

## ITS 323 – QUIZ 7 (ITB)

First name: \_\_\_\_\_ Last name: \_\_\_\_\_

ID: \_\_\_\_\_

Total Marks: \_\_\_\_\_

out of 10

### Question 1 [2 marks]

Match the address/identifier types to their correct meaning (write either the letter or the full name). You can select from the following address/identifier types:

- a. Port number
- b. Hardware address
- c. Protocol number
- d. Domain name
- e. IP address

\_\_\_\_\_ Physical addresses specific to a LAN or WAN technology  
\_\_\_\_\_ Identify the transport protocol  
\_\_\_\_\_ User-friendly identifiers for IP interfaces  
\_\_\_\_\_ Identify application protocols

### Question 2 [2 marks]

List the four addresses that identify a unique TCP connection:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

### Question 3 [3 marks]

True or false:

- a) UDP provides a full duplex connection. T / F
- b) DNS maps domain names to IP addresses T / F
- c) Two protocols used in email transfer are POP and SMTP T / F

**Question 4** [3 marks]

- a) Draw a diagram to illustrate the TCP connection setup process between A and B. You must include the segment types as well as any other important information carried in the segments. Assume A chooses an initial sequence number of 82, and B chooses 17.
- b) After the connection is setup, if the first data sent from B to A is a segment containing 2000 bytes of data, then what is the acknowledgement number sent from A to B in response?

**Bonus Questions** (marks from these questions are added to your overall quiz score from the five best quizzes; each part is worth 1 mark)

- a) What is the broadcast address for the classless IP address 160.14.16.3/17?  
Broadcast address: \_\_\_\_\_
- b) What subnet mask should be used to create a network with a maximum of 126 hosts?  
Subnet mask: \_\_\_\_\_
- c) Datagram packet switching requires a header to be added to each packet; virtual circuit packet switching *does not* add a header to each packet. T / F
- d) An IP router will change the IP address in an IP datagram before forwarding to the next router. T / F
- e) What is the network address for the classful IP address 120.3.254.16?  
Network address: \_\_\_\_\_