CS 32, Spring 2013
Hw4: 50 total points

Print this form, staple loose pages together, and write your answers on it.

Accepted: on paper at the beginning of your lab section on May 8.
No email submission allowed.

Name (1 pt): _____

Umail (1 pt): _____@umail.ucsb.edu

Lab Section (1 pt) Circle one: 1:00   2:00   3:00

Consult the readings and lecture notes as necessary. Provide brief answers to
each of the following questions in your own words:

    1. (10 pts.) What is CPU scheduling? How does a time-sharing system run
multiple processes on a computer system with a single CPU? Be brief but precise.

    2. (8 pts.) What is the difference between built-in (internal) and external
shell commands? How does a UNIX shell execute built-in and external commands?
Explain your answer with an example.

    3. (8 pts.) What are signals in UNIX? Give three examples of signals. What
are the possible actions that a process can take upon receiving a signal? Write
commands for sending these signals to a process with PID 10289.

4. (5 pts.) What is the purpose of the nice command in UNIX?

5. (8 pts.) Compute the priority number of a UNIX process with a recent CPU usage of 31, a threshold priority of 60, and a nice value of 20. Show your work.

6. (8 pts.) Give the sequence of steps (with commands) for terminating a background process (remember to find out PID or job number first).

End of Hw4