslookup under windows you can read:

<http://www.sabete.org/~michael/learn/nslookup.html>

3. List the several SMTP commands you must use in order to use telnet to manually send an email. You must list these commands in order.

4. **Wireshark usage and WWW monitoring:** You are required to install wireshark on your own computer and then monitor your web connection in this assignment. You are required to connect to <http://www.wikipedia.org/> and monitor the HTTP traffic:

- a). What is the IP address of your computer and the IP address of the website you connected?
- b). How long did it take from when the HTTP GET message was sent until the HTTP OK reply was received?
- c). Show the “summary” text of the HTTP GET message and the HTTP OK message (these two packets should be the first two http packets captured by wireshark). You can right-click a packet line, then select “copy” → “summary” to copy down the summary text.