

## Principal Assessor Report 2004

**Assessment Panel:**

**Technical Education**

**Qualification area**

**Subject(s) and Level(s)  
Included in this report**

**Technological Studies – Advanced Higher**

### **Statistical information: update**

<b>Number of entries in 2003 (Pre Appeal)</b>	133
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<b>Number of entries in 2004 (Pre Appeal)</b>	140
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### **General comments re entry numbers**

The increasing trend of the last years appears to be levelling off, though an increase of 7 candidates is still encouraging.

### **Distribution of awards**

A	30.0%
B	20.0%
C	19.3%
D	8.6%
No Award	22.1%

### **Comments on any significant changes in percentages or distribution of awards**

There was a 5% reduction across A awards this year, coupled with a 2% reduction in B awards, C awards increased by 6 ½ %, whilst the overall pass-rate is down by 6% from last year, to 70%. Distribution is in line with with a small but highly motivated group of candidates.

## Grade boundaries for each subject area included in the report

Distribution of awards	%	Cum %	Number of candidates	Lowest mark
A	30.0	30.0	42	67
B	20.0	50.0	28	58
C	19.3	69.3	27	49
D	8.6	77.9	12	44
No award	22.1	100	31	

## General commentary on passmarks and grade boundaries

- While SQA aims to set examinations and create mark schemes which will allow a competent candidate to score a minimum 50% of the available marks (notional passmark) and a very well-prepared, very competent candidate to score at least 70%, it is almost impossible to get the standard absolutely on target every year, in every subject and level
- Each year we therefore hold a passmark meeting for each subject at each level where we bring together all the information available (statistical and judgmental). 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 senior management team at SQA
- We adjust the passmark downwards if there is evidence that we have set a slightly more demanding exam than usual, allowing the pass rate to be unaffected by this circumstance
- We adjust the passmark upwards if there is evidence that we have set a slightly less demanding exam than usual, allowing the pass rate to be unaffected by this circumstance
- Where the standard appears to be very similar to previous years, we maintain similar grade boundaries
- 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 are different. This is also the case for exams set in centres. And just because SQA has altered a boundary in a particular year in say Higher Chemistry 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
- Our main aim is to be fair to candidates across all subjects and all levels and maintain standards across the years, even as arrangements evolve and change.

## Comments on grade boundaries for each subject area

Following on from the ‘stiffening’ of the examination in 2003, the ‘C’ boundary for 2004 has been maintained at almost the *a priori* value – i.e. 49%. Upper grade boundaries were reduced similarly to maintain consistency of standards.

## **Comments on candidate performance**

### **General comments**

Highest score this year was 89% (98% last year); 10 candidates scored less than 30% (only 4 last year).

In all Section A questions full marks were gained by many candidates, though candidates found Section B difficult, and few gained full marks in these questions.

### **Areas of external assessment in which candidates performed well**

Questions 1, 2 and 3 were all well attempted, and provided a good lead into the paper. Question 6 produced an average score of 7.6 out of 9. Question 9 contained sequential control (Applied Electronics) and low-level programming. This was by far the most successful of the Section B questions.

### **Areas of external assessment in which candidates had difficulty**

Question 7 ( digital-to-analogue conversion) proved difficult. In Section B, questions 8 and 10 both contained Statics, and these were not done well.

## **Recommendations**

### **Feedback to centres**

#### **Applied Electronics**

Op-amp applications such as ADC and DAC caused difficulty for many candidates, who were unable to correctly analyse a given specification and produce a valid solution.

#### **Structures and Materials**

Shear-force and bending-moment diagrams still provide major challenges.

Method of Sections is still not well understood. Most centres need to spend much more time in this area of the syllabus if candidate-performance is to be significantly improved.