



## External Assessment Report 2014

Subject(s)	Information Systems
Level(s)	Advanced Higher

The statistics used in this report are prior to the outcome of any Post Results Services requests

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 in the 2014 question paper was similar to that in previous years, with 84.4% of candidates achieving grades A–C, compared with 85.7% in 2013. The average mark in the exam was 75.2, with the average mark obtained in the core section being 41.9; the average marks obtained in the optional sections were 31.3 and 39.1 respectively.

In total, there were 33 presentations from 11 teaching centres: candidates from eight of those centres attempted questions from Information Systems Interfaces (Section II Part A), while candidates from the remaining three centres attempted questions from Online Database Systems (Section II Part B).

## Areas in which candidates performed well

### Core Content: Section I and Normalisation

In general, questions 1 and 2 in the core section were answered well by the majority of candidates.

- ◆ Question 4: Most candidates knew how to resolve the many-to-many relationship correctly and accurately indicated the cardinality of the BADGE entity.
- ◆ Question 5(a): Candidates coped well with this question.
- ◆ Question 6: This question was answered well by almost all candidates. The average mark awarded was 9 marks out of a possible 10 marks.
- ◆ Question 7(a) and Question 11(a): The majority of candidates demonstrated good data analysis skills, coping well with the complex system presented. The average mark awarded was 6.9 marks out of a possible 10 marks.

### Section II Part A: Information Systems Interfaces

- ◆ Question 9: Candidates demonstrated good knowledge of the content examined in this question by providing short but accurate descriptions.

## Areas which candidates found demanding

### Core Content: Section I and Normalisation

- ◆ Question 3(b): Explanations of how to produce the report shown were very poor, with few candidates referring to the underlying database components or formulae needed to carry out summary calculations.
- ◆ Question 5(b): The majority of candidates were able to correctly position the events in the Entity Life History diagram; however, candidates' understanding of the notation used to indicate optional and repeated events was disappointing.

### Section II Part A: Information Systems Interfaces

- ◆ Question 7(c): Candidates' responses to the State Transition Diagram were very poor.

- ◆ Question 8(a)(i): Candidates were unable to compare low fidelity prototypes with storyboards. Descriptions produced were vague and lacked sufficient detail.
- ◆ Question 8(a)(ii): This question produced mixed responses from candidates, some of whom wrongly stated that vertical prototypes are so called because the orientation of the screen was vertical (portrait) rather than horizontal (landscape).
- ◆ Question 8(d)(ii): Few candidates were able to discuss any standards that would apply to the interface of an information system. The lack of knowledge about operating system standards, web standards or even industry standards was very disappointing.

## **Section II Part B: Online Database Systems**

- ◆ Question 11(d)(i): Candidate responses were generally poor and generic — candidates failed to refer to customer loyalty.
- ◆ Question 12(c): Responses were generic statements and did not refer to possible security issues.
- ◆ Question 13(a): Candidates' responses were weak and very generic — they did not refer to how CMS can assist different users to complete the different tasks that their roles demand.
- ◆ Question 14(c): Few candidates demonstrated any knowledge of how SQL INSERT is used.

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

Centres should continue to ensure that candidates have a sound knowledge of specialist terminology from both core units.

Candidates must be prepared to solve problems using any of the six modelling techniques in the Systems Analysis and Design unit: Normalisation, Data Dictionary, Entity Relationship Diagram, Entity Event Diagram, Entity Life History Diagram, or Data Flow Diagram. In particular, centres should ensure that candidates are familiar with the notation used to indicate optional and repeated events in an Entity Life History diagram (o to indicate optional event and \* to indicate repeated event): correct use of this notation is clearly indicated in the published Marking Instructions.

Candidates should be able to apply knowledge of database components listed under the 'Database Development' content statement for the Database Testing and Implementation unit (the list is on p34 of the Arrangements: tables, relationships, queries, forms, reports, user interface, scripting).

When asked to compare or describe benefits or drawbacks of features of a particular system, candidates are expected to refer to the context of the question and explain the relevance of the feature concerned; in this type of question, generic descriptions are unlikely to receive any marks. Similarly, when asked to give reasons for a particular course of action, candidates are expected to refer to the scenario of the question and not simply state facts.

## Statistical information: update on Courses

Number of resulted entries in 2013	49
------------------------------------	----

Number of resulted entries in 2014	32
------------------------------------	----

## 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	53.1%	53.1%	17	140
B	18.8%	71.9%	6	120
C	12.5%	84.4%	4	100
D	9.4%	93.8%	3	90
No award	6.3%	-	2	-

## 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.