CS 414	**Operating Systems**	Test 1
Name:	Spring 2003	Max Pts: 38

Important: This is an open book test. You can use any books, notes, or paper, but not exchange anything with other students. You are not allowed to use any electronic/communication devices. Any calculations and rough work can be done on the back side of the test pages. You will lose five points for not writing your name.

1. [6 pt] Describe the extended machine view of an operating system. How does it differ from the resource allocator view?

2. [4 pt] Why is Internet Explorer an integral part of Windows? Why don't we require any application (such as `ls`) to be a part of Unix?

3. [6 pt] What is the difference between a daemon and a zombie? Are they essential to a system's performance?

4. [5 pt] Unix has several types of files. Briefly describe character special file and block special file. Is it possible to view a directory as a regular file?

5. [4 pt] A system call is invoked by putting data into a specified location and then, making a call to the kernel. Can we achieve the same as a regular function? Explain your answer.

6. [4 pt] What is the purpose of states "Blocked Suspended" and "Ready Suspended" in the process model?

7. [9 pt] How does the critical section problem solution for multiple processes ensure that the protocol for the solution is satisfied. Show the application of solution to satisfy mutual exclusion, progress, and bounded wait.