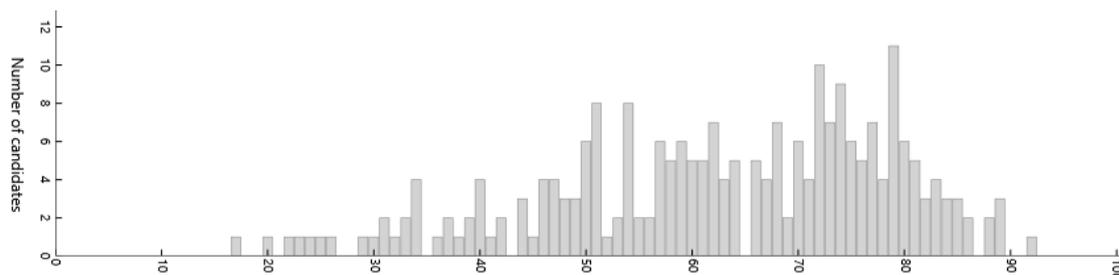




Summary report of the 2018 ATAR course examination: Engineering Studies

Year	Number who sat	Number of absentees
2018	240	2
2017	178	3
2016	232	4

Examination score distribution–Written



Summary

There was a 34.8% increase in the number of candidates who attempted the 2018 examination compared to the previous year, bringing the number of candidates to a similar total in 2016. Of the 240 candidates, 156 (65%) attempted the Mechanical section of the paper and 84 (35%) attempted the Mechatronics. The overall mean for this examination was 62.49%, with the highest score being 90.89% and the lowest being 18.10%.

The section means for this paper were:

Section One:	Overall Mean	64.80%	
Core content Part A: Multiple-choice	Mean 70.21%		
Attempted by 240 candidates	Mean 7.02(/10)	Max 10.00	Min 3.00
Core content Part B: Extended answer	Mean 63%		
Attempted by 240 candidates	Mean 18.90(/30)	Max 27.93	Min 2.59
Section Two:	Overall Mean	58.75%	
Mechanical Part A: Multiple-choice	Mean 68.4%		
Attempted by 156 candidates	Mean 6.84(/10)	Max 10.00	Min 1.00
Section Two: Mechanical Part B: Extended answer	Mean 56.81%		
Attempted by 156 candidates	Mean 28.40(/50)	Max 46.25	Min 2.00
Section Two:	Overall Mean	65.15%	
Mechatronics Part A: Multiple-choice	Mean 66.43%		
Attempted by 84 candidates	Mean 6.64(/10)	Max 10.00	Min 3.00
Section Two: Mechatronics Part B: Extended answer	Mean 64.89%		
Attempted by 84 candidates	Mean 32.45(/50)	Max 47.25	Min 4.00

General comments

The majority of candidates performed well in the core section of the examination. Similar means between the core and the two specialised sections indicates good comparability between sections and therefore suggests a fair examination for all candidates.

Advice for candidates

- For multiple-choice questions, you need to read all choices carefully and use the space next to the question for working if necessary.
- For extended answers you need to read all questions carefully before attempting them.
- Make sure you include all relevant equations and set your working out neatly for questions in the extended answer involving calculations as this allows for marks if the final numerical answer is incorrect.
- If you make an error and redo the calculation make sure you put a line through the working you don't want marked.
- Be familiar with the set-up of the data book so that information can be found quickly.

Advice for teachers

- Encourage students to show 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.

Comments on specific sections and questions

The section and overall means indicate that this was a fair paper regardless of the specialist field selected by candidates.

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

All candidates attempted all questions in this section and results show that most questions were answered well.

Section One: Core content Part B: Extended answer (30 Marks)

Candidates were required to answer all four questions in this section. Some candidates thought that an orthographic drawing of the end view was required for Question 11 whereas the question specifically required candidates to draw an accurately dimensioned pictorial drawing from the end view. Question 12 revealed a lack of knowledge of materials and their application, while question 13 discriminated well with frequent errors in calculating efficiency. Question 14 was answered reasonably well with part (d)(ii) the discriminator.

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

All candidates attempted all questions in this section and results show that most questions were answered correctly.

Section Two: Mechanical Part B: Extended answer (50 Marks)

This section had the lowest mean within the examination of 56.81% with Questions 26 (f), 28 parts (a) and (c), 29 (a) and 30 (b) providing good discrimination between candidates.

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

All candidates attempted all questions in this section and results show that most questions were answered well.

Section Two: Mechatronics Part B: Extended answer (50 Marks)

This section had a mean score of 64.89% and all six questions were reasonably well attempted by candidates. Question 45 was a challenging question with a number of candidates appearing confused by the reference to a motor in the wording of the question.