Unit 4: Modelling or problem-solving task – Sample assessment record Matrices Networks and decision mathematics

**Outcome 1 (5 marks)** *Define and explain key concepts as specified in the content for the**area of study,**and apply a range of related mathematical routines and procedures to solve practical problems from a range of everyday and real-life contexts.*

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| **Criterion** | **Marks** | **1** | **2** | **3** | **4** | **5** |
| Appropriate use of mathematical conventions, symbols and terminology | |  |  |  |  |  |
| Definition and explanation of key concepts | |  |  |  |  |  |
| Accurate use of mathematical skills and techniques | |  |  |  |  |  |
|  | | **Outcome 1 Total** | | |  | |

**Outcome 2 (10 marks)** *Apply mathematical processes in non-routine practical contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics.*

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| **Criterion** | **Marks** | **1** | **2** | **3** | **4** | **5** |
| Identification of important information, variables and constraints | |  |  |  |  |  |
| Application of mathematical ideas and content from the specified areas of study | |  |  |  |  |  |
| Analysis and interpretation of results | |  |  |  |  |  |
|  | | **Outcome 2 Total** | | |  | |

**Outcome 3 (5 marks)** *Apply computational thinking; use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in practical situations requiring investigative, modelling or problem-solving techniques or approaches.*

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| **Criterion** | **Marks** | **1** | **2** | **3** | **4** | **5** |
| Appropriate selection and systematic use of technology | |  |  |  |  |  |
| Application of technology | |  |  |  |  |  |
|  | | **Outcome 3 Total** | | |  | |
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|  | | **Task Total** | | |  | |

**Unit 4: Modelling or problem-solving task – pointers for assessment**

**Topic (Select one): Matrices Networks and decision mathematics**

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| Outcome 1  Define and explain key concepts as specified in the content for thearea of study,and apply a range of related mathematical routines and procedures to solve practical problems from a range of everyday and real-life contexts. | |
| Appropriate use of mathematical conventions, symbols and terminology | |
| Application of mathematical ideas and content from the specified areas of study | |
| Accurate use of mathematical skills and techniques | |
| Outcome 2  Apply mathematical processes in non-routine practical contexts, including situations with some open-ended aspects requiring investigative, modelling or problem-solving techniques or approaches, and analyse and discuss these applications of mathematics. |
| Identification of important information, variables and constraints |
| Definition and explanation of key concepts |
| Analysis and interpretation of results |

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| Outcome 3  Apply computational thinking; use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in practical situations requiring investigative, modelling or problem-solving techniques or approaches. |
| Appropriate selection and systematic use of technology |
| Appropriate selection and systematic use of technology |