

Principal Assessor Report 2004

Assessment Panel:

Technical Education

Qualification area

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

Graphic Communication - Higher

Statistical information: update

Number of entries in 2003 (Pre Appeal)	3,070
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Number of entries in 2004 (Pre Appeal)	3,246
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General comments re entry numbers

It is encouraging to see that the numbers are continuing to rise. This year they have increased by 5.8 % compared with 2.5 % last year.

This represents 52% of the previous years Credit candidates returning to do the Higher.

Statistical Information: Performance of candidates

Distribution of awards

A	23.6%
B	23.5%
C	24.8%
D	9.9%
No Award	18.2%

Comments on any significant changes in percentages or distribution of awards

Very little difference from last year. Slight increase at B to upper A though - this could be a result of the mean mark for the thematic presentation rising by 1.1 marks.

Grade boundaries for each subject area included in the report

Distribution of awards	%	Cum %	Number of candidates	Lowest mark
A	23.6	23.6	765	136
B	23.5	47.1	764	115
C	24.8	71.9	805	95
D	9.9	81.8	320	85
No award	18.2	100.0	592	

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

The grade boundaries dropped at A, B and C by 4, 5 and 5 marks respectively this drop took into account the inaccessible marks in question 9, and to a lesser extent, the increased level of difficulty of every candidate having to attempt curves in isometric.

The boundary for upper A remained the same.

Comments on candidate performance

General comments

Performance was very similar to last year, but it is again disappointing that there were very few high performers in section A. This is down to the continued poor knowledge of BS conventions.

Including an isometric in the compulsory part of section B, forced everyone to attempt isometric curves which caused problems for the C candidates. This possibly resulted in some marks being inaccessible to these candidates. Previously we have tried to make this an optional topic.

As the optional questions were measured perspective or planometric, around 85% of candidates selected measured perspective, which is usually one of the best attempted topics.

10 marks in question 9 (engineering section) proved to be inaccessible to all candidates. As a result this limited the number of high performing candidates who managed to achieve greater than 120 marks from a possible 140.

The performance in the thematic presentation continued to improve. The mean mark increased by 1.1 marks to 41.2.

There are still centres that are presenting candidates at Higher, who are clearly more suited to Intermediate 2.

Areas of external assessment in which candidates performed well

Section A

Section A

Question 1(c), Types of graphic

Answered very well with most candidates achieving both marks.

Question 3(a), Co-ordinate dimensions

As this is probably the least commonly used method of dimensioning in schools, it was surprising that so many managed to answer it well, even though many omitted to draw centre lines.

Question 6, CAD features

This was very well answered by the majority of candidates.

Question 7, DTP

As with question 6 this was very well answered, which is a big improvement from last year in this topic. Most candidates achieved the majority of their marks for section A in these two questions.

Section B

The better candidates attempted all questions in this section and managed to gain marks. Most candidates though did some questions extremely well.

Question 8(a), Auxiliary plan

This was one of the best-attempted auxiliary views in recent years. Some candidates do not project enough points though, but the majority understood the principles of drawing an auxiliary plan.

Question 11, Measured Perspective

Once again well done as centres prepare candidates extremely well for this topic. Most candidates achieved high marks, with mistakes being limited to a lack of accuracy or using an incorrect height line.

Question 12, Planometric

Very few chose to do this question, but those who did were rewarded with very high marks.

Areas of external assessment in which candidates had difficulty

Section A

Question 1, Building plans

As with Standard Grade this topic is very poorly answered. Even though there are only three plan types at least 50 % of candidates do not know them. In addition only a small number knew what the scales were.

Question 2(a), BS conventions for sections

Extremely poorly answered. Lucky if even 5% of candidates attempted this. This has been asked before and should be being taught in the course. This topic was also the poorest answered last year.

Question 4(a) and (b), BS conventions

It was expected that this question would produce the widest range of answers, but only a very small number achieved even 1 of the 4 marks available. It is appreciated that candidates will not know all of the content of BS8888, but too many candidates are not even attempting these questions at all. There is also a disappointing trend that the performance in these types of questions is steadily dropping.

Question 5, Colour gradients

Better answered than the last time it was asked, but many still confuse tonal scale with colour gradient.

Section B

Question 8, Development

Too many candidates did not even attempt the development. Of those who did attempt it, a significant number did not draw the triangular sides and did not know how to achieve the correct length of the development. Particularly disappointing as this is a typical style of question in the HSDU resource material.

Question 9, Quarter section

Very poorly done by the majority of candidates. Very few achieved greater than 20 marks from the 30 available. Areas of difficulty were:

- ◆ Positioning of the tapings and M14 stud.
- ◆ Sectioning the correct area and to the correct BS convention.
- ◆ Drawing the hexagon on the detail of the machine screw.
- ◆ Knowledge of knurling.

These are all aspects of BS conventions and traditional technical type drawing, which is the same area of weakness in section A.

In addition approximately 25% of candidates misinterpreted the question and drew a scaled up version of the given elevation and a number did not even attempt it.

Question 10, End elevation & isometric curves

The end elevation provided good differentiation but too many could not draw the curves or did not select enough points to produce accurate curves.

Curves were also the problem with the isometric. Again a lack of construction points used.

Recommendations

Feedback to centres

General

- ◆ Candidates are being well prepared for the majority of exam topics. There is though a significant drop in performance in the more traditional topics: BS conventions, engineering drawing and geometric construction. Each centre should now have a list of BS conventions that will be examined, which hopefully will help to raise performance.
- ◆ Again there are still too many inappropriate candidates being presented for the Higher. These candidates should be being presented for Intermediate 2.

Section A

- ◆ It appears that centres are now addressing the previous poor performance in DTP questions.
- ◆ The remaining weak area in this section is BS conventions. The lack of knowledge of this topic is causing candidates to drop too many marks in this section.
- ◆ Candidates must give more than a one-word answer when the question asks for a description, comparison or explanation.

Section B

- ◆ Pictorial drawings are being taught well in particular measured perspective.
- ◆ There was a significant improvement in the quality of the auxiliary plan. Hopefully this is a sign that it is now being taught better.
- ◆ As commented last year, candidates need to take enough points to accurately draw a circle in isometric or to transfer a curve between views in orthographic projection. A minimum of 12 points for a complete circle (the quadrant points plus intermediate points).
- ◆ Developments have been poorly done for 2 consecutive years.
- ◆ The overall quality of draughtsmanship is dropping. In many cases it is difficult to tell the difference between construction and completed outlines. This makes it difficult to mark and candidates are losing out. Candidates must draw in outline to be awarded the marks. In addition the quality of hidden and centre lines is poor.