

ITS323 – Quiz 4

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

Question 1 [2 marks]

- (a) Circuit switching can be inefficient if most of the resources reserved for a circuit are not used by the source/destination. True or False.
- (b) Datagram packet switching is the most common form of switching used in landline telephone networks. True or False.

Question 2 [4 marks]

- (a) When an error is detected by the source computer, explain the difference between the operation of selective reject ARQ and go-back-N ARQ. [2 marks]

- (b) Explain an disadvantage of selective reject ARQ (compared to go-back-N ARQ). [2 marks]

Question 3 [4 marks]

Consider a link with a one way propagation delay of 17ms. Each data frame has a transmission time of 30ms, while the acknowledgement transmission time is 3ms. 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?