1. **SPREADSHEETS – 20 MARKS**

| **Processes** | Key Skills | **Mark Allocation** | **Mark Allocated** |
| --- | --- | --- | --- |
| The effectiveness with which students use pre-defined systems functions to form arithmetic, logical and relation expressions. | * Demonstrating awareness of the existence of appropriate formulae * Use of appropriate formulae to solve numeric problems * Replicating formulae * Use of range names, relative and absolute addressing formats | **1**  **2**  **1**  **2**  **(6)** |  |
| The effectiveness with which students manipulate the spreadsheet. | * Copying data * Moving data * Use of formatting features to allow clarity of display * Inserting page breaks appropriately * Deleting and inserting rows such that formulae remain unaffected | **2**  **(2)** |  |
| The effectiveness with which students use the search and sorting facilities. | * Setting up primary and secondary key fields | **1**  **(1)** |  |
| The effectiveness with which students perform graphic operations to present information. | * Creating appropriate charts to represent data   + bar, pie, line, from spreadsheet data * Labelling charts appropriately * Comparing different series of data on a single bar chart or line graph | **3**  **1**  **1**  **(5)** |  |
| The effectiveness with which students use spreadsheets to solve specific problems. | * Conceptualizing a solution using the spreadsheet   + select appropriate column and row labels   + layout spreadsheet to permit easy additions and deletions   + use constants in cells, instead of placing values directly in formula * Organizing spreadsheet so that data can easily be interpreted * Extracting data to allow summary information | **1**  **1**  **1**  **1**  **2**  **(6)** |  |

1. **DATABASE MANAGEMENT – 20 MARKS**

| **Processes** | **Key Skills** | **Mark Allocation** | **Mark Allocated** |
| --- | --- | --- | --- |
| The effectiveness with which students use facilities in creating and modifying database. | * Defining fields and selecting appropriate data types to create tables * Identifying appropriate primary keys * Adding/deleting/sorting/ modifying records or tuples * Deleting fields and changing field definitions | 3  1  2  1  **(7)** |  |
| The effectiveness with which students use the query facility. | * Searching database   + use three tables, two tables one table in queries to generate new tables   + use multiple conditions * Producing calculated fields | 3  2  2  **(7)** |  |
| The effectiveness with which student use report generating facilities. | * Generating report on specified fields * Grouping on fields * Sorting on fields * Using summary features, for example, count and sum | 2  1  1  2  **(6)** |  |

1. **WORDPROCESSING - 20 MARKS**

|  |  |  |  |
| --- | --- | --- | --- |
| **Processes** | **Key Skills** | **Mark Allocation** | **Mark Allocated** |
| The effectiveness with which the student uses formatting facilities to create and enhance the document. | * Formatting for presentation   + justification   + single and double line spacing   + paragraph styling (indent, hanging, block) * Formatting for emphasis   + bold   + italics   + borders and shading to highlight and give emphasis   + font and point size * Other features   + use of spell checker/search and replace/grammar check   + search and replace | **2**  **2**  **1**  **(5)** |  |
| The effectiveness with which students use formatting facilities to present information. | * Page Layout   + set margins   + change page orientations   + change paper size   + text orientation * Headers/footers/endnotes * Tables | **2**  **1**  **2**  **(5)** |  |
| The effectiveness with which students use facilities to create flyers or brochures. | * Multiple page/book fold/columns * Use of graphics * Clarity of itemization   + insert/delete (word, sentence,   paragraph document)   * + block operations - move/copy/cut and paste | **2**  **1**  **1**  **1**  **(5)** |  |
| The effectiveness with which students use facilities to perform mail merge. | * Defining appropriate fields in the document * Creating primary document * Creating secondary document appropriately * Performing the mail merge | **1**  **1**  **1**  **2**  **(5)** |  |

