



## External Assessment Report 2010

Subject	<b>Information Systems</b>
Level	<b>Intermediate 2</b>

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

Many Markers reported an improvement in the standard of candidates' responses this year although some candidates still have difficulty expressing their answers using an appropriate technical vocabulary.

The Expert Systems optional topic had the fewest centres presenting. Applied Multimedia and The Internet topics had roughly equal presentation.

Section 1 was completed to a reasonable standard this year although Question 11 (b) was poorly answered.

Section 2 was completed to a higher standard this year. Question 14 (a) (the normalisation question) was completed to a much better standard, with most candidates gaining the majority of the seven marks available. Question 15 in general was poorly answered, mainly due to candidates being unable to distinguish between 'gathering' and 'processing'.

In Section 3, fewer candidates answered all three optional sections this year. All optional topics were completed satisfactorily.

In the Applied Multimedia option, some candidates are still unable to describe or use the basic terminology that is necessary for this Unit. Question 17 (b) is an example of this — candidates were asked what is meant by the term 'sampling rate'. This was a term straight from the Arrangements document, yet few candidates were able to give a technical response with most candidates inaccurately talking about quality.

In the Expert Systems option, some candidates still do not apply their knowledge to the scenario. Question 21 (a) (ii) asked candidates to explain why a type of inferencing had been used in this situation. Most candidates were able to give a generic answer about inferencing, but very few actually applied this to the holiday scenario.

In The Internet option, questions requiring technical responses and explanations were poorly answered. This was disappointing as this was highlighted in last year's report, yet candidates were still unable to describe basic concepts like relative page addressing or the function of a router.

## Areas in which candidates performed well

### Section 1

Questions 1, 6 and 11 were answered extremely well with most candidates gaining full marks.

## **Section 2**

Questions 14 (c) (i) and 15 (b) (ii) were answered very well with most candidates gaining full marks. An improvement in responses to Question 14 (a) should be noted with most candidates gaining the majority of the marks.

## **Section 3**

### **Applied Multimedia**

Question 17 (a) was quite well answered with most candidates gaining at least two out of the three marks. Most candidates also gave a good response to Questions 16 (b) (i) and (ii) and 17 (e).

### **Expert Systems**

Questions 19 (c), 20 (c) (i) and (ii), 21 (b) and (c) were well answered.

### **The Internet**

Questions 23 (c) (i), 24 (c) (i) and (ii) and 25 (d) were well answered.

## **Areas which candidates found demanding**

### **Section 1**

Questions 4 (a) and (b)

A number of candidates were unfamiliar with the terms 'integer' and 'real' or, when explaining them, gave them the wrong way around.

Question 9

Many candidates lost this mark by giving trivial answers like 'the seat should be comfy'.

Question 11

This was poorly answered with most candidates being unable to recognise a data input form.

### **Section 2**

Question 13 (a)

Few candidates were able to identify features that would be used to evaluate a software package.

Question 13 (d)

Although nearly all candidates gained one mark, a number of candidates failed to gain another mark because they identified the middle paragraph as centred, when the last line of that paragraph shows clearly that it was not.

Question 14 (c) (ii)

Most candidates identified the simple sort but failed to identify the order of the sort. Simply answering 'sorted on gender' was not enough for the mark and candidates had to identify gender in ascending order. Few candidates identified the complex sort correctly; this is

disappointing, as last year's report indicated that candidates are more likely to be asked about a complex sort. Centres giving candidates practice on clearly identifying and laying out the answer to a complex sort should improve their marks.

#### Question 14 (e)

This was poorly carried out with candidates just giving general answers about making it easy, rather than describing features like catering for all users by providing both menus and keyboard shortcuts.

#### Question 15 (a)

This caused difficulty for candidates. The main reason was because they were unable to differentiate between 'gathering' and 'processing'. Emphasising the difference between these two concepts should improve candidate's responses.

### **Section 3: Applied Multimedia**

#### Question 16 (e)

Although this question was answered well by some candidates, it was poorly answered by others. Candidates did not use the technical terms 'text wrap' and 'caption', but instead gave simple descriptions like 'the text has been moved to the side' or 'his name has been put under the photo'. Candidates must use a technical vocabulary when answering questions. Similarly, few candidates were able to distinguish what was meant by the term 'anchor'.

#### Question 17 (b)

The examining team were disappointed that such a fundamental concept as 'sampling rate' should not be well answered with very few candidates gaining the mark. Once again, only technical responses like 'the number of times the sound is sampled per second' will gain the mark.

#### Question 18 (c)

Most candidates simply reworded the question in their answer by writing that it was easier to use rather than explaining why it was easier to use.

### **Section 3: Expert Systems**

#### Question 20 (a)

It was surprising that the fundamental stages of creating an expert system were unknown to many candidates. Emphasising the different stages when actually creating an expert system should improve candidate responses.

#### Question 21 (a) (ii)

Most candidates are still giving a generic answer to this type of question. As was noted in last year's report, if a question asks 'in this expert system' or 'in this situation' candidates are expected to refer to the scenario in which the question is set.

### **Section 3: The Internet**

Throughout The Internet section many candidates were unable to provide suitably technical descriptions of the fundamental concepts. Questions 24 (b) (ii), 24 (c) (iii), 24 (c) (iv) and 25 (b) (ii) all fall into this category.

Candidates' responses seem to indicate that they think if they describe how they use the internet at home, then that will be good enough to gain marks.

Candidates who are able to give a technical description of the basic concepts identified in the Arrangements documents should do well in this section.

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

Candidates should be prepared to provide a response containing technical details. For example, for relative page addressing, answers such as 'where you don't need to give the full name' will not attract marks but answers such as 'only the pathname relative to its current location needs to be given' will receive full marks.

Candidates should not give answers like 'it is easier/quicker/cheaper'. Answers like these must contain justification why they are easier/quicker/cheaper if they are to gain the marks.

At Intermediate 2 level, it is unlikely that a simple search or simple sort will be asked. Candidates should therefore be prepared to clearly identify a complex search/sort. For example, Question 14 (c) (ii) should have been answered in a similar way to: 'Sort on Gender field in ascending order and then the Surname field in ascending order'.

Although not asked this year, candidates should not use commercial product names, eg Powerpoint but should give the type of software, eg presentation.

## Statistical information: update on Courses

Number of resulted entries in 2009	1765
Number of resulted entries in 2010	1547

## Statistical information: performance of candidates

### Distribution of Course awards including grade boundaries

Distribution of Course awards	%	Cum. %	Number of candidates	Lowest mark
Maximum Mark — 100				
A	29.3%	29.3%	453	67
B	29.0%	58.2%	448	57
C	20.0%	78.2%	309	48
D	7.2%	85.5%	112	43
No award	14.5%	100.0%	225	—

### 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.