CSPB 3753 - Fall 2024 - Knox - Operating Systems

Started on	Monday, 30 September 2024, 7:03 PM
State	Finished
Completed on	Monday, 30 September 2024, 7:10 PM
Time taken	6 mins 33 secs
Grade	**10** out of 10 (**100**%)

Question **1**

Correct

Mark 1 out of 1

To start an I/O operation, a device driver loads the appropriate registers within the _____.

Select one:

- ○ a. Kernel
- ○ b. GPU
- ○ c. System Bus
- ○ d. Secondary storage
- ○ e. Main Memory
- ◉ f. Device controller   ✔
- ○ g. CPU

Your answer is correct.

Question **2**

Correct

Mark 1 out of 1

A keyboard is a ___ while a USB drive is a ____.

Select one:

○ a. block device, block device

○ b. character device, character device

◉ c. character device, block device   ✔

○ d. block device, character device

> Your answer is correct.

Question **3**

Correct

Mark 1 out of 1

The Kernel identifies a driver with a _____.

Select one:

○ a. Device file

○ b. Minor number

○ c. Module

◉ d. Major number   ✔

> Your answer is correct.

Question **4**

Correct

Mark 1 out of 1

In interrupt-driven I\O, _____ raises an interrupt by asserting a signal on the interrupt request line.

Select one:

○ device controller ✔

○ device driver

○ user

○ a process

Your answer is correct.

Question **5**

Correct

Mark 1 out of 1

_____ I/O is the most efficient method, when the device rarely needs to be serviced.

Select one:

○ a. Polling

○ b. Disconnected

○ c. Interrupt driven ✔

○ d. Volatile

Your answer is correct.

Question **6**

Correct

Mark 1 out of 1

Concurrency is:

Select one:

○ a. scheduling of multiple CPUs

⦿ b. interleaving of processes to simulate parallelism   ✔

○ c. parallel execution of tasks

○ d. device driver method of communication

Your answer is correct.

Question **7**

Correct

Mark 1 out of 1

Who initiates a DMA transfer?

Select one:

○ a. Process being executed

○ b. CPU

⦿ c. I/O devices   ✔

○ d. Operating System

Your answer is correct.

Question **8**

Correct

Mark 1 out of 1

Which of the following is FALSE about DMA?

Select one:

○ a. The purpose of DMA is to free up the CPU during expensive I/O transfers

○ b. DMA sends an interrupt to the CPU when it is finished

○ c. DMA is made possible through specialized hardware

⊙ d. If DMA hardware is present for I/O transfers, it will always invoke itself to do any I/O transfer ✔

Your answer is correct.

Question **9**

Correct

Mark 1 out of 1

Which of the following is an advantage of LKMs.

Select one:

○ a. If the LKM has an error, it requires a total recompile of the kernel.

○ b. Unused LKMs are a waste of memory since they are loaded at launch.

○ c. LKMs do not require kernel mode access.

⊙ d. Functionality may be added or removed from the kernel without a reboot. ✔

Your answer is correct.

Question **10**

Correct

Mark 1 out of 1

(SELECT ALL THAT APPLY question, no partial credit, all or nothing)

Two device files may have...

☑
a. Different major numbers and the same minor number.

✔

☑
b. The same major number with different minor numbers.

✔

☑
c. Different major and different minor numbers.

✔

☐
d. The same major and the same minor number.

> Your answer is correct.