

ITS323 – Quiz 7

Name: _____ ID: _____ Marks: _____ (10)

Question 1 [6 marks]

Write the last 8 digits of your ID in the spaces below *backwards*. (E.g. if my ID is 5222123456, then I would write 6 5 4 3 2 1 2 2).

____ . ____ . ____ . ____

Above is the IP address of your computer. Use it to answer the following questions.

- (a) If your IP address has subnet mask /16, then what is the network address for the subnet your computer is attached to? [2 marks]
- (b) Assume your computer is initially the only IP host in the subnet. Then a router with an IP address with subnet mask 255.255.255.128 is attached to the same subnet. Now how many more IP devices can be attached to the subnet? [2 marks]
- (c) Write an IP address that is a local broadcast address *and* explain what happens if your computer sends an IP datagram to that address. [2 marks]

Question 2 [4 marks]

Draw a diagram that illustrates the TCP connection establishment process, assuming a client selects an initial sequence number of 9877, and the server selects 901. For each TCP segment, clearly indicate the value of the Sequence Number field, the Acknowledgement Number field (if relevant) and the flags that are set to 1.