

## ASSIGNMENT 1

1. Which of the following instructions should only be allowed in kernel mode?
  - a. Disable all interrupts
  - b. Read the time of day clock
  - c. Change the memory map
2. What is the purpose of interrupts? What are the differences between a trap and an interrupt? Can traps be generated intentionally by a user program? If so, for what purpose?
3. In what ways is the modular kernel approach similar to the layered approach? In what ways is it different?
4. True or False: A monolithic kernel architecture assigns only a few essential functions to the kernel, including address spaces, interprocess communication and basic scheduling.
5. The \_\_\_\_\_ is the portion of the operating system that remains in main memory during system operation.
6. Compare and contrast programmed I/O and memory mapped I/O.
7. Describe an application, other than VMWare, where you would want to use virtual machines.
8. What is the BIOS?
9. Give two reasons why we do not want the entire OS kernel in the ROM.
10. Why would an OS dump its memory? When is the memory dump useful?