

Principal Assessor Report 2006

Assessment Panel:

Computing and Information Systems

Qualification area

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

Computing Higher

Comments on candidate performance

General comments

ENTRY NUMBERS

This was the first year in which all candidates were examined on the new arrangements. Comparing candidate numbers for this year to the combined total from both of last year's papers, the trend of slight decline in numbers continues.

GRADE BOUNDARIES

The paper was well received by practitioners, candidates and the media. The paper was seen as a fair test of candidate ability. Following feedback from the 2005 paper some changes were made to the structure and mark allocation of some questions for 2006. This has altered the level of demand and allowed a slight shift in the grade boundaries towards the standard grade Boundaries, although the boundary for an upper A remains unchanged. It is expected that, over the next couple of years, further rebalancing of questions will allow further harmonisation between the grade boundaries.

GENERAL COMMENTS

The general standard of response appears to have improved, with a slight increase in the pass rate and some excellent responses. However it is clear that there are still many candidates being presented at the wrong level. The standard of written English is still very varied, with poor spelling of even the most basic computing terms.

Areas in which candidates performed well

Candidates generally performed better when answering questions that tested their ability to recall facts, particularly in the shorter "state"-type questions. There were fewer omitted questions and candidates seemed to be better prepared for the "set-piece" questions, for example the file/memory size calculations and twos complement conversion.

Areas which candidates found demanding

Candidates experienced particular difficulties with questions in the following areas:

- Problem solving within a given context
- Tailoring of a standard algorithm to suit a given context
- Use of technical terms
- The difference between viruses, worms and trojans
- The functions of an interface
- Distinctive features of a scripting language
- The use of substrings
- The definitions and uses of value and reference parameters
- The names of relevant pieces of legislation
- Tracing a solution, vision systems, neural nets and recursion in Artificial Intelligence
- Synchronous/asynchronous transmission, circuit/packet switching HTML tags and the interrelationship of the URL and IP address in Computer Networking
- Purpose of a codec, features of Bluetooth, names/descriptions of compression algorithms and convergent technologies in Multimedia Technology

Advice to centres for preparation of future candidates

This is the second examination of the new arrangements and the majority of the “settling-in” has been done. Centres have clearly taken feedback from the 2005 paper on board, resulting in a higher pass rate. There were fewer blank spaces on papers and the majority of candidates were clearly more confident in their abilities.

However there are still a distressingly large number of candidates who show little or no grasp of the basics. Approximately 24% of candidates gained no award, with less than 86 marks out of 200 inclusive of the Coursework. Centres themselves are predicting “no award” in far too many cases. 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 quality of estimates.

There was a marked difference in responses of candidates who had been trained in the standard definitions, for example whole Centres giving a clear and concise description of global/local variables. The new content did not appear to cause any more difficulty than the old.

Candidates were still guilty of misreading or misinterpreting questions, for example question 11. They should note that the context of a question is also important, as too many marks were lost through the offering of generic responses during problem solving questions. There were too many marks lost through lack of depth in responses. Candidates must realise that “the file size will be multiplied by four” is a better response than “it will get bigger” and will attract more marks. This tendency towards “woolly” answers was widespread, particularly in Section I. This section should have been relatively easy for most candidates however half marks was the average here. Candidates must be reminded that the same rigour should be applied to all questions and that Standard Grade responses will often gain little or no credit.

In every exam there are questions designed to test integration across the core and optional topics. Candidates have difficulty combining knowledge from discrete areas of the course. There will also be questions drawn from the broad themes outlined in the Arrangements document. Question 15 b, on objects and operations, was poorly done by the vast majority of candidates.

Candidates are still experiencing difficulty interpreting the level of response appropriate to questions. Centres should continue to highlight the wording of questions, emphasising the difference between state, describe and explain.

Statistical information: update on Courses

Number of resulted entries in 2005	1,943 (Old) 2,684 (New)
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Number of resulted entries in 2006	4,341
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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	16.2	16.2	703	135
B	21.5	37.7	933	115
C	26.2	63.9	1,139	96
D	11.4	75.3	493	86
No award	24.7	100.0	1,073	-

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.