CSCE351: Midterm Exam Review

Know all these concepts and you will be fine. The exam will be closed book and closed note.

1. Know how functions such as *fork, sigsetjmp,* and *siglongjmp* work and how they can be used.

2. Be able to follow execution of processes after creation.

3. Be able to identify critical sections and fix possible races in a program.

4. Understand how monitors work and the basic signaling disciplines.

5. Understand what are condition variables and know how they work.

6. Understand how semaphores work.

7. Understand how to avoid races.

8. Be able to distinguish between mutual exclusion and synchronization.

9. Understand important terms (e.g. critical sections, mutual exclusions, races, deadlock, livelock, etc.).

10. Understand basic computer organization.

11. Understand the basic of multiprogramming and how most OSs provide support.

12. Understand the notion of processes, their life cycle, and their states.

13. Understand how hardware can support mutual exclusion (e.g. a sample program on how to create lock using TSL).

14. Be able to distinguish between threads and processes.

15. Know the differences between user-level threads and kernel-level threads.