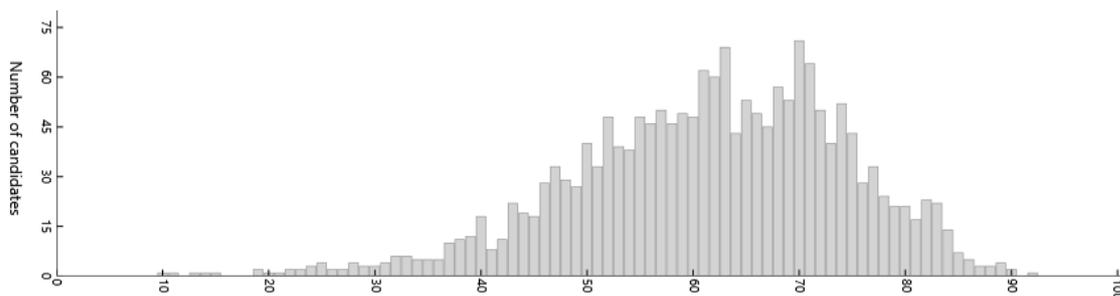




Summary report of the 2018 ATAR course examination: Biology

Year	Number who sat	Number of absentees
2018	1835	29
2017	1810	20
2016	1822	30

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 1835 candidates and had a mean score of 61.37%. Scores ranged from a minimum of 10% to a maximum of 91.75%.

Attempted by 1835 candidates Mean 61.37% Max 91.75% Min 10.00%

Section means were:

Section One: Multiple-choice	Mean 76.63%		
Attempted by 1835 candidates	Mean 22.99(/30)	Max 30.00	Min 10.00
Section Two: Short answer	Mean 57.82%		
Attempted by 1833 candidates	Mean 28.91(/50)	Max 45.25	Min 0.25
Section Three: Extended answer Unit 3	Mean 42.39%		
Attempted by 1796 candidates	Mean 4.24(/10)	Max 10.00	Min 0.00
Section Three: Extended answer Unit 4	Mean 54.14%		
Attempted by 1814 candidates	Mean 5.41(/10)	Max 10.00	Min 0.00

General comments

The majority of candidates were well-prepared and attempted all questions.

The overall mean scores for the 2018 and 2017 examinations were very similar (61.37% versus 61.42% respectively). In 2018 compared to 2017, candidates did slightly better in the multiple-choice section (76.63% versus 71.25%) and the extended answer in Unit 4 (54.14% versus 47.02%) and slightly worse in the short answer section (57.82% versus 60.16%) and the extended answer in Unit 3 (42.39% versus 53.93%). The paper discriminated between candidates and the standard deviations ranged from 11.69% for the multiple-choice questions to 18.20% and 18.28% for the extended answer questions in Units 3 and 4, respectively. It is noted that statistics show that there is difficulty in discriminating between the more able candidates. Perhaps a different way of presenting questions and the related marking key should be investigated in the extended answer section.

Advice for candidates

- Include units with quantitative data (e.g. when reporting data from a graph or table).
- Read the question carefully and make sure that you answer the question asked. Take particular care with the extended answer questions in Section Three which often have subtle components that require attention.
- Use formal and precise language and scientific terminology in answering questions.
- Communicate clearly in your written answers.

Advice for teachers

- Instruct students how to answer questions according to the 'instruction' verb in the question (e.g. state, define, discuss, and explain).
- Give students practice at decoding questions.
- Prepare students to provide coherent answers to extended answer questions in Section Three (e.g. where information is logically organised, connects different points and demonstrates an understanding the key concepts).

Comments on specific sections and questions

Candidates answered the short answer and especially the multiple-choice questions well but had more difficulty with the extended answer questions in Section Three.

Section One: Multiple-choice (30 Marks)

Most candidates performed well in this section (mean score 76.63%). All candidates attempted every question. Although most candidates got most questions correct, no single question was answered correctly by all candidates.

Eight questions (1, 7, 10, 14, 16, 20, 21 and 23) had mean scores of 90% or above. Most of these questions tested factual recall or required candidates to obtain data from a figure but two (16 and 20) required an application of knowledge.

Three questions (3, 6 and 8) had mean scores below 50%. Question three required candidates to distinguish between a scientific observation versus predictions and inferences. Question six required candidates to realise that both fungal and bacterial cells have cell walls. Question eight required candidates to understand that a terrestrial bird will lose most water by breathing.

Questions 14 and 15 required candidates to obtain data from a phylogenetic tree. Candidates performed well in question 14 (mean score of 94%), suggesting that they understood how to interpret such trees. The mean score for question 15 was, however, only 54%. It appears that many candidates did not inspect the tree carefully enough to realise that, while cycads, ginkgoes and conifers formed a single related group of plants, cycads, ginkgoes and mosses did not.

Section Two: Short answer (100 Marks)

This section was attempted by almost all candidates. Although no one candidate got full marks for the entire section (maximum score was 90.5%), at least one candidate achieved full marks for every part of every question. There was also at least one candidate achieving full marks for each of Questions 31, 33 and 35; the maximum scores for Questions 32 and 34 were 95% and 97.5% respectively. The mean scores per question ranged from 66.65% (question 31) to 45.35% (question 32). The mean scores for different parts of the same question tended to vary.

Section Three: Extended answer Unit 3 (20 Marks)

The mean score for the questions in Unit 3 in Section Three of the paper (42.4%) was the lowest for any part of the paper. The number of candidates who attempted this part of the examination was also the lowest, although most (98%) candidates nevertheless made an attempt. Question 37 was less popular than Question 36 and had a lower mean score (38.15% compared to 44.9%).

Section Three: Extended answer Unit 4 (20 Marks)

Overall candidates performed better in Unit 4 (mean score 54.1%) than Unit 3 (mean score 42.3%). Almost all (99%) candidates attempted this part of the examination. Question 38 was more popular than question 39 but had a lower mean score (50.15% compared to 62.2%).