**Mark Scheme**

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| --- | --- | --- |
| Technical Solution | Completeness of solution | -/15 |
| Techniques Used | -/27 |
| Total | -/42 |
| Documented Design | | -/12 |
| Analysis | | -/9 |
| Total | | -/63 |

**Technical Solution**

Completeness of solution (15 marks)

| **level** | **Mark Range** | **Description** |
| --- | --- | --- |
| 3 | 11-15 | A system that meets almost all of the requirements of a solution/an investigation (ignoring any requirements that go beyond the demands of A-level). |
| 2 | 6-10 | A system that achieves many of the requirements but not all. The marks at the top end of the band are for systems that include some of the most important requirements. |
| 1 | 1-5 | A system that tackles some aspects of the problem or investigation. |

Techniques Used (27 marks)

| **level** | **Mark Range** | **Description** |
| --- | --- | --- |
| 3 | 19-27 | The techniques used are appropriate and demonstrate a level of technical skill equivalent to those listed in Group A in Table 1. Program(s) demonstrate(s) that the skill required for this level has been applied sufficiently to demonstrate proficiency. |
| 2 | 10-18 | The techniques used are appropriate and demonstrate a level of technical skill equivalent to those listed in Group B in Table 1. Program(s) demonstrate(s) that the skill required for this level has been applied sufficiently to demonstrate proficiency. |
| 1 | 1-9 | The techniques used demonstrate a level of technical skill equivalent to those listed in Group C in Table 1. Program(s) demonstrate(s) that the skill required for this level has been applied sufficiently to demonstrate proficiency. |

**Documented Design**

| **level** | **Mark Range** | **Description** |
| --- | --- | --- |
| 4 | 10-12 | Fully or nearly fully articulated design for a real problem, that describes how all or almost all of the key aspects of the solution/investigation are to be structured/are structured. |
| 3 | 7-9 | Adequately articulated design for a real problem that describes how most of the key aspects of the solution/investigation are to be structured/are structured. |
| 2 | 4-6 | Partially articulated design for a real problem that describes how some aspects of the solution/investigation are to be structured/are structured. |
| 1 | 1-3 | Inadequate articulation of the design of the solution so that it is difficult to obtain a picture of how the solution/investigation is to be structured/is structured without resorting to looking directly at the programmed solution. |

**Analysis**

| **level** | **Mark Range** | **Description** |
| --- | --- | --- |
| 3 | 7-9 | Fully or nearly fully scoped analysis of a real problem, presented in a way that a third party can understand. Requirements fully documented in a set of measurable and appropriate specific objectives, covering all required functionality of the solution or areas of investigation. Requirements arrived at by considering, through dialogue, the needs of the intended users of the system, or recipients of the outcomes for investigative projects. Problem sufficiently well modelled to be of use in subsequent stages. |
| 2 | 4-6 | Well scoped analysis (but with some omissions that are not serious enough to undermine later design) of a real problem. Most, but not all, requirements documented in a set of, in the main, measurable and appropriate specific objectives that cover most of the required functionality of a solution or areas of investigation. Requirements arrived at, in the main, by considering, through dialogue, the needs of the intended users of the system, or recipients of the outcomes for investigative projects. Problem sufficiently well modelled to be of use in subsequent stages. |
| 1 | 1-3 | Partly scoped analysis of a problem. Requirements partly documented in a set of specific objectives, not all of which are measurable or appropriate for developing a solution. The required functionality or areas of investigation are only partly addressed. Some attempt to consider, through dialogue, the needs of the intended users of the system, or recipients of the outcomes for investigative projects. Problem partly modelled and of some use in subsequent stages. |