**CS 3800 Computer Networks**

Instructor: John Korah

**Quiz # 3  
(Solutions in red)**

**Duration: 15 minutes**

**NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1) What protocol is used to retrieve e-mail from a mail server?

1. DHCP
2. POP3
3. Telnet
4. SMTP

2) The HTTP protocol uses which port?

1. 40
2. 53
3. 80
4. 87

3) What protocol is used to send e-mails between mail servers?

1. Telnet
2. DHCP
3. POP3
4. SMTP

4) Which of the following two statements are true

1. HTTP is a pull protocol whereas SMTP is a push protocol
2. Both HTTP and SMTP uses TCP
3. SMTP is a pull protocol whereas HTTP is a push protocol
4. Both HTTP and SMTP are pull protocols

5) Suppose you need to send one message to three different users: user1@example.com, user2@example.com, and user3@example.com. Is there any difference between sending one separate message per user and sending only one message with multiple (three) recipients? Explain.

Yes, there is a difference.

If a separate message is sent for each of the users, a set of SMTP commands (i.e. one MAIL, one RCPT and one DATA commands) will be issued for each of the messages, resulting in the transmission of three copies of the message data.

If only one message with multiple recipients (three) is sent (this is possible here as all the recipients belong to the same email domain), only one set of SMTP commands (one MAIL, multiple RCPT and one DATA command) will be issued, resulting in the transmission of only one copy of the message data.

6) What is a *ServerSocket* and how is it used?

ServerSocket is a passive socket used on the server side to listen to connections.

7) Object of which of the following class is used to send an HTTP request to a web server?

1. Socket
2. ServerSocket
3. DatagramSocket
4. URL