Updated, Problem 2 below now refers to the correct final exam problem.

Problem 1:   Solve Fall 2010 Final Exam Problem 4.

Problem 2:   This problem is based on Fall 2010 Final Exam Problem 7(a).

(*a*) Solve Fall 2010 Final Exam Problem 7(a).

(*b*) Illustrate your answer above with a code fragment that includes a loop. The loop should have what we will call a *body branch* inside the loop body and a *loop branch* at the end, going to the top of the loop. The loop branch is predicted with 100% accuracy. Consider cases in which the body branch is predicted with 95% accuracy and 96% accuracy. Estimate the iteration time when the body branch is taken and not taken, and when it's predicted correctly or not. Do this both for a 2-way and 4-way superscalar system. Based on these numbers estimate performance for a 95% prediction accuracy of that branch and a 96% prediction accuracy.