VCE ALGORITHMICS (HESS) Rubric for School-assessed Coursework performance descriptors Unit 3 Outcome 3

Performance descriptors provide holistic statements of achievement developed from the outcome statement and its key knowledge and skills, as specified in the study design. These will be used by teachers in making judgments about the student’s level of performance. There are five levels of performance and each level corresponds to a mark range.

| **VCE ALGORITHMICS (HESS)****SCHOOL-ASSESSED COURSEWORK – UNIT 3, OUTCOME 3** |
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| **PERFORMANCE DESCRIPTORS** |
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| DESCRIPTOR: typical performance in each range |
|  | Mark Range | **Very Low** | **Low** | **Medium** | **High** | **Very High** |
| ***Unit 3.******Outcome 3*****Evaluate, test and document algorithms and data representations, and solve real-world problems whose solution requires the integration of multiple algorithms and data types.** | 1 - 100 | Outlines testing methods possibly without distinguishing between white- and black-box methodologies and with minor errors.  | Describes the purpose of testing methodology with reference to white- and black-box methodologies possibly with minor errors | Describes the purpose of white- and black-box testing methodologies and describes accurately some of the differences between them. | Describes the purpose of white- and black-box testing methodologies and explains most of the differences between them. | Precisely describes the purpose of white- and black-box testing methodologies and clearly differentiates the differences between them. |
| Outlines a testing methodology’s approach, with minor errors. | Describes some of the main approaches within white- and black- box testing, with minor errors. | Describes accurately some of the main approaches within white- and black-box testing. | Describes accurately most of the main approaches within white- and black-box testing. | Comprehensively describes the main approaches within white- and black-box testing.  |
| Outlines a technique used for test data generation (black-box testing) or coverage (white box). | Describes a technique used for test data generation (black-box testing) or coverage (white box). | Describes some of the techniques used to generate test data, values and cases for black-box testing and describes both branch and path coverage (white box). | Describes most of the techniques used to generate test data, values and cases for black-box testing and describes both branch and path coverage (white box)  | Fully describes the techniques used to generate test data, values and cases for black-box testing and describes both branch and path coverage (white box). |
| Describes a particular ADT and algorithm combination used in a solution to a real-world problem and provides limited reasons for choices.  | Provides some justification, based on some systematic and unsystematic testing, for why a particular ADT and algorithm combination represents the best solution to a real-world problem.  | Provides justification, based on some systematic testing, for why a particular ADT and algorithm combination represents the best solution to a real-world problem.  | Provides justification, based on systematic testing, for why a particular ADT and algorithm combination represents the best solution to a real-world problem.  | Provides comprehensive and well-argued justification, based on systematic testing, for why a particular ADT and algorithm combination represents the best solution to a real-world problem.  |
| Outlines the design of algorithms with limited reference to modularisation, functions and efficiency. | Communicates the design of algorithms with some reference to modularisation, functions and efficiency. | Communicates the design of algorithms with reference to modularisation, functions and efficiency. | Clearly communicates the design of algorithms with sound reference to modularisation, functions and efficiency. | Clearly and comprehensively communicates the design of algorithms with extensive reference to modularisation, functions and efficiency. |
| Provides a limited description of some criteria for demonstrating the correctness of solutions. | Describes some criteria for determining the correctness of solutions. | Describes most of the criteria for determining the adequacy and correctness of solutions. | Describes the criteria for determining the adequacy and correctness of solutions. | Comprehensively describes criteria for determining the adequacy and correctness of solutions. |
| Communicates little of the meaning of a computed solution in terms of the real-world problem to which it has been applied. | Communicates some of the meaning of a computed solution in terms of the real-world problem to which it has been applied. | Communicates most of the meaning of a computed solution in terms of the real-world problem to which it has been applied. | Clearly communicates the meaning of a computed solution in terms of the real-world problem to which it has been applied. | Clearly communicates the meaning and all the implications of a computed solution in terms of the real-world problem to which it has been applied. |

KEY to marking scale based on the Outcome contributing 100 marks

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| Very Low 1-19 Low 20-39 Medium 40-59 High 60-79 Very High 80-100 |