

## ITS 323 – QUIZ 5 (CS)

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

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

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

out of 10

### Question 1 [7.5 marks (1.5 each)]

True or False:

- a) The aim of Medium Access Control (MAC) in LANs is to ensure frames (or transmissions) do not collide with each other. T / F
- b) Two fields of the IP header are the Source Address and Destination Address. When an IP router receives an IP datagram, it will change the addresses before forwarding on to the next node. T / F
- c) The Time To Live (TTL) field in the IP header is used to limit the number of times an IP datagram is forwarded by routers. T / F
- d) If using a ring topology for a LAN, a frame transmitted by node A will eventually return to (and be received by) node A. T / F
- e) The main difference between a switch and a hub is that a hub can allow two users (computers) to transmit at the same time (whereas a switch cannot). T / F

### Question 2 [1 mark]

Fill in the word(s) to complete the following sentence:

A \_\_\_\_\_-based dynamic medium access control scheme allocates transmission opportunities to computers in an ordered pattern, one computer after another.

### Question 3 [1.5 marks]

For each of the following descriptions of IP, indicate which node it best describes by circling the node.

- a) IP receives a frame from the Data Link layer, removes the IP header and sends the Data to the Transport layer.

Source Computer          Destination Computer          Router          Switch

- b) IP receives a frame from the Data Link layer, determines the next node, and sends the IP datagram to another Data Link layer.

Source Computer          Destination Computer          Router          Switch

- c) IP receives Data from the Transport layer, attaches an IP header and sends the IP datagram to the Data Link layer.

Source Computer          Destination Computer          Router          Switch