



## External Assessment Report 2010

|         |                              |
|---------|------------------------------|
| Subject | <b>Graphic Communication</b> |
| Level   | <b>Higher</b>                |

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

Candidate performance was slightly improved from last year. Last year there was a slight adjustment in the grade boundaries, and this year steps were taken to address this. These measures were successful and enabled the grade boundaries to be set at notional difficulty levels once again. In particular:

- ◆ Care was taken with the grouping of lines for marks within the engineering question resulting in a better balance of marks being available.
- ◆ A new approach was taken to marking the tangency question by grouping similar items together to allocate marks, ie all positions of centres, arcs, correct radii and lines.
- ◆ Grouping similar items together in the dimensioning question, ie all text to BS, lines/leaders to BS. This proved very successful and was much fairer to the candidates.
- ◆ Most questions were appropriately accessible for the majority of candidates and as a result a significant number of candidates completed all of the questions. In addition there was an even balance of candidates choosing between question 10 or 11, with no significant difference in performance across the two questions.
- ◆ As with previous years, some candidates are being presented at Higher level when Intermediate 2 would be more appropriate.

## Areas in which candidates performed well

### Section A

Question 1: CAD commands

This proved to be a very good initial question as it was answered extremely well which would have helped to settle the candidates. Part (b) on plotters was not as well answered as (a) but most candidates still achieved 7 or more marks out of a possible 10.

Question 2a: Types of section

This question was answered well and there was evidence that this topic was covered more thoroughly than in previous years.

Question 3: Dimensioning

The changes in marking improved the opportunities for candidates to gain marks. This resulted in probably the best-answered dimensioning question to date.

Question 4: DTP terms

As in previous years this question was very well answered. This was expected, as this is now being consistently well done. There remains a little confusion over what is a 'headline' and what is a 'sub heading'.

## **Section B**

### Question 7a: Measured perspective

This was answered well but, as with last year, candidate performance was not as high as in previous years. The question was an internal perspective and this encouraged candidates to think, however few candidates spotted that a height line can be taken vertically up from the back corner.

### Question 8: Sectional assembly

Candidate performance was very good in this question. Concerns that candidates may have drawn the incorrect end elevation, due to the orientation of the given pictorial, were unfounded, however the identification of the webs was poor as a number of candidates applied hatching to them.

### Question 10a: Oblique

This question was fairly straightforward and candidates responded well. The curves tended to be well constructed but freehand curves were untidy.

### Question 10b: Tangency

There was a marked improvement in candidate performance from last year, however draughtsmanship still requires improvement.

### Question 12: Isometric

This was potentially a more challenging isometric question, however the performance of those candidates who attempted it was good. It should be noted that some candidates are not taking an adequate number of points on the curves for accurate construction.

## **Areas which candidates found demanding**

### **Section A**

Question 2b: BS convention for threads

The response to this question was very poor. While candidates recognised that it was a thread convention, some were unable to recognise it as internal or external.

Question 6: Tolerances

There was a mixed response to this question, with some candidates performing well, however some centres demonstrate a lack of understanding of this topic.

### **Section B**

Question 7b: Auxiliary plan

There was a poor response to this question. Many candidates projected from the wrong view, projected at the wrong angle or used incorrect sizes. This was an accessible question and those who did know how to attempt it got close to full marks, however a significant number of candidates achieved no marks at all. Centres are reminded that this type of question appears in most question papers and should be covered.

Question 9: Intersection and development

Around 50% of candidates drew this as two cylinders intersecting, and so did not identify the square shape on the auxiliary view or read the question correctly.

## **Advice to centres for preparation of future candidates**

### **General**

Candidates continue to be well prepared for the majority (in particular pictorial views) of drawing topics.

Responses to BS conventions still require improvement; however performance was marginally better this year. BS conventions will continue to be examined though, so centres are advised to prepare candidates for this topic.

Centres are reminded that there are no longer any half marks within the marking instructions of the question paper and this should be reflected in any prelim papers.

### **Section A**

There is room for improvement in performance in this section even for the most able candidates. Very few achieve more than 30 out of a possible 40 marks.

### **Section B**

Transferring curves between views and drawing an isometric circle and the number of points taken must be considered. A minimum of 12 points is required for a complete circle (the quadrant points plus intermediate points).

The overall quality of draughtsmanship is still poor. Centres are advised to note the following:

- ◆ There must be a clear difference between construction and completed outlines.
- ◆ Candidates must draw in an outline to be awarded the marks.
- ◆ Even when outlines are drawn, they often extend beyond the point where they should end, resulting in no marks being awarded for that line.
- ◆ Tangent lines are also poorly drawn.
- ◆ The quality of hidden and centre lines is poor.

These points were highlighted in last year's report but they still need to be addressed.

Candidate performance in auxiliary views remains a concern. Centres are recommended to review their approach to this topic.

## Statistical information: update on Courses

|                                    |      |
|------------------------------------|------|
| Number of resulted entries in 2009 | 3694 |
| Number of resulted entries in 2010 | 4069 |

## Statistical information: performance of candidates

### Distribution of Course awards including grade boundaries

| Distribution of Course awards | %     | Cum. % | Number of candidates | Lowest mark |
|-------------------------------|-------|--------|----------------------|-------------|
| Maximum Mark — 200            |       |        |                      |             |
| A                             | 27.1% | 27.1%  | 1102                 | 140         |
| B                             | 25.6% | 52.6%  | 1040                 | 119         |
| C                             | 24.3% | 77.0%  | 990                  | 99          |
| D                             | 8.7%  | 85.7%  | 355                  | 89          |
| No award                      | 14.3% | 100.0% | 582                  | —           |

### 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, therefore, SQA 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 Head of Service 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.