**CG1112 Engineering Principles and Practices II for CEG**

**Week 5 Tutorial Part 2 – Interrupts**

Question 1.

What are hardware interrupts? Why are they needed? Give some examples of hardware interrupts in your laptop or PC.

Similarly, what are software interrupts? Give some examples of how software interrupts can be used.

Question 2.

What interrupt request lines are available on the Atmega328P? Describe these lines and how they are used.

Question 3.

Discuss how hardware interrupts are implemented. In particular, talk about how hardware interrupts are detected, how the CPU/MCU decides with ISR to run, how control is handed over to the ISR, and how execution resumes normally after the ISR has completed execution.