ITS323 − Quiz 4

Name: _____   ID: _____   Marks: _____ (10)

Question 1 [2 marks]

(a) Circuit switching requires data to be divided into packets before transmission. True or False.

(b) All links coming into a circuit switch must use the same technology and speed. True or False.

Question 2 [4 marks]

Consider selective reject ARQ being used on a link with one way propagation delay of 200ms. Data frames have a transmission time of 10ms, ACK frames (including selective reject or NACK frames) have a transmission time of 2ms, and a maximum window size of 4 is available. Assume 0 processing or queuing delay. If the source has 4 original data frames to transmit, but the third data frame sent is lost, at what time is all of the data successfully received by the destination?

Question 3   [4 marks]

Consider a link with a one way propagation delay of 10ms. Each data frame has a transmission time of 9ms, while the acknowledgement transmission time is 1ms. Assume other processing and queuing delays are 0. If the source computer starts its timer after completing the transmission of the data frame, what is the minimum timeout interval that a source computer should use if stop-and-wait ARQ is applied across the link?