1. What are the two main functions of an operating system?

The purpose of the operating system is to both provide a medium for the user and the system and to provide a means to communicate with the console.

2. What is an interrupt and how does it differ from a trap?

An Interrupt is generally caused by an exception in the processor while a trap is a code that is set to be thrown as an exceptional condition such a break point.

3. What is multiprogramming and what is the main purpose of multiprogramming?

Multiprogramming is an ability of the processor to store multiple programs and execute one then continue to store other programs so that if it either yields or stops the processor will be ready to be used by another one.

4. Which of the following instructions should be allowed only in kernel mode?

All but B were correct.

(a) Disable all interrupt

(c) Set the time-of-day clock

(d) Change the memory map

5. What is a device driver and do they work across various operating systems? Why?

A device driver is software that allows a piece of hardware to communicate with the computer’s operating system. One driver will most likely not work between different operating systems unless they are similar enough to one another to allow it.

6. What is a system call? What types of system calls are listed in Chapter 1?

A system call is performed within code and takes it out to the system to perform some base function of the OS. Chapter 1 has very basic Linux commands such as cd, write, create, open and close.

7. Explain the difference between monolithic and layered operating systems.

A monolithic operating system is one that typically deals with one program at a time and will allow the user to start another once the one is finished executing. A layered operating system is one that we’re used to where the operating system can support multiple programs at the same time.

8. Why is a process table required in a timeshared system, but not in a computer system that only supports one process such as MS DOS.

A process table has all the processes for that machine which are either ready to be processed or are waiting. MS DOS does not support multiple processes so it’s not needed.

9. List some key differences between mainframe and PC operating systems.

The biggest difference is that a mainframe’s OS is generally deigned to accommodate 100’s of users and have multiple OS’s for the users to use while a PC is meant to accommodate a single person. Mainframes are generally really expensive because they need to be designed to allow multiple users to log in and use it at once while PC’s are more…personal.