



External Assessment Report 2013

Subject(s)	Technological Studies
Level(s)	Intermediate 2

The statistics used in this report are pre-appeal.

This report provides information on the performance of candidates which it is hoped will be useful to teachers/lecturers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding. It would be helpful to read this report in conjunction with the published question papers and marking instructions for the Examination.

Comments on candidate performance

General comments

The 2013 Intermediate 2 Question Paper was found to be fair, balanced and accessible.

The full range of marks was awarded in all questions, and feedback from the Markers confirmed that the level of demand of 2013 paper was comparable with previous years.

It was found that the ability of this year's cohort had improved, with a notable rise in the number of upper A level students presented in fourth year. The Markers also suggested that the candidates were generally better prepared, with most questions attempted, and an increase in the number answering all three questions in Section B.

After careful analysis of the performance of this year's Question Paper the decision was taken to maintain the grade boundary cut-off scores. This produced a strong performance across all grades (A – D) and an increase of 7.7% in the number of upper A awards.

Areas in which candidates performed well

- ◆ Question 5: most candidates performed well with the energy topic including calculations.
- ◆ Question 6: a strong response was noted in all aspects of this electrical circuit question.
- ◆ Question 10(d): the IC wiring diagram question was well answered by most candidates.

Areas which candidates found demanding

- ◆ Question 2 (b): performance in the pneumatic description question was not as strong as seen previously.
- ◆ Question 8 (b): a number of candidates, across all abilities, did not correctly calculate the velocity ratio.
- ◆ Question 9 (d) (ii): candidates lacked an understanding of the use of a relay.

Advice to centres for preparation of future candidates

Centres may wish to address the following areas where poor performance was noted:

- ◆ Candidates did not consistently use the Data Booklet, and this was evident when calculating velocity ratio or when completing PBASIC programs or flowcharts.
- ◆ There were frequent basis syntax errors in developing PBASIC programs with particular issues with *for... next* and *if... then* commands.
- ◆ Many candidates could not explain why program sub-procedures are used.
- ◆ There is a general lack of understanding of closed loop control and the use of negative feedback to reduce an error.

**Statistical information: update on Courses
Intermediate 2**

Number of resulted entries in 2012	174
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Number of resulted entries in 2013	181
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Statistical information: Performance of candidates

Distribution of Course awards including grade boundaries

Distribution of Course awards	%	Cum. %	Number of candidates	Lowest mark
Maximum Mark 100				
A	49.7%	49.7%	90	72
B	16.6%	66.3%	30	61
C	11.6%	77.9%	21	51
D	2.2%	80.1%	4	46
No award	19.9%	100.0%	36	-

General commentary on grade boundaries

- ◆ While SQA aims to set examinations and create marking instructions which will allow a competent candidate to score a minimum of 50% of the available marks (the notional C boundary) and a well prepared, very competent candidate to score at least 70% of the available marks (the notional A boundary), it is very challenging to get the standard on target every year, in every subject at every level.
- ◆ Each year, SQA therefore holds a grade boundary meeting for each subject at each level where it brings together all the information available (statistical and judgemental). The Principal Assessor and SQA Qualifications Manager meet with the relevant SQA Business Manager and Statistician to discuss the evidence and make decisions. The meetings are chaired by members of the management team at SQA.
- ◆ The grade boundaries can be adjusted downwards if there is evidence that the exam is more challenging than usual, allowing the pass rate to be unaffected by this circumstance.
- ◆ The grade boundaries can be adjusted upwards if there is evidence that the exam is less challenging than usual, allowing the pass rate to be unaffected by this circumstance.
- ◆ Where standards are comparable to previous years, similar grade boundaries are maintained.
- ◆ An exam paper at a particular level in a subject in one year tends to have a marginally different set of grade boundaries from exam papers in that subject at that level in other years. This is because the particular questions, and the mix of questions, are different. This is also the case for exams set in centres. If SQA has already altered a boundary in a particular year in, say, Higher Chemistry, this does not mean that centres should necessarily alter boundaries in their prelim exam in Higher Chemistry. The two are not that closely related, as they do not contain identical questions.
- ◆ SQA's main aim is to be fair to candidates across all subjects and all levels and maintain comparable standards across the years, even as arrangements evolve and change.