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 1Define 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  |