ITS 323 – QUIZ 5

First name: _____ Last name: _____

ID: _____ Total Marks: _____
out of 10

Question 1 [4 marks]

a) One aim of Medium Access Control (MAC) in LANs is to ensure only one user (computer) transmits at a time. T / F

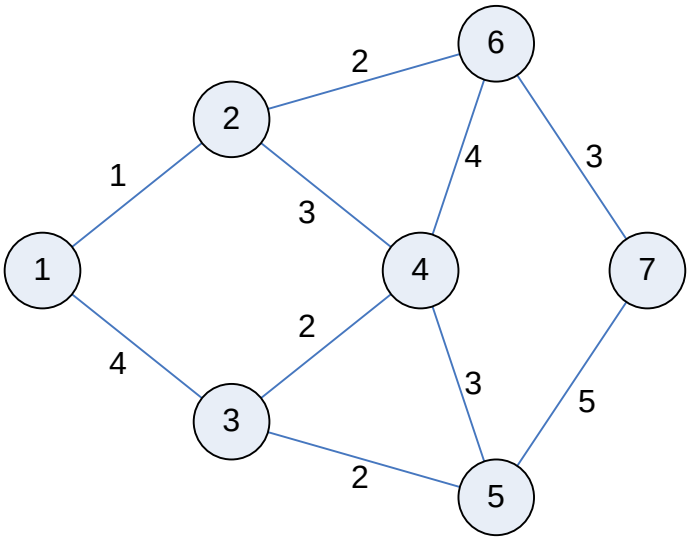
b) Centralised control for Medium Access Control (MAC) has the advantage (compared to distributed control) that if the controlling station fails, the network can still operate. T / F

c) The IEEE 802 series of LAN standards focus on the Physical Layer and Data Link Layer of the OSI model. T / F

d) A contention-based MAC protocol gives each station a turn at transmitting in an ordered manner (e.g. station 1, station 2, station 3, …). T / F

Question 2 [3 marks]

The following diagram shows a network of 7 nodes with the costs shown for each link (the costs are the same in both directions of the link). Assuming least-cost routing, complete the routing table for node 6.



Node 6	
Destination	Next Node

Question 3 [3 marks]

If flooding is used to send a packet from 1 to 7 in the network above, and a hop limit of 2 is used:

a) How many copies of the packet are transmitted in the network?

b) Does the destination receive the packet? Why or why not?

If a probability-based selective flooding protocol is used, where a node randomly chooses one output link with a probability inversely proportional to the cost (assume no hop limit):

c) What is the most likely path the packet will take from source to destination?