HOMEWORK 1.

1. What are the two main functions of an operating system?
2. What is multiprogramming?
3. Which of the following instructions should be allowed only in kernel mode?
   Explain your answers.
      a.   Disable all interrupts
      b.   Read the time of day clock.
      c.   Set the time of day clock.
      d.   Change the memory map.
4. list some differences between personal computer O.Ss and server O.Ss
5. Exercise 1.1 a. (on page 36,37)
In a multiprogramming and time-sharing environment, several users share the system simultaneously. This situation can reset in various security problems. What are two such problems?
6. Exercise 1.2 b.
   The issue of resource utilization shows up in different forms in different types of O.Ss. list what resources must be managed carefully in the following settings.
   b)   Workstation connected to servers
7. Exercise 1.3.
   Under what circumstances would a user be better off using a time-sharing system rather than a PC or single user workstation?
8. Exercise 1.11 a, b.
   Direct memory access is used for high-speed I/O devices in other to avoid increasing the CPU's execution load.
                  a)   How does the CPU interface with the device to coordinate the transfers?
                  b)   How does the CPU know when the memory operations are complete?
9. Exercise 1.9.
   How are network computers different from traditional PCs? Describe some usage scenarios in which it is advantageous to use network computers?
10. Exercise 1.17. a, c, d, e.
    Define the essential properties of the following type of O.Ss
    a) batch, c) Timesharing d) Real time e)network

Good luck!