



External Assessment Report 2015

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

The statistics used in this report are prior to the outcome of any Post Results Services requests

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 candidates' response showed that the 2015 question paper was fair, balanced and fully assessable. The assessment functioned as intended and the full range of marks were awarded in each question.

Analysis of the examination found that the level of demand was similar to the 2014 question paper, and the grade boundaries were not changed.

Only 22 candidates were presented this year. Some very high marks were achieved, with one centre in particular preparing their candidates very well for the assessment.

Areas in which candidates performed well

Question 1: There was a good application of knowledge on sources of energy.

Question 3 & Q11(d): Candidates demonstrated a good understanding of combinational logic.

Question 6: Developing the flowchart saw strong responses from most candidates.

Question 10 (d): Candidates consistently calculated work done, electrical energy and power consumption.

Question 11 (a): Most candidates showed a good understanding of the operation of the pneumatic circuit.

Areas which candidates found demanding

Question 2 (a): A number of candidates failed to adequately describe the operation of the closed loop aspect of the system.

Question 7(b) (i): Some candidates found challenge in calculating the output voltage in the potential divider circuit.

Question 9 (a): A number of the descriptions of the operation of the motor control circuit lacked appropriate detail for the four mark allocation.

Advice to centres for preparation of future candidates

Centres may wish to consider the following issues where difficulty was noted:

- ◆ Candidates often do not appropriately distinguish between 'state', 'describe' and 'explain' questions in terms of the length of response and amount of detail required.
- ◆ Candidates use the Data Booklet only infrequently, and as a result often make careless errors with units, flowchart symbols, and PBASIC coding

Statistical information: update on Courses

Number of resulted entries in 2014	191
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Number of resulted entries in 2015	21
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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	66.7%	66.7%	14	71
B	14.3%	81.0%	3	60
C	9.5%	90.5%	2	50
D	4.8%	95.2%	1	45
No award	4.8%	-	1	-

After reviewing the 2015 Question Paper (following the 2014 diet), it was our intention to try to retain the 2014 grade boundaries. The Question Paper functioned as expected and this was achieved.

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.