



External Assessment Report 2010

Subject	Information Systems
Level	Advanced 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

In general, candidate performance in the external exam has continued to improve with performance in the Coursework Project similar to that in previous years.

Although only 50 candidates were presented for the final exam, it is heartening to see that, once again, a number of new centres presented candidates for the first time. When combined with candidates from returning centres, these accounted for 36% of the overall presentations.

Thirty per cent of candidates attempted Section II Part A: Information Systems Interfaces whereas seventy per cent of candidates attempted Section II Part B: Online Database Systems and the performance of candidates within these options is similar.

Areas in which candidates performed well

In Section I, candidates performed well in Question 2, demonstrating problem solving skills in the use of an entity/event matrix, entity life history diagrams and test data values. Question 3 was also well handled, with the vast majority of candidates able to produce an entity relationship diagram indicating all requirements.

In both optional sections, candidates coped well with integrative questions that required knowledge and problem solving skills from the core Units. In particular, questions relating to the development process, investigative techniques, database development, types of testing and maintenance were answered well.

In Section II Part A, the majority of candidates were able to use their knowledge of usability testing techniques to provide descriptions and suggest appropriate techniques to use in the situations described in Questions 6–9.

In Section II Part B, candidates demonstrated a good understanding of CMS, CRM, e-commerce and EDI systems and there was a marked improvement in the number of candidates who were able to produce accurate HTML for the <input> and <button> elements required.

Areas which candidates found demanding

In Section I, a large number of candidates continue to have difficulty with normalisation, with many of these candidates unable to consistently apply the rules of normalisation one stage at a time: removal of repeating data followed by removal of partial dependencies followed by removal of transitive dependencies. As a result, performance in Question 5 was extremely variable.

In both optional sections, all candidates found it difficult to produce structured English that reflected the processes described in Question 7 (d) and Question 14 (c) respectively.

Advice to centres for preparation of future candidates

Core Content

Although most candidates were better able to provide clear, accurate and technical descriptions of key terminology from all Units, there are some candidates presented at this level who are unable to do so.

When asked to create an entity/relationship diagram, candidates are clearly asked to indicate weak/strong entities/relationships and the mandatory/optional nature of each relationship. In some cases, these aspects of candidates' solutions are either omitted or are inaccurate.

The Arrangements document for the Advanced Higher Course indicates that candidates should be able to exemplify both level 0 and level 1 data flow diagrams and yet some candidates do not appreciate that there are differences between the two.

Centres should ensure that candidates are familiar with both structured English and a graphical design notation that can be used for process description. Both techniques are required as evidence of Unit assessment; however this work was poorly attempted in the Question Paper.

Information Systems Interfaces

Knowledge of techniques and methods used for usability testing must be secure; in particular, candidates must know the difference between qualitative and quantitative techniques. In the external exam, not only will candidates be expected to provide accurate descriptions of these, they are also expected to suggest appropriate techniques or methods for given situations and justify their selection. Centres should ensure that candidates are better prepared to answer these types of problem solving questions.

Online Database Systems

Many candidates demonstrated little knowledge of the use made of server-based database management tools to create, modify, delete and connect to secure databases.

Although most candidates were able to demonstrate knowledge of HTML <form>, <input> and <button> elements, knowledge of the required **attributes** for each element (stated in the

Arrangements document) was not secure. Centres are also reminded of the necessity to ensure that candidates have the necessary knowledge of a server-side scripting language.

Statistical information: update on Courses

Number of resulted entries in 2009	67
Number of resulted entries in 2010	51

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	31.4%	31.4%	16	140
B	19.6%	51.0%	10	120
C	11.8%	62.7%	6	100
D	9.8%	72.5%	5	90
No award	27.5%	100.0%	14	—

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.