

## Principal Assessor Report 2005

**Assessment Panel:**

**Computing and Information Systems**

**Qualification area**

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

**Computing Higher (New)**

### **Statistical information: update**

<b>Number of resulted entries in 2004</b>	-
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<b>Number of resulted entries in 2005</b>	2684
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### **General comments re resulted entry numbers**

The paper was dual-running with the old arrangements. The combined total for the two examinations shows a decrease in the number of presentations overall.

## Statistical Information: Performance of candidates

### Distribution of awards including grade boundaries

Distribution of awards	%	Cum %	Number of candidates	Lowest mark
Maximum Mark- <b>200</b>	-	-	-	-
A	15.2	15.2	409	134
B	21.5	36.7	577	113
C	25.4	62.1	681	93
D	11.9	74.0	319	83
No award	26.0	100.0	698	-

### 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 any significant changes in distribution of awards/grade boundaries

This years examination was judged to have presented an increased level of demand in comparison with previous “old” examinations and so grade boundaries for this first paper were set below standard ‘a’ priori boundaries.

## Comments on candidate performance

### General comments

There was a wide range of candidate responses. Whilst there are many very good candidates, there are still a number of candidates who are clearly being presented at the wrong level. Performance in the actual exam is exceptionally poor in some cases, with some candidates gaining less than 20 marks out of 140. Approximately 13% of candidates gained 35% or less overall.

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

Candidates performed better in those questions that tested their ability to recall knowledge, particularly in short response questions.

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

Candidates experienced particular difficulties with questions in the following areas:

- contextualised problem solving situations
- producing an algorithm, particularly in an unfamiliar context
- recognising and explaining the different types of parameter passing
- differentiating between language types
- clear layout of calculations, often resulting in simple arithmetic errors
- distinguishing between the definitions and usage of registers, cache, memory and storage
- use of technical terms appropriately
- tracing a solution, NLP and neural nets in Artificial Intelligence
- layers in the OSI model and the relationship between the URL and IP address in Computer Networking
- depth of technical detail lacking (ie of storage media) in Multimedia Technology
- the new content in Multimedia Technology (ie VRML, file types, role of the DSP) was very poorly done
- some candidates are still attempting questions from more than one optional topic.

## Recommendations

### Feedback to centres

This is the first examination of the new syllabus and it is recognised that the new structure and content will take some time to “bed in”, with teaching materials and techniques being honed to match the new demands of the syllabus.

In the light of the very poor performance of some candidates, Centres must look at presentation policies. There are candidates being presented who are clearly unsuited to this level. Ten percent of candidates gained less than sixty five marks out of two hundred, including the coursework mark out of sixty. Subject specialists are in the best position to give guidance to candidates, parents and others regarding realistic expectations in Higher Computing. Where there is a large or uniform discrepancy between a Centre’s estimates and the actual grades gained, Centres should seek advice on how to improve the accuracy of estimates submitted to the SQA.

The new content presented a major challenge to some candidates. Centres should ensure that coverage of all topics detailed in the SQA Course descriptors is to an appropriate depth. Care should be taken that teaching materials and prelim papers cover the whole syllabus.

There are many instances of candidates not reading questions, for example question 19 (d), on writing data to memory, was answered by a significant proportion of candidates as though it were on the fetch/execute cycle. Similarly, in the context-based questions, candidates must relate the answer to the context to gain full credit. A good example of this was question 21 (c), where most candidates attempted to write the standard algorithm for finding a maximum rather than answer the question as stated.

Candidates must improve the layout of calculations if they are to cut down on careless errors.

Some types of question will appear in most years, for example tracing a solution in Artificial Intelligence; the OSI model in Computer Networking; calculations, compression and file types in Multimedia Technology. Approaches to these, and other, “set piece” questions should be rehearsed.

A deeper knowledge of technical terms would bolster the more “woolly” answers given by some candidates. A number of Markers raised concerns that some candidates were offering Standard Grade answers.

Note must be taken of the number of marks allocated to questions; this gives candidates an indication of the depth of response required, generally one point is required for each mark. Single word answers are inappropriate in the majority of cases and should be avoided.

Wording of questions should be emphasised to candidates. Differences between responses required by “explain”, “describe”, “state” and “name” need to be clarified as part of preparation for examinations.