Name: _____ **Quiz 5**

ID#: _____

CS311 Operating Systems I

There are 10 questions on this quiz. Any 2 may be selected for extra credit. Please mark them clearly. Extra credit questions are worth 3 points each, with regular questions worth 5.

1. What is the limit on the number of bytes in a `write` to a pipe such that it is guaranteed to be atomic?

2. How does one create new processes in Linux?

3. Each of the `exec` library functions have a suffix of some combination of ℓ, p, e, and v. What does each of these letters imply?

4. There is only a single way to remove a zombie. What is it?

5. The `wait` family of system calls is used to monitor child process execution. Describe the semantics of `wait` and `waitpid`. Specifically, when do they return, what do they return, what meanings do differen t values of the `pid` argument to `waitpid` have, etc.

6. After a fork, who runs first, the parent or the child?

7. Post fork, what relationship exists between file descriptors in the parent and children processes?

8. How can dead children be prevented from turning into zombies?

9. How do pipes and FIFOs differ?

10. How is a pipe created?