

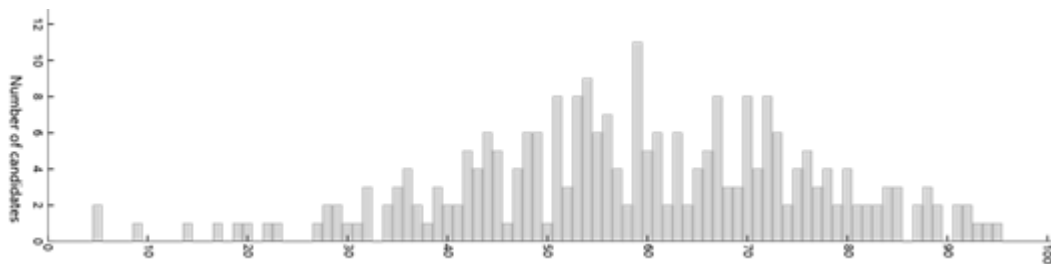


Summary report of the 2021 ATAR course examination report: Engineering Studies

Year	Number who sat	Number of absentees
2021	254	2
2020	228	5
2019	198	3
2018	240	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–Written



Summary

The examination covered a range of syllabus content in both the core and specialist areas, with questions ranging in rigour from straightforward to demanding. This enabled stronger candidates to be identified and all candidates who had applied themselves the opportunity of success at their level.

Attempted by 254 candidates Mean 58.12% Max 94.80% Min 5.19%

Section means were:

Section One: Core content Part A: Multiple-choice

Mean 61.22%

Attempted by 254 candidates Mean 6.12(/10) Max 10.00 Min 0.00

Section One: Core content Part B: Extended answer

Mean 66.59%

Attempted by 254 candidates Mean 19.98(/30) Max 29.61 Min 0.00

Section Two: Mechanical Part A: Multiple-choice

Mean 62.28%

Attempted by 114 candidates Mean 6.23(/10) Max 10.00 Min 2.00

Section Two: Mechanical Part B: Extended answer

Mean 53.30%

Attempted by 113 candidates Mean 26.65(/50) Max 46.67 Min 0.00

Section Two: Mechatronics Part A: Multiple-choice

Mean 59.07%

Attempted by 140 candidates Mean 5.91(/10) Max 10.00 Min 0.00

Section Two: Mechatronics Part B: Extended answer

Mean 50.83%

Attempted by 140 candidates Mean 25.41(/50) Max 48.57 Min 0.00

General comments

The standard of written responses ranged from candidates who provided logical and complete written answers with an engineering focus, to those whose responses were superficial, incorrect, or not attempted. Calculations presented ranged from logical, well set out, and well structured to incorrect or not attempted. Overall, the questions in the paper appeared to be appropriate and well structured.

Advice for candidates

- Read all questions carefully before you attempt to answer them.
- For multiple-choice questions, you need to relate each choice back to the initial statement and use the space next to the question for working if necessary.
- For extended answers, carefully read all information provided before attempting each part of the question.
- In extended answer questions involving calculations, include all relevant equations in your working.
- Your working needs to be set out neatly as this may allow for the awarding of part marks if the final numerical answer is incorrect.
- If you make an error in any answer, make sure you put a line through the working you do not want considered for marking.
- Become familiar with the Data book so that you can find information quickly.
- Use the correct units in both your working and answers.

Advice for teachers

- Familiarise students with the syllabus terminology.
- Familiarise students with drawing symbols specific to engineering studies.
- Advise students to read all questions carefully before attempting them.
- Stress to students the importance of showing all working in their answers to questions requiring calculations and to set their working out in a way that it can be easily followed.
- Encourage students to write neatly in all written response answers.

Comments on specific sections and questions

Section One: Core content Part A: Multiple-choice (10 Marks)

The mean for Section One: Multiple choice was 61.22%. Questions 4 and 5 had the lowest means, suggesting candidates had a poor understanding of the physical properties of materials. Candidates performed well in Questions 1 and 7.

Section One: Core content Part B: Extended answer (77 Marks)

The mean for this section was 61.22%. Question 11 had the lowest mean of 56%. Many candidates had a poor understanding of the correct labelling procedures for drawings. Question 13 had the highest mean of 80%.

Section Two: Mechanical Part A: Multiple-choice (10 Marks)

The mean for this section was 62.28%. Questions 23 had the lowest mean of 22%, followed by Question 17 with 39% and Question 18 with 43%. Candidates performed well in Questions 15 and 24.

Section Two: Mechanical Part B: Extended answer (105 Marks)

The mean for this section was 53.30%. Candidates performed better in Question 26, with a mean of 68% and Question 25, with a mean of 61%. Question 28 generated the lowest mean with 36.26%. A number of candidates did not attempt this question.

Section Two: Mechatronics Part A: Multiple-choice (10 Marks)

The mean for this section was 59.07%. Question 32 had the lowest mean of 47%, followed by Questions 33 and 34 with 49%. Candidates performed well in Questions 31 and 39.

Section Two: Mechatronics Part B: Extended answer (105 Marks)

The overall average of 50.83 for this section was lower than in previous years. Responses that received higher marks reflected a very good understanding of the topics.