**Tutorial 6:** WRES1201 – Computer System Architecture

1. In what circumstances that a modem can become an I/O device?

network interface card

1. List all the factors that may affect the performance of an I/O of a system.

I/O technique

Bus System

1. List and explain briefly the principle of I/O techniques.

slide 12.. Programmed I/O, Interrupt-driven I/O, Direct memory access

1. What is the difference between memory-mapped I/O and isolated I/O?

slide 17 - sharing memory location for memory-mapped I/O

not shring memory location isolated I/O

1. When a device interrupt occurs, how does the processor determine which device issued the interrupt?

multiple interrupt lines - not ideal to connect many device on one line

software polling

daisy chain

bus arbitration (bus master) - i/o device must own the bus first

1. When a DMA module takes control of a bus, and while it retains control of the bus what does the processor do?

advantage of dma - microprocessor dont have to wait, save the transfer time, can straight away send data to memory