



General Certificate of Education

Applied Information and Communication Technology 8751, 8753, 8756, 8757 and 8759

IT10 Advanced Spreadsheet Design

Report on the Examination

2009 examination - January series

Further copies of this Report are available to download from the AQA Website: www.aqa.org.uk

Copyright © 2009 AQA and its licensors. All rights reserved.

COPYRIGHT

AQA retains the copyright on all its publications. However, registered centres for AQA are permitted to copy material from this booklet for their own internal use, with the following important exception: AQA cannot give permission to centres to photocopy any material that is acknowledged to a third party even for internal use within the centre.

Set and published by the Assessment and Qualifications Alliance.

Unit 10: Advanced Spreadsheet Design (IT10)

General comments

All candidates provided evidence of setting up a spreadsheet system for a client. Although the spreadsheets were generally unambitious, they revealed a good knowledge of the chosen software.

Although most candidates used many complex spreadsheet features, these tended to be added on to a system rather than an integral part of it.

Some candidates submitted instructions on how to set up the spreadsheet. Others gave a fully illustrated step-by-step history of how they set up the spreadsheet. This is not a sensible or necessary use of time within the controlled conditions. Candidates need only submit work that provides evidence of the final spreadsheet and the features used.

Being concise is important in ICT reports and candidates should be reminded that the quality of the work produced is assessed rather than the quantity.

Organisation of portfolios

Some candidates fail to number the pages of their scripts as instructed in the Candidates' Booklet. A proportion of scripts were not submitted in the appropriate order (a) – (k) as requested in the Candidates' Booklet.

Some pages submitted did not include the name, centre number, or candidate number.

Some portfolios included blank or upside-down pages. The nature of an applied course, where quality of written communication is awarded marks throughout the submitted portfolio, means that candidates should be encouraged to check this kind of detail.

Choice of project

The emphasis is on real or at the very least realistic projects. Some candidates have said that their client is a multi-national company which calculates its payroll manually and needs an electronic spreadsheet system to improve the situation. This is scarcely believable or realistic.

Candidates should be steered away from unrealistic scenarios.

Investigation Time

Task (a) - Time plan

Most candidates attempted to break up the tasks and allocate an appropriate amount of time. Those who thought about this and broke it down into appropriate smaller subsets achieved the second mark.

Several candidates simply repeated the tasks (a) to (k) in the Candidate's Booklet and so received no marks.

Task (b) - Background information

Candidates should answer the question, 'Why does the client need a spreadsheet?' Most candidates described why a spreadsheet was needed. Those who went on to explain the benefits of the client using the spreadsheet solution gained the second mark.

Most candidates described the skill levels of the user. Those who went on to describe how this would affect their system gained the second mark. Some candidates said that as their client knew very little about spreadsheets, the formulas used would have to be simple. These candidates did not gain a second mark, as it is they who are setting up the formulae. A better

explanation would have been to describe simplifying the interface to reduce the possibility of data input errors.

Task (c) - Client needs

Most candidates produced a list of some client needs. Better candidates gave these needs in detail and explained how this would affect their system.

Some candidates included such statements as 'the client needs are to include six advanced software features' or 'my client wanted macros.' Clearly these were not requirements of the client but the requirements of the Specification and gained no marks. Modifying these statements to explain what client needs these items would meet would have gained some marks.

Few candidates described the inputs, processes and outputs in much detail, if at all. It was rare to see any mention of input or output formats, or to see sample input and output data. Some candidates did attempt to describe the processing that would take place. Describing the required outputs, inputs and processing needed to produce these outputs is an important part of describing the needs of the client.

Some candidates listed the required hardware for the solution, such as input devices rather than the data that has to be input. This is not needed and does not gain any marks.

Task (d) - Evaluation criteria

On the whole, this was done well but some candidates simply repeated their client's needs as evaluation criteria.

A common evaluation criterion was 'Have the client's needs been met?' without breaking this down into smaller parts. The evaluation criteria should be derived from the client needs and lead to a comprehensive test plan.

Task (e) - Designs

Most candidates produced annotated designs that could have been implemented quite easily by a third party.

Few candidates annotated their designs with client comments though some did document client discussion within their narrative description and then provided revised designs. These latter candidates were awarded marks for this description.

