

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. The 32-bit IP address 72.16.4.3 Layer: _____
- ii. www.google.com Layer: _____

Question 2 [2 marks]

To send a 1.5KB 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 8KB/s, what is the maximum throughput achieved when sending the file?

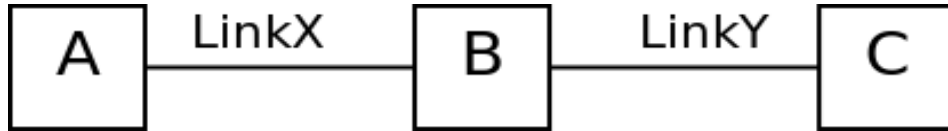
Question 3 [3 marks]

True or False – circle the most accurate answer:

- a) An application may implement more than one protocol. 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 simplex link, the transmission of A can be received by both B and C at the same time. T F

Question 4 [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	1500 Bytes
Link X	
- Signal speed	2.50E+008 m/s
- Data rate	24 Mb/s
- Distance	25000 m
Link Y	
- Signal speed	2.50E+008 m/s
- Data rate	12 Mb/s
- Distance	25000 m