

## Homework 3

*Assigned: Feb. 18, 2009**Due: Feb. 25, 2009*

1. (20') Kurose & Ross, Chapter 3, on pages 295-304, Problems 2, 3 (calculate the checksum only)
2. (30') Suppose that we need to send five packets (A, B, C, D, E) from a sender to a receiver. Consider two cases. 1) packet C is lost. 2) acknowledgement for packet C is lost. Assume that only the first transmission is lost, but retransmissions are successful. We do not have limit on the range of sequence number, but window size in go-back-N and selective repeat should be set to 3.

Draw diagrams to show the interactions between the sender and the receiver for each case by using the three reliable data transfer protocols (i.e., stop-and-wait, go-back-N, and selective repeat). Write down whatever assumptions you have made. Also give the sequence number and acknowledgement number in the packets, and the values of local variables (for example, seqno, ackno, base, rcvbase, nextseq) at the sender and the receiver.