OFFICE OF TASMANIAN ASSESSMENT, STANDARDS & CERTIFICATION

External Assessment 2021

MATHEMATICS METHODS

MTM415117

Part **1**

Pages	24
Questions	18
Information Sheet	1

Reading time: 15 minutes – you may begin writing during this time

Suggested working time: 80 minutes

Instructions

Calculators are not allowed to be used.
Part 1 will be collected after 80 minutes.

- There are **five (5)** sections to this exam paper.

- Answer **all** questions and **all** parts within each question.

- Write your answers in the spaces provided in this exam paper.

  - Spare diagrams have been provided at the end of each section.
    Indicate in the box provided if you have used the spare diagram.

- During the first 80 minutes you may move onto Part 2, but you **cannot** use your calculator until told by your Supervisor(s).

- All answers must be written in **English**.

- You **must** make sure your answers address:

  - Criterion 4   understand polynomial, hyperbolic, exponential and logarithmic functions.

  - Criterion 5   understand circular functions.

  - Criterion 6   use differential calculus in the study of functions.

  - Criterion 7   use integral calculus in the study of functions.

  - Criterion 8   understand binomial and normal probability distributions and statistical inference.

Marker use	
C4	**16**
C5	**16**
C6	**16**
C7	**16**
C8	**16**

Additional Exam Instructions

For questions worth **one (1)** mark, you are not required to show workings. Markers will look at the presentation of the answer(s) and at the argument(s) leading to the final answer(s).

For questions worth **two (2)** or more marks **you are required** to show relevant workings.

Marks will be allocated:

- according to the degree to which workings convey a logical line of reasoning

- for suitable justifications and explanations of methods and processes when requested.

Guide to Exam Structure

<table>
<tr><th colspan="2"></th><th>Sections</th><th>Questions available</th><th>How many questions to answer</th><th>Suggested working time</th><th>Marks available</th></tr>
<tr><td rowspan="5">Part</td><td rowspan="5">1</td><td>Section A</td><td>4</td><td>4</td><td>16 minutes</td><td>16</td></tr>
<tr><td>Section B</td><td>3</td><td>3</td><td>16 minutes</td><td>16</td></tr>
<tr><td>Section C</td><td>4</td><td>4</td><td>16 minutes</td><td>16</td></tr>
<tr><td>Section D</td><td>3</td><td>3</td><td>16 minutes</td><td>16</td></tr>
<tr><td>Section E</td><td>4</td><td>4</td><td>16 minutes</td><td>16</td></tr>
<tr><td colspan="2">Total</td><td></td><td>**18**</td><td>**18**</td><td>**80 minutes**</td><td>**80**</td></tr>
<tr><td rowspan="5">Part</td><td rowspan="5">2</td><td>Section A</td><td>4</td><td>4</td><td>20 minutes</td><td>20</td></tr>
<tr><td>Section B</td><td>4</td><td>4</td><td>20 minutes</td><td>20</td></tr>
<tr><td>Section C</td><td>5</td><td>5</td><td>20 minutes</td><td>20</td></tr>
<tr><td>Section D</td><td>5</td><td>5</td><td>20 minutes</td><td>20</td></tr>
<tr><td>Section E</td><td>4</td><td>4</td><td>20 minutes</td><td>20</td></tr>
<tr><td colspan="2">Total</td><td></td><td>22</td><td>22</td><td>100 minutes</td><td>100</td></tr>
<tr><td colspan="2">**Total**</td><td></td><td>**40**</td><td>**40**</td><td>**180 minutes (3 hours)**</td><td>**180**</td></tr>
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OFFICE OF TASMANIAN ASSESSMENT, STANDARDS & CERTIFICATION

External Assessment 2021

MATHEMATICS METHODS

MTM415117

Part 2

Suggested working time: 100 minutes

Instructions

Calculators are allowed to be used for Part 2.

- There are **five (5)** sections to this exam paper.

- Answer **all** questions and **all** parts within each question.

- Write your answers in the spaces provided in this exam paper.

  o Spare diagrams have been provided at the end of each section.
    Indicate in the box provided if you have used the spare diagram.

- During the first 80 minutes you may move onto Part 2, but you **cannot** use your calculator until told by your Supervisor(s).

- All answers must be written in **English**.

- You **must** make sure your answers address:

  o Criterion 4   understand polynomial, hyperbolic, exponential and logarithmic functions.

  o Criterion 5   understand circular functions.

  o Criterion 6   use differential calculus in the study of functions.

  o Criterion 7   use integral calculus in the study of functions.

  o Criterion 8   understand binomial and normal probability distributions and statistical inference.

Marker use	
C4	**20**
C5	**20**
C6	**20**
C7	**20**
C8	**20**

Additional Exam Instructions

For questions worth **one (1)** mark, you are not required to show workings. Markers will look at the presentation of the answer(s) and at the argument(s) leading to the final answer(s).

For questions worth **two (2)** or more marks **you are required** to show relevant workings.

Marks will be allocated:

- according to the degree to which workings convey a logical line of reasoning

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