Total number of problems: 4
Maximum points: 50

Problem 2.30 [15 pts.]

Problem 2.49 [15 pts.]

Problem 3.7 [8 pts.]
[Hint: use the following MIPS instructions: addu, bgez, sub. See appendix A for a detailed description of these three instructions]

Problem [12 pts.]
There are six relative conditions between the values of two registers.

(a) if (i == j) go to L1;
(b) if (i != j) go to L1;
(c) if (i < j) go to L1;
(d) if (i <= j) go to L1;
(e) if (i > j) go to L1;
(f) if (i >= j) go to L1;

Assuming that variable i corresponds to register $s1 and variable j corresponds to $s2, show the MIPS code for the condition corresponding to the following C codes.
Notice that MIPS does not provide all types of branch instructions.

[Hint: you can implement any of the given relative conditions by using only the following MIPS instructions: bne, beq, slt. You need at most 2 MIPS instructions per relative condition]