* **Marking Scheme (Part 1 and Part 2)**
* **Test Plan for Part 1 (Histogram)**

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| **TEST PLAN – 1. Histogram Assessment** | | | | | **Tutor to Complete at Viva** | | |
| **Marks** | **Test Cases** | **Maximum Marks (includes test case)** |
|  | **Test**  **No.** | **Test Data**  (Input) | **Expected Result**  (Output) | **Student to complete:**  **Pass, Fail or Not Attempted** |
| Part A **-** Basic Program | 1 | 0, 29  30, 39  40, 69  70, 100  (& -1) | Histogram Displayed: | | (16) | Test case correct for each category & total students (5) | /21 |
| 0-29 \*\* | Pass  Pass  Pass  Pass |
| 30-39 \*\* |
| 40-69 \*\* |
| 70-100 \*\* |
| 8 students in total |
| Part B - Statistics | 2 | 20, 50, 55, 80, 70  (& -1) | a) Average: 55 | Pass | (4) | Test case correct for a, b, c, d (4) | /8 |
| 3 | b) Pass: 4 | Pass |
| 4 | c) Highest mark: 80 | Pass |
| 5 | d) Lowest mark : 20 | Pass |
| Part C - Validation | 6 | A  101 | Error message  Error message | Pass  Pass | (2)  (2) | Test case correct (2) | /6 |
| Part D - Vertical Histogram | 7 | 0, 29  30, 39  40, 69  70, 100  (& -1) | Vertical Histogram displayed: | | (6) | Test case  correct for each category (4) | /10 |
| 0-29 30-39 40-69 70-100  \* \* \* \*  \* \* \* \* | Pass |
| Flowchart diagram (10)  Viva (Part 1)  Programming style & acceptable referencing | | | | | | (10)  (8) | /18 |
| Total (Part 1 – Histogram) | | | | | | /63 | |
| **Tutor to Complete at Viva** | | | | | | | |
| **Part 2 - Assignment (Encoding / Decoding Strings)** | | | | | |  | 37 |
| Part A: Program accepts a message, key (1 to 25). Encodes lower case characters. | | | | | | 12 |  |
| Part B: (Optional) Menu. Decrypts using encrypted message and key | | | | | | 6 |
| Part C: (Extension) Menu. Decrypts message with word from decoded string. | | | | | | 6 |
| User-defined functions | | | | | | 6 |  |
| Viva (Part 2)  Programming style & acceptable referencing | | | | | | 7 |  |