

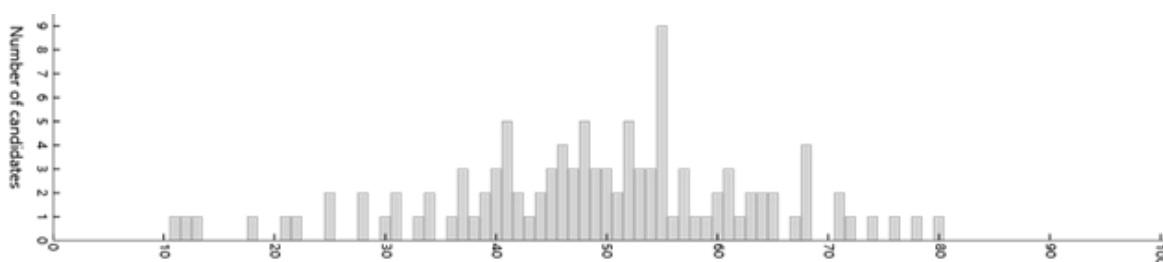


Summary report of the 2023 ATAR course examination report: Earth and Environmental Science

Year	Number who sat	Number of absentees
2023	109	2
2022	140	2
2021	142	1
2020	165	2

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



Summary

The examination consisted of three sections. Section One (Multiple-choice) and Section Two (Short answer) required candidates to complete all questions. In Section Three (Extended answer), candidates were required to answer the compulsory question (Question 25) and one other question (Question 26 or Question 27).

Attempted by 109 candidates Mean 48.74% Max 79.75% Min 10.50%

Section means were:

Section One: Multiple-choice	Mean 66.48%		
Attempted by 109 candidates	Mean 9.97(/15)	Max 15.00	Min 1.00
Section Two: Short answer	Mean 48.07%		
Attempted by 109 candidates	Mean 26.44(/55)	Max 42.50	Min 1.50
Section Three: Extended answer	Mean 41.12%		
Attempted by 107 candidates	Mean 12.33(/30)	Max 26.00	Min 0.00

General comments

The examination presented questions across a wide range of subject matter in the syllabus, offering broad scope for candidates to demonstrate their knowledge. Most candidates attempted all questions, indicating that the examination was of an appropriate length. The individual response patterns largely conformed to those of the last few years, both between sections, with candidates progressively being more challenged through Sections One, Two, and Three, and within individual questions. Higher marks were typically achieved for the early parts of the Short answer and Extended answer sections, with the later parts, designed to elicit synthesis and higher-order thinking, proving a greater challenge thus differentiating the candidates. Most candidates demonstrated good knowledge of syllabus content but struggled when asked to develop extended responses or frame their own arguments aligned to general subject matter understanding. Candidate performance in the construction and completion of figures and diagrams was noted as a point of significant weakness.

Candidates notably performed poorly in the compulsory Extended answer question (Question 25), which had a mean of 33%.

Advice for candidates

- You are expected to demonstrate insight and understanding of the curriculum and relevant skills alongside the recall of specific facts.
- Ensure your answers are well-structured, logical, and supported by real-world examples where appropriate.
- The examination is constructed to accommodate different styles of thinking and expression. Consider the use of annotated illustrations, dot points and tables in presenting an answer, even when such means of expression are not explicitly called for in a question.
- Identification and discussion of real examples can be a valuable element of your response, but only insofar as the example/s are used to demonstrate knowledge and understanding of specific scientific principles or knowledge relevant to the question posed.

Advice for teachers

- Keep in mind that the syllabus for this course is largely geared towards practical insight and understanding of processes as they affect the real world, rather than in-depth knowledge of formal scientific theories.
- Include questions relating to current events with relevance to the curriculum, or be open to the use of such events as illustrative examples in the class.
- Expose students to practice questions that test their ability to construct and interpret representative diagrams as an element of preparation for the examination.
- Case studies and examples do not need to be drawn from a specific geographic region. Use diverse examples in the classroom, where these illuminate the syllabus content in an informative fashion.
- Challenge students to develop answers in greater depth of content, as is required for the extended answer format.

Comments on specific sections and questions

Section One: Multiple-choice (15 Marks)

Overall, candidate performance was good in this section, with a mean mark of 66.48%. Although the section was nominally attempted by all candidates, the minimum mark of 1 (out of 15) suggests some candidates may not have engaged with the question material in a meaningful fashion. The deliberate range of question difficulty implemented in the design of the examination was reflected in the mean marks of individual questions, which ranged from 43% to 98%.

Section Two: Short answer (110 Marks)

Candidates were challenged in this section, with a mean mark of 48.07%. Candidates achieved a mean above 50% on only three questions: Question 20 (greenhouse gases and climate change), Question 21 (renewable and non-renewable energy resources) and Question 23 (construction and interpretation of a graph).

Section Three: Extended answer (30 Marks)

Candidates were required to complete the compulsory question (Question 25), and then choose to answer one of the other two questions in this section. From the two optional questions, approximately 40% of candidates chose to answer Question 26, with the remaining 60% answering Question 27. Performance was similar across the two optional questions.