ITS323 – Quiz 4

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

Question 1   [2 marks]

(a) In circuit switching the establishment of a new circuit will be rejected by a switch if insufficient resources are available. True or False.

(b) Circuit switching was developed for the original telephone networks, and is no longer used today. True or False.

Question 2   [4 marks]

Consider selective reject ARQ being used on a link with one way propagation delay of 300ms. Data frames have a transmission time of 20ms, ACK frames (including selective reject or NACK frames) have a transmission time of 3ms, 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 20ms. Each data frame has a transmission time of 12ms, while the acknowledgement transmission time is 2ms. 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?