**Tutorial 8:** 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.

* Programmed I/O
* Interrupt I/O
* DMA

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

Sharing and not sharing memory location between processor and I/O

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

Four general categories of techniques are in common use: multiple interrupt lines; software poll; daisy chain (hardware poll, vectored); bus arbitration (vectored).

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

The processor pauses for each bus cycle stolen by the DMA module.