

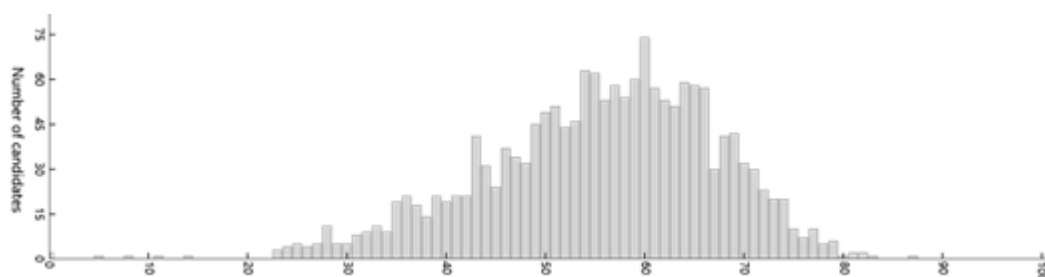


## Summary report of the 2021 ATAR course examination report: Biology

Year	Number who sat	Number of absentees
2021	1716	29
2020	1758	23
2019	1769	21
2018	1835	29

The number of candidates sitting and the number attempting each section of the examination can differ as a result of non-attempts across sections of the examination.

### Examination score distribution–Written



### Summary

The examination paper had three sections. Section One comprised 30 Multiple-choice questions, Section Two comprised five Short answer questions and Section Three comprised two Extended answer questions from Unit 3 and two from Unit 4. Candidates were required to answer all questions in Sections One and Two, and one question from each of Units 3 and 4 in Section Three. The examination was attempted by 1716 candidates and had a mean score of 55.25%. Scores ranged from a maximum of 86.75% to a minimum of 0%.

Attempted by 1716 candidates                      Mean 55.25%                      Max 86.75%    Min 0.00%

Section means were:

Section One: Multiple-choice	Mean 77.82%		
Attempted by 1716 candidates	Mean 23.35(/30)	Max 30.00	Min 0.00
Section Two: Short answer	Mean 50.01%		
Attempted by 1712 candidates	Mean 25.01(/50)	Max 43.00	Min 0.00
Section Three: Extended answer Unit 3	Mean 36.20%		
Attempted by 1696 candidates	Mean 3.62(/10)	Max 9.00	Min 0.00
Section Three: Extended answer Unit 4	Mean 32.80%		
Attempted by 1694 candidates	Mean 3.28(/10)	Max 7.75	Min 0.00

### General comments

Candidates were generally well prepared, and most candidates attempted all questions.

The overall mean score was very similar to that in the 2019 (54.64%) and 2020 (54.86%) examinations. The mean score for Section One was higher with 77.82%, Section Two was

moderate at 50.01%, while the means for Section Three Units 3 and 4 were lower at 36.20% and 32.80%, respectively.

#### *Advice for candidates*

- Use formal and precise language and scientific terminology when answering questions.
- Communicate clearly in your written answers.
- Carefully label diagrams. Lines should point exactly to the structure being labelled.
- Read the question carefully and make sure that you answer the question asked. Be alert to subtle components that require attention.
- Be prepared to apply your knowledge and understanding of topics in a range of contexts.
- Develop an in-depth knowledge of key topics and concepts so that you can provide full responses to short answer and extended answer questions.
- Spend some time planning your responses to extended answer questions so that you do not miss crucial details and/or repeat points.

#### *Advice for teachers*

- Prepare students to answer questions from across the syllabus.
- Help prepare students to apply their knowledge and understanding of topics in a range of contexts by providing a broad range of sample questions.
- Instruct students how to answer questions according to the 'command' verb in the question e.g. state, define, explain, compare, discuss. For example, 'compare' answers should include a systematic evaluation of similarities and differences. 'Discuss' answers should identify issues and provide points for and/or against.
- Give students practise at decoding questions so as to recognise subtle components of questions that require attention.

### **Comments on specific sections and questions**

Candidates typically answered the multiple-choice questions very well but had more difficulty with the short answer, and especially the extended answer questions. On average, candidates performed well in constructing a graph and with factual recall and data interpretation questions. In the Extended answer section, candidates struggled with questions that required them to apply their knowledge, provide in-depth explanations or discuss a topic.

#### **Section One: Multiple-choice (30 Marks)**

Candidates performed very well in this section with a mean score of 77.82%. All candidates attempted every question. The maximum score for this section was 100% and the minimum score was zero. No single question was answered correctly by every candidate.

Six questions (8, 9, 13, 16, 18 and 24) had mean scores of 90% or above. Most of these questions tested factual recall from content in Unit 4. No question had a mean score below 50%. Questions 25 and 22 had the lowest mean scores at 52% and 59%, respectively. Question 25 required candidates to identify that an endotherm uses a higher percentage of its energy to maintain homeostasis than an ectotherm. Question 22 required candidates to deduce phenotypic ratios from a parental cross.

#### **Section Two: Short answer (100 Marks)**

This section was attempted by almost all candidates. The mean score was 50.01% and the mean score per question ranged from 59.15% (Question 33) to 39.4% (Question 32). The

maximum score for this section was 86%, however the maximum scores for individual questions were higher.

**Section Three: Extended answer Unit 3 (20 Marks)**

Most candidates attempted this section. The mean score was low at 36.20%. Slightly more than half (55.60%) of the candidates answered Question 37, which had a higher mean score (41.75% versus 29.4%) and a higher maximum mark (90% versus 75%) than Question 36.

**Section Three: Extended answer Unit 4 (20 Marks)**

Most candidates attempted this section, although the mean score was low at 32.80%. Approximately two thirds of the candidates answered Question 38, which had a lower mean score (28.1% versus 42.25%) and a lower maximum mark (70% versus 77.5%) than Question 39.