



External Assessment Report 2012

Subject(s)	Information Systems
Level(s)	Intermediate 2

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

It is pleasing to note that, once again this year, there was an improvement in the standard of responses with fewer candidates achieving low marks. Both centres and candidates are to be congratulated on this.

Generally, where a response was one or two words, the questions were well answered. However, once again, where a more expansive response (eg a description or explanation) was required then some candidates demonstrated a lack in their depth of knowledge, or their ability to convey that knowledge.

Uptake for the optional topics shows that Expert Systems had the fewest centres presenting with Applied Multimedia and The Internet having roughly equal presentation.

Section 1

Section 1 on the whole, was completed to a good standard this year. Surprisingly, Question 6 (b) was poorly answered. Many candidates simply named a piece of reference software rather than describing a personal use for it. Candidates are expected to be able to differentiate and exemplify both organisational uses and personal uses of all types of software referred to in the Arrangements.

Despite being indicated previously as an area of difficulty for candidates, they still are unable to give a good description of the role of a knowledge worker. The marking team are expecting candidates to respond at a level similar to 'Someone who adds value to the organisation by processing existing information to generate new information'. Most candidate responses were short of this standard.

Section 2

Section 2 was completed to a good standard this year.

Question 9 (a) (the normalisation question): Was completed to a high standard, with most candidates gaining the majority of the 7 marks available.

Question 10 (f): Many candidates were unable to distinguish between increased productivity and increased profitability. Also many candidates lost marks by providing a response that was simply a rewording of the question. For example, when asked to explain what is meant by increased profitability, many candidates lost marks as their response was 'profits were increased'. Whereas, candidates that responded with 'the organisation would make more money' gained the marks.

Question 12 (c) (ii): Worked as expected giving a wide range of marks. To improve candidate performance, centres should ensure that candidates are aware that where 3 marks are awarded for a question, simply giving one point will not gain all marks. In this case, many candidates just identified the simple sort rather than looking more carefully and identifying the complex sort.

Section 3

It was pleasing to see that even fewer candidates answered all three of the optional sub-sections this year. All optional topics were completed satisfactorily although there is considerable evidence that candidates are less knowledgeable about the optional Units than the core Units, with most candidates barely gaining half marks for the optional sub-section.

Applied Multimedia

Many candidates did not develop their answers and simply gave one or two word responses. For example, Question 14 (d) (ii) asked 'Explain how the resolution of the scanned image will affect the file size and clarity.' A large number of candidates lost marks because they didn't indicate whether the resolution was increasing or decreasing. Candidates that developed their responses like 'The higher the resolution the greater the file size and the clearer the picture would be', gained both marks.

Similarly, in Question 15 (b) (ii), candidates were asked to explain why a GUI would be a suitable user interface **for this application**. Many candidates did not refer to the specific context and responded 'easy to use' which gained 0 marks. Candidates that responded 'A GUI was suitable because the application was aimed at young children and therefore would be easy for them to use', gained the mark.

Another example is Question 15 (c). Candidates were asked to 'Suggest one other use of audio **in this game**'. Again candidates did not apply their answer to the scenario, so responses like 'sound effect' gained no marks, but candidates that developed their answers and applied it to the scenario with 'a cheering sound if they got the coins correct' gained full marks.

Candidates doing the Applied Multimedia option should ensure that sufficient time and practice is allocated to learning the underlying theory behind the Unit. Also, candidates will benefit from being given examples of theory questions in context and centres should ensure that candidates are aware that they will only gain full marks by responding to the question in terms of the context.

Expert Systems

Candidates did well in the creation of the factor table and creation of rules, but some candidates did not apply their responses to the scenario given. For example, Question 19 (c). Candidates were asked to 'Explain how the domain expert is involved during the testing **of this system**' — some reference to the recommended ski run is essential to gain full marks.

Candidates doing the Expert Systems option should ensure that sufficient time and practice is allocated to learning the underlying theory behind the Unit. Also, candidates will benefit from being given examples of theory questions in context and centres should ensure that candidates are aware that they will only gain full marks by responding to the question in terms of the context.

The Internet

A few candidates omitted Question 20. It is essential that candidates read the information contained within the Question Paper, about the page number and question number where each optional topic starts — this should prevent a situation, such as this, occurring again.

Most years, there is a Boolean search question worth 3 marks. It was surprising therefore, that so many candidates did not gain the majority of the marks. Candidates are expected to interpret the textual information, extract the key terms and apply the correct Boolean operators. In Question 20 (a) some candidates lost marks because they simply rewrote the textual information eg 'martial arts clubs in Angus that don't meet on a Thursday' gained no marks. Those candidates that responded "martial arts" AND Angus NOT Thursday' gained full marks as they had correctly applied the Boolean operators and demonstrated that they could extract the key terms.

Nearly all candidates gained good marks for Question 20 (d) about viruses.

Very few candidates demonstrated sufficient knowledge about the structure of a data packet or were able to describe what was meant by a communication protocol.

Candidates doing The Internet option should ensure that sufficient time and practice is allocated to learning the underlying theory behind the Unit. Candidates are expected to be able to respond using a technical vocabulary and performance will improve if centres ensure that candidates are able to do this.

Areas in which candidates performed well

Question 1: Most candidates were able to give reasons for computerised databases replacing manual databases.

Question 3 (a): Most candidates were able to identify a multi-valued field.

Question 5: Most candidates were able to identify an offence made illegal by the Computer Misuse Act.

Question 10 (c) (ii): Most candidates were able to identify different types of strategy.

Question 14 (b) (i) and (ii): Nearly all candidates were able to identify the different aspects of a project specification and the most appropriate delivery media.

Question 17: Candidates were able to create the factor table.

Question 20 (d) (i) and (ii): Most candidates were able to identify the symptoms of virus infection.

Areas which candidates found demanding

Question 6 (b) was very poorly answered. Candidates simply gave an example of reference software rather than describing a personal use of reference software.

Question 8: Candidates still find it difficult to give a sufficiently detailed description about the role of a knowledge worker.

Question 14 (d) (iii): Candidates still find it difficult to give a sufficiently detailed description about what is meant by the term 'anchor'.

Question 22 (d): Candidates did not have sufficient knowledge about the structure of a data packet.

Question 22 (e) (i): Despite having being asked regularly, candidates this year again found it difficult to give a sufficiently detailed description about what is meant by a communication protocol.

Advice to centres for preparation of future candidates

General

Centres should ensure that candidates are aware that when a question asks them to describe in terms of the scenario, that to gain full marks they must make sure their answer refers to the scenario.

Candidates should ensure that they look at the number of marks allocated to each question and respond accordingly. If a question is worth 2 or 3 marks, then it is likely that the candidate would have to give 2 or 3 points to gain full marks.

Centres should ensure that sufficient time is allocated to the delivery of the optional topic. Within this time allocation sufficient time must be allowed for the delivery and reinforcement of the key concepts of the chosen optional topic.

Statistical information: update on Courses

Intermediate 2

Number of resulted entries in 2011	1,366
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Number of resulted entries in 2012	1,184
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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 100				
A	32.9%	32.9%	389	70
B	26.7%	59.5%	316	60
C	20.3%	79.8%	240	50
D	7.2%	87.0%	85	45
No award	13.0%	100.0%	154	-

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.