1. **PROBLEM SOLVING AND PROGRAMMING – 30 MARKS**
   1. **ALGORITHM DEVELOPMENT – 10 MARKS**

|  |  |  |  |
| --- | --- | --- | --- |
| **Processes** | **Key Skills** | **Mark Allocation** | **Mark Allocated** |
| Problem statement that defines the problem. | * Problem is clearly defined | 1  **(1)** |  |
| Representing the solution in flowchart or pseudocode. | * Start of solution * Definition of variables   + identify variables   + initialize variables * Processing   + request for data   + storing data   + appropriate and logical use of control structures:   selection statements;  looping constructs   * + output results * End of solution | 1  1  1  1  2  2  1  **(9)** |  |

* 1. **TRACE TABLE DEVELOPMENT – 5 MARKS**

|  |  |  |  |
| --- | --- | --- | --- |
| **Processes** | **Key Skills** | **Mark Allocation** | **Mark Allocated** |
| Constructing the trace table. | * ALL variables correctly identified and used * Appropriate test data * Data set complete   + data set test ALL areas for robustness   + [data set test SOME areas] * Change in values correctly demonstrated | 1  1  2  [1]  1  **(5)** |  |

* 1. **PROGRAMME WORKING TO SPECIFICATION – 15 MARKS**

| **Processes** | **Key Skills** | **Mark Allocation** | **Mark Allocated** |
| --- | --- | --- | --- |
| The effectiveness with which the program achieved the objective. | * Program compiled (1) * Output (2) * output is correct for ALL values in teacher’s data set   [Output is correct for SOME values in the teacher’s data set] | 1  2  [1]  **(3)** |  |
| The effectiveness with which the language features are used to achieve a working solution. | * Appropriate use of features of the language (2) * appropriate choice of data types for ALL variables   [appropriate choice of data types for SOME variables]   * Appropriate use of control structures (7) * appropriate initialization of variables * appropriate use of sequence * appropriate use of if then else construct   [inefficient use of if then construct] | 2  [1]  1  1  2  [1] |  |
| The effectiveness with which the language features are used to achieve a working solution. (cont’d) | * appropriate use of looping construct to manipulate arrays and perform other tasks   [inefficient *or inappropriate* use of loop construct] | 3  [1]  **(9)** |  |
| The effectiveness with which the language features are used to achieve clarity. | * Clarity of program (3) * program documentation through variable names; author of program; date created; simple statement of task program solves * readability (correctly indented; logical flow of control; easy to follow ;) * user-friendly. | 1  1  1  **(3)** |  |

**REQUIREMENTS OF SBA PROJECT DOCUMENTATION**

1. **Problem-solving and Program Implementation Component**

|  |  |
| --- | --- |
| **Requirements** | **Guidelines** |
| Cover sheet | The information supplied here is essential since it is used to associate the submission with a particular candidate. |
| Table of contents | Provides easy reference when evaluating the project. |
| Problem definition | This section provides a clear statement of the problem.  Students are also expected to draw flowcharts. |
| Program listing and output | This section is essential for assessing whether the component submitted is correct and complete. In addition, this section is used to evaluate the internal documentation. Candidates must demonstrate that they can select the appropriate features of the language to obtain the solution to the problem. |
| Test data (if applicable) | In situations where output is relevant, candidates are required to supply the test data that produced the output. This information would be necessary to determine whether the tasks have been performed correctly. |

1. **Word processing**

* This assignment should consist of the formatting, importing and/or documentation of results to be included in **no more than two word processed documents**.
* **One document must be a letter for mass mailing**. The other may be chosen from but not limited to reports, faxes, simple brochures, flyers and newspaper articles.

### Spreadsheet

This assignment should be limited to:

* + A maximum of THREE major tasks consisting of no more than THREE requirements;
  + The creation of no more than TWOcharts.

### Database Management

The tasks in this assignment should be limited to no more than:

* + THREE tables or files;
  + FOUR queries;
  + TWO calculations within queries;
  + ONE report, with grouping and sorting involving TWO or THREE tables.