

ITS323 – Quiz 1

Name: _____

ID: _____ Mark: _____ (out of 10)

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

Question 1 [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. Port 443 Layer: _____
 - ii. The 32-bit IP address 72.16.4.3 Layer: _____

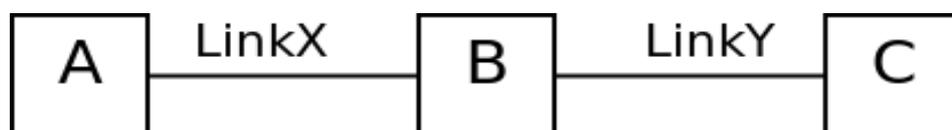
Question 2 [3 marks]

True or False – circle the most accurate answer:

- a) A protocol is the same as a standard. T F
- b) If the average delay of 10 messages is 30ms, then the jitter is 30ms. T F
- c) With a half-duplex link, A can transmit to B and B can transmit to A, but not at the same time. T F

Question 3 [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	2000 Bytes
Link X	
- Signal speed	2.50E+008 m/s
- Data rate	8 Mb/s
- Distance	25000 m
Link X	
- Signal speed	2.50E+008 m/s
- Data rate	16 Mb/s
- Distance	25000 m

Question 4 [2 marks]

To send a 2KB 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 10Mb/s, what is the maximum throughput achieved when sending the file?