1. Programmed i/o is usually used with keyboards as its slower to input due to a full fetch execute cycle. It is also uses the address of the device to get the input of the keyboard reputably, as well as being the main used type for controllers

2.

B executes, a interrupts, a is suspended, b executes, c interrupts, b is suspended, c is executed, c finishes, b interrupts, b executes, b finished, a interrupts, a executes.

3. If interrupt b has the higher priority, the program would finish executing b before running c, then a would run last after c has finished.

4. The CPU interrupts the disk Controller asking for information. The disk controller then interrupts the memory to pass over the data, then interrupts the CPU to say the job is completed.

5. after an interrupt occurs, the CPU will decide whether to continue with the current job or execute the interrupt. If the interrupt is less important or before the current job is finished (depending on which way the CPU is programmed) it will suspend the interrupt until the current job is finished, otherwise It will suspend the current job and work on the new one.

7. programmed i/o is used to find out how the CPU needs to use the data. For example; it can be used to find a certain file on a hard drive, or be used to decide whether the CPU needs to read the file or add to the information on file.

8. The cpu could be stopped from running a program that is going to modify the locations and data within this transfer. This could be done by moving this job down until the memory transfer is complete.

9. polling searches the interrupts for the input device then starts the routine from there. The upside of this is that it saves hardware on the machine. The downside is it may take longer to process, as all devices on the machine need to be interrupted to find the problem.

10. DMA allows for a larger amount of data to be sent and received from CPU to i/o device, and also allows for the CPU to do other jobs while the data is being transferred to the memory, making a lot of processes faster.