Russell Andlauer

Assignment #11

8.1, 8.2, 8.5, 8.6, 8.9, 8.10, 8.11

8.1)

a) What is a device register?

An I/O device will usually have at least 2 device registers. These registers communicate the status of the device and the data that is transferred between the device and the computer.

b) What is a device data register?

A device data register contains the data that is transferred between the computer and the device.

c) What is a device status register?

The device status register communicates to the computer status information about the device such as if is available for use or the device is still processing an I/O task.

8.2)

Why is a Ready bit not needed if synchronous I/O is used?

8.5)

What is the purpose of bit [15] in the KBSR?

8.6)

What problem could occur if a program does not check the Ready bit of the KBSR before reading the KBDR?

8.9)

What problem is likely to occur if the keyboard hardware does not check the KBSR before writing to the KBDR?

8.10)

What problem could occur if the display hardware does not check the DSR before writing to the DDR?

8.11)

Which is more efficient, interrupt-driven I/O or polling? Explain.