**Use of programming techniques [6 Marks]:**

* Reasonable attempt at all 3 task.
* all 3 tasks solutions must work.

**Efficient use of programming techniques [12 Marks]:**

* Working solutions for all 3 tasks, and must be reasonably efficient.
* For full marks there should be NO obvious inefficiencies in the code.

**Design [9 Marks]:**

* Detailed analysis of the problem including and validation
* Detailed algorithm describing the solution
* Suitable success criteria
* A test strategy with suitable test data identified for use during development
* There must be a complete design for all 3 tasks.
* The design must be capable of being given to another programmer to complete the task and expect similar solutions without further analysis and design.

**Development [9 Marks]:**

* Systematic testing during development
* There must be annotated code
* Meaningful variable names
* Explained code indicating the function of each section
* Clear evidence of iterative development for all 3 tasks.
* Fully explained code and evidence of testing, at various key stages. With remedial actions fully documented.
* Evidence of development

**Testing [9 Marks]:**

* Clear evidence of testing during development fully explained, and linked to success criteria and test strategy.
* Testing must be extensive and clearly attempted to find flaws in the solution.
* The evaluation will link the test evidence and success criteria to evaluate how well the solution matches the requirements.