University of California at Berkeley
College of Engineering
Department of Electrical Engineering and Computer Science

EECS 150 R. H. Katz
Spring 2007

Student Background Questionnaire and Diagnostic Quiz (Legible Please!)

Name: _____

Student ID: _____ Card Key # (for lab access): _____

Social Net Website: _____

Circle one: Freshman Sophomore Junior Senior Graduate

Have you taken CS 61C? Yes No When? Semester/Year: _____

Have you taken EE 40? Yes No When? Semester/Year: _____

What is your most ambitious software project (not limited to course projects)?

_____

_____

What is your most ambitious hardware project (not limited to course projects)?

_____

_____

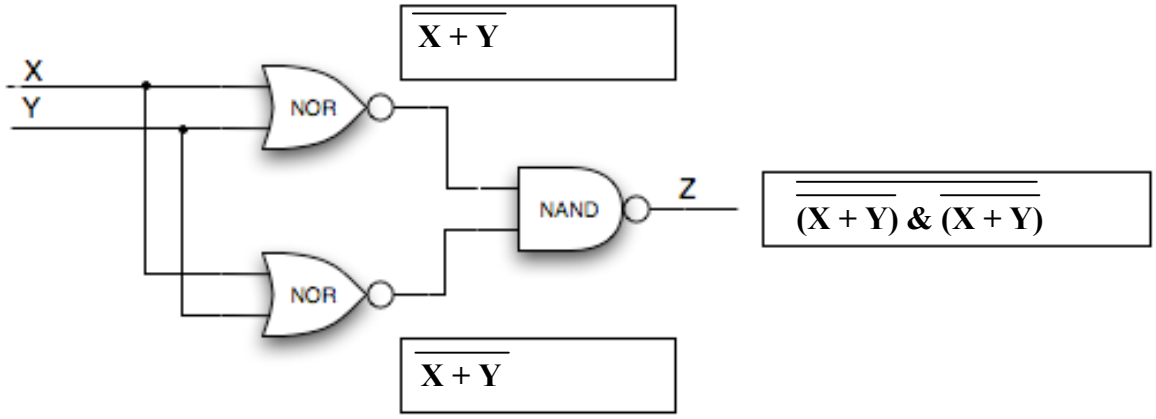
How would you describe your skills and interests (circle one per line)?

Mathematical/Analytical	Engineering/Building Things
Hardware	Software
Electrical Engineering	Computer Science
Components	Architecture
Systems	Applications
Technology	Business

The following are diagnostic questions to test your retention of basic knowledge from CS 61c. If they are mysterious, then you probably are not ready to take CS 150.

1. Logic Gates and Boolean Equations

The following implements a logic function Z(X,Y). Write Boolean equations within the boxes below that correspond to the logic function at that point in the schematic. Write down the simplest possible form of the logic function here: Z(X,Y) = __X + Y __.



2. Flip-flops and State Diagrams

Given the state machine implementation shown on the left below, complete the state diagram shown at the right.