

Pre-lab:

Q1) Program memory: stores the program in the form of instructions
Data Memory: stores the data that is operated on by the program

Q2) MPU: contains cpu, optimised for external data manipulation & storage
MCU: less complex than MPU, optimised for use when little external devices are connected to it

Q3) CISC (Complex Instruction Set Computing):

- Variable commands, bit sizes & multiple clocks
- Aim is to simplify the program (hardware more complex)

RISC (Reduced Instruction Set Computing):

- simple instructions
- Aim is to simplify hardware structure

Q4) Hardware Model: focus on hardware characteristics (understanding physical capabilities & external input/interaction)

Software Model: focus on instruction set & syntax

Q5) main purpose of ALU is to do arithmetic operations, as well as logic operations

Q6) Infinite loops are very resource intensive & consume a lot of power

Q7) using interrupts, which interrupt the operation of the program for sometime then resume operations when a particular flag is set

Q8) to do complex operations & manipulate data

Q9) the resources allocated for a particular program

Q10) ".c" files are implementations of functions declared in ".h" files

Q11) to have more control of the CPU while avoiding as much overhead as possible.

Rubric for Laboratory Notes 1: Familiarisation with an IDE

Date and Session Time: _____

Names and ID Numbers: _____

(Please do not forget to write your student ID number, including your laboratory partner(s))

Tasks	Progress Completion Assessment Criteria – Demonstrator(s) Academic Judgement					Demonstrator(s)/Group Initials/Sign
	0%–20%	20%–40%	40%–60%	60%–80%	80%–100%	
Pre-Laboratory (Logbook Notes/Answers/Explain Code) 1 (Tick)						/30
Laboratory Session Demonstration/Progress 2 (Tick)						/70
Mark						/100