Task (f) - Test plan

Although candidates generally managed to produce a test plan, rarely did they describe their test strategy. A test strategy, for which 12 marks are available, should describe how the components of the system will be tested. From this a detailed test plan can be written. Test plans should enable the candidate to test that the client's needs and the evaluation criteria have been satisfied.

Many candidates had test plans that tested macro buttons and validation to exhaustion but did not test that the spreadsheet calculations were correct, or that input data produced the correct outputs. As a result the testing based on these test plans was weak and few candidates gained more than 3 of the 8 marks available in section (g).

Controlled conditions

Centres are reminded that controlled conditions means examination conditions and that clear guidance is provided in the Teachers' Notes about what is and what is not allowed. Any queries should be addressed to the ICT Subject Manager.

Several centres seemed to be unclear about what is allowed to be taken into controlled conditions sessions. No electronic files, including image files, may be taken into these sessions.

There was evidence that some candidates had access to their normal user areas and email during the controlled conditions. This does contravene controlled conditions rules and these facilities should be disabled by the centre during the controlled conditions sessions.

Task (g) - Testing

Work in this section is improving over time, but few candidates are testing discrete parts of the system and the system as a whole.

In their test strategy, candidates should specify appropriate data sets for testing the system, enter this data as inputs and check that the outputs match those expected.

Some candidates provided excessive amounts of evidence that testing had been carried out by, for example, showing screenshots of inputs, resultant outputs and each number being entered into a calculator program. Some provided very repetitive screenshots that showed numerous similar items being tested. These candidates gained no additional marks to those who produced a screenshot of the input and output and annotated it to explain how this compared with the expected result.

Task (h) - Implementation

Some very good examples of the use of spreadsheet software were seen. Candidates generally though did not do enough to explain how the spreadsheet system that they had created met the needs of the client, by referring back to the original description of the needs.

The best candidates, however, linked much of their work to the client needs stated in task (c).

Common problems with documenting the implementation of the spreadsheet system, often resulting in some of the available marks not being awarded, included:

- Screenshots cropped so that cells mentioned in formulas were not visible, so it was impossible to see whether the formulas referred to were correct
- Screenshots cropped so that formulas were not visible
- Screenshots cropped so that sheet names and file names had been removed
- Poor colour choice so that screenshots were not legible
- Screenshots being too small to read
- Macro code not being submitted

Some candidates printed worksheets in formula view, showing exactly what formulas they had set up. This is recommended, as it provides the examiner with the information required for assessment.

In many instances there was a large amount of superfluous material in the submitted work. This included, for example, guides to using Microsoft Excel, user documentation, hardware and software requirements for the client and screen-by-screen implementation reports.

Candidates do not need to document every step of how they used some feature of the software, such as recording a macro or formatting the borders of some cells. It is sufficient to show the completed feature, such as the coding of a macro or a screenshots of the cells with the borders formatted, as these will indicate to the examiner that a macro has been created or that the borders have been formatted and so show the features of the software that have been used. Annotation may be added if necessary to explain why these features were used.

Few candidates seemed to understand what is meant by a reusable spreadsheet system; that is one that can be used again and again, either by using templates to set up a blank worksheet or by creating automated facilities to delete old data.

Some candidates listed the advanced features that they had used, though others claimed credit for features which are standard and not advanced, such as SUM(), simple formulas or creating a chart. A list of relevant advanced features may be found in the Specification.

Several candidates specifically highlighted where they stated that the spreadsheet met the client's needs. Others had inserted a section at the end of this task stating how their client's needs were met by the system. This made it clear to the examiner that they understood what they were attempting to do.

Task (i) - Evaluation

Many candidates used their evaluation criteria and the client's needs in their evaluation and so gained some of the available marks. The best candidates provided evidence in the form of test results and screenshots to demonstrate that these criteria had been met. These critical evaluations gained higher marks.

Task (j) - Time planning

Most candidates did monitor their progress against their original time plan and those candidates who explained, rather than stated, any necessary alterations achieved two marks.

Task (k) - Written communication

This was generally pleasing. Candidates had made a lot of effort to ensure that their work was well described, using good technical language, as well as being checked for spelling and grammar. This resulted in many candidates gaining three or four of the available marks.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the [Results statistics](#) page of the AQA Website.