CSE 4300 Homework 1 (Due on October 3rd, 2019)

1. What are the main activities of file-system management in an operating system? (10 points)

2. What are the CPU's two modes of operation and what is the purpose of having two modes of operation? (10 points)

3. What is the purpose of interrupts? How does an interrupt differ from a trap? Can traps be generated intentionally by a user program? If so, for what purpose? (10 points)

4. How do clustered systems differ from multiprocessor systems? What is required for two machines belonging to a cluster to cooperate to provide a highly available service? (10 points)

5. Discuss the differences between symmetric and asymmetric multiprocessing and discuss the advantages of multiprocessor systems. (10 points)

6. What are the major process management activities an operating system is responsible for? (10 points)

7. What are system calls? Provide the major categories of system calls and give examples. (10 points)

8. What are some benefits of a microkernel-structured system? (10 points)

9. What is the main advantage of the layered approach to system design? What are the disadvantages of the layered approach? (10 points)

10. Why is the separation of mechanism and policy desirable? (10 points)