ITS323 – Quiz 1

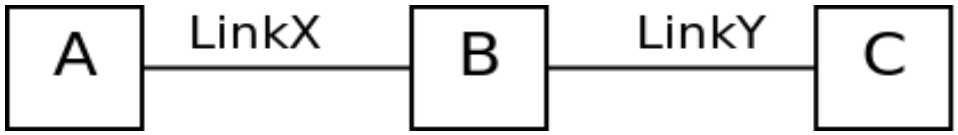
Name: _____

ID: _____ Mark: _____ (out of 10)

Email address: _____ @ hotmail/gmail/other (that you used on Mailist)

Question 1 [3 marks]

Consider the network below with source A sending a message to destination C. The message passes via B.



Calculate the delay for the message for conditions in the table below. Assume both processing delay and queuing delay for all devices is 0.

Message size	1000 Bytes
Link X	
- Signal speed	2.00E+008 m/s
- Data rate	4 Mb/s
- Distance	100000 m
Link X	
- Signal speed	2.00E+008 m/s
- Data rate	2 Mb/s
- Distance	100000 m

Question 2 [2 marks]

a) Draw the Internet protocol stack, giving the names of each layer. [1 mark]

b) For the following examples addresses, indicate which layer they correspond to. [1 mark]

i. The 48-bit IEEE MAC address 00:17:31:5a:e5:89 Layer: _____

ii. steve@siit.tu.ac.th Layer: _____

Question 3 [3 marks]

True or False – circle the most accurate answer:

a) A protocol may be implemented in hardware or software. T F

b) If the average delay of 10 messages is 20ms, then the jitter is 2ms. T F

c) With a point-to-point full-duplex link, the transmission of A can be received by both B and C at the same time. T F

Question 4 [2 marks]

To send a 1KB file from A to B, the layers within a protocol architecture contribute an additional 500B of overhead. If the data rate of the link from A to B is 6Kb/s, what is the maximum throughput achieved when sending the file?