**MATHEMATICS**

**Calculator-free**

**ATAR course examination 2018**

**Marking Key**

Marking keys are an explicit statement about what the examining panel expect of candidates when they respond to particular examination items. They help ensure a consistent interpretation of the criteria that guide the awarding of marks.

The examining panel provide a provisional marking key. The marking key is refined or modified as necessary in the light of sample marking and discussion between the chief examiner and the chief marker.

**Section One: Calculator-free XX% (XX marks)**

**Question 1 (x marks)**

(a) (i) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(ii) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(b) (i) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(ii) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

**Question 2 (x marks)**

(a) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(b) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(c) (i) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(ii) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(iii) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

**Question 3 (x marks)**

(a) (x mark)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(b) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(c) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(d) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

**Question 4 (x marks)**

(a) (i) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(ii) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(b) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(c) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(d) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

**Question 5** **(x marks)**

(a) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(b) (i) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(ii) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(iii) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

**Question 6** **(x marks)**

(a) (i) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(ii) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(b) (i) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(ii) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(c) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

**Question 7 (x marks)**

(a) (i) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(ii) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(b) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(c) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(d) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

**Question 8 (x marks)**

(a) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(b) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(c) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |

(d) (x marks)

|  |
| --- |
| **Solution** |
|  |
| **Specific behaviours** |
| 🗸  🗸 |