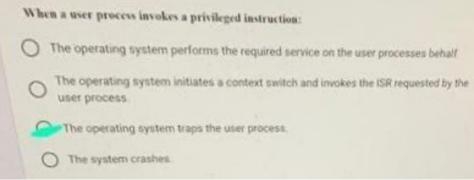- ✓ Load a local variable from memory into CPU registers.
- ◯ Print a local variable
- ◯ Open a file for input.
- ◯ Create a child process.

1 point

The major function of the command interpreter is to provide the interface between the API and application program.

- ◯ True
- ◯ False ✓

1 point

Virtualization allows operating systems to run as applications within other operating systems.

- ✓ True
- ◯ False

Which of the following storage devices is NOT suitable for storing the bootstrap program:

○ Flash memory.

○ ROM.

◉ Cache.

○ EPROM

Operating systems designed for these devices mainly focus on user experience:

◉ Mobile devices.

○ Cloud computing

○ Mainframes.

○ Imbedded systems.

**When a CPU is interrupted:**

○ It ignores the interrupt and resumes the currently execution program.

○ It aborts the currently executing program and executes the corresponding interrupt service routine.

◉ A context switch is performed then the corresponding ISR executes.

○ The system crashes and must be restarted.

**On multitasking systems, a process is allowed to execute until it voluntarily releases the CPU.**

○ True

◉ False

**When a user process invokes a privileged instruction:**

- ○ The operating system performs the required service on the user processes behalf

- ○ The operating system initiates a context switch and invokes the ISR requested by the user process

- ☑ The operating system traps the user process.

- ○ The system crashes

The Security service in an operating system involves ensuring the access of all processes and system resources are controlled, while the protection service provides mechanisms to safeguard the system resources form external users.

○ True.

✓ False.

Which of the following components run continuously on the system from start-up until shut-down:

○ Text editor.

○ Assembler.

✓ Kernel.

○ Printer driver.

_____ is/are technique(s) used for passing parameters from application to system call. But this/these technique(s) may limit the number of parameters being passed:

✓ Registers

○ Stack.

○ Special block in memory.

○ All listed techniques.

**Which of the following categories includes a system call to return the current time of the system:**

○ Process control.

✓ Information maintenance.

○ Device management.

○ Protection.

In layered approach, each level is implemented with functions and services provided by:

○ The same layer.

◉ Lower-level layers.

○ Higher-level layers.

○ Any layer.

Which of the following operating system structures implement the kernel as a single program that runs the operating system services in the kernel's address space:

◉ Monolithic.

○ Layered structure.

In both multitasking and multiprogramming systems, the CPU is kept busy as long as there are active jobs in the system.

☑ True.

◯ False.

A device controller catches an interrupt by sending a signal to the CPU via the system bus.

◯ True.

◯ False.

**Designing a program using an API is beneficial because:**

◯ The program will compile and run on any system that supports the same API.

◯ Actual system calls can often be more detailed and difficult to work with than the API.

◯ Both A and B.

◯ None of the above.

◯ Option 5

Which of the following storage devices is considered a solid-state device (no moving parts):

- ○ Hard disk drive.
- ○ Optical disk.
- ✅ Flash memory.
- ○ Magnetic tapes.

In what way is an operating system similar to an organization's manager?

- ○ It rarely operates correctly
- ✅ It creates an environment within which other programs can do useful work.
- ○ It performs most useful functions by itself
- ○ It is always concerned primarily with the individual's needs