



## External Assessment Report 2012

Subject(s)	Graphic Communication
Level(s)	Higher

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 improved slightly from last year with the majority of the candidates well prepared by the centres, although there were several centres that presented candidates at an inappropriate level. The adjustment in the grade boundary last year was addressed and the measures taken appear to have been successful. This year the grade boundaries were returned to notional levels, apart from a slight adjustment to the upper A level.

## Areas in which candidates performed well

### Section A

- Q1 CAD commands and features: well answered by most candidates.
- Q3 Desktop publishing: as in the past, this question has been consistently well attempted by candidates. There was some confusion by candidates over the difference in desktop publishing terms between *footer* and *folio*.
- Q 4 Architectural symbols and plans: well answered by most candidates, but centres should note that only correct British Standards terminology is acceptable.

### Section B

- Q8 Measured perspective: this was answered well with candidates appearing to have been well prepared. As in previous years, there are some candidates who do not firm up construction lines and cannot gain the marks that are readily achievable.
- Q10 Exploded isometric: this question was well done by the majority of the candidates. In general, centres appear to be preparing candidates well in the principles and techniques for drawing pictorial views. The question challenged the more able candidates with the complex curve (and there is still an issue with the quality of some of the freehand curves). Centres should note that only smooth arcs drawn as a single line passing through predetermined points can be allocated a mark.
- Q11 Auxiliary plan: the majority of candidates chose to attempt this question from the elective. Centres appeared to have responded to previous advice and there was a marked improvement in the quality of candidate response to this type of question. Part (a) end elevation, was a straight-forward projection that allowed most to gain full marks. Part (b) auxiliary plan, provided a range of marks with most candidates able to understand and

draw the upper body of the bin. The cylindrical base did, however, provide a challenge with the more able candidates gaining full marks. As before, the draughtsmanship in drawing the freehand curves needs to be addressed by centres.

## Areas which candidates found demanding

### Section A

- Q2 (b) & (c) British Standards dimensioning: few candidates gave correct answers for this question. Many gave answers that referred to errors and not tolerances. The standard of sketching to British Standards was very poor as was the accuracy of the answers. This type of question will continue to feature in future papers.
- Q5 (a) & (b) British Standards line type: it appeared that this topic has been overlooked by some centres. Several candidates failed to describe the application of line types successfully.
- Q6 (a) (i) & (ii) Some candidates performed poorly and failed to achieve marks. This type of question has been a regular feature in past papers, and it is surprising that it is not attempted better. Many candidates appeared to be confused over *full section* and *half section*, many stating the correct answers, but under the wrong drawing.

### Section B

- Q7 Tangency: it was evident that some centres have prepared candidates well for this question. However, a proportion of candidates are still displaying poor draughtsmanship in the following areas: sketching freehand; leaving tails or not connecting arcs; not clearly showing the centres of the arcs or circles; and inaccurate measuring.
- Q9 Engineering assembly: candidates achieved a wide spread of marks for this question, although only a small proportion gained the maximum. Correct assembly of the parts proved challenging to some candidates, with some failing to recognise the common sizes from each part that indicates the correct positioning of the parts. As in previous years, identifying the correct areas to be hatched and correct application of the British Standards proved problematic to many candidates and only a few achieved the mark allocated for arcs and fillets. The upper grade boundary was adjusted to reflect the difficulty of this question.
- Q12 Development: this was a question that required the candidates to project and lift sizes from an existing plan and a partial auxiliary plan. The end elevation was well attempted however the development was not well attempted. A number of candidates did not appreciate that a datum base line was required to lift the

correct lengths/heights from the elevation and, in consequence, failed to produce the two curves required.

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

### **General**

Although the general standard of candidate response this year showed improvement on previous years, the standard of draughtsmanship continues to be poor in some centres. The majority of candidates appeared to be well prepared by centres, particularly for the pictorial questions and the auxiliary plan. Centres should carefully consider the level at which some candidates should be presented, as it was evident that some candidates were not equipped with the skills or knowledge to attempt Graphic Communication at this level.

### **Section A**

As in previous years, there is room for improvement. Knowledge of British Standards continues to be a concern, and centres are reminded that guidance on this topic is given on the SQA website. It is strongly recommended that centres access this information.

### **Section B**

Centres should ensure that all candidates have the required instruments, compasses, pencils etc, in good working order and appropriate to the task in hand. The correct rating of pencil, neither too soft nor too hard, can affect the quality of the candidate's drawing.

Centres are advised of the following:

- ◆ A clear difference between construction and completed outlines needs to be evident.
- ◆ Candidates must draw in an outline to be awarded the marks.
- ◆ Lines should not extend beyond their completion point; marks are not awarded if lines continue past their termination.
- ◆ The construction of centres should be clearly shown in tangency questions. Arcs must be drawn with compasses and not drawn freehand.
- ◆ Centre lines and hidden lines should be drawn clearly and to British Standard.
- ◆ Centres are advised to review their approach to teaching of drawing to British Standard, in particular hatching convention and thread detail.

## Statistical information: update on Courses

Number of resulted entries in 2011	4171
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Number of resulted entries in 2012	4120
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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 200				
A	26.2%	26.2%	1080	140
B	27.1%	53.3%	1116	120
C	25.4%	78.7%	1045	100
D	8.9%	87.5%	366	90
No award	12.5%	100.0%	513	-

## 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.