



**General Certificate of Education (A-level) Applied  
January 2012**

**Applied Information and  
Communication Technology**

**IT10**

**(Specification  
8751/8753/8756/8757/8759)**

**Unit 10: Advanced Spreadsheet Design**

***Report on the Examination***

---

Further copies of this Report on **the Examination** are available from: [aqa.org.uk](http://aqa.org.uk)

Copyright © 2011 AQA and its licensors. All rights reserved.

**Copyright**

AQA retains the copyright on all its publications. However, registered schools/colleges 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 schools/colleges 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.

The Assessment and Qualifications Alliance (AQA) is a company limited by guarantee registered in England and Wales (company number 3644723) and a registered charity (registered charity number 1073334).  
Registered address: AQA, Devas Street, Manchester M15 6EX.

## **Unit 10: Advanced Spreadsheet Design**

### **General Comments**

Minor changes were made to the wording of tasks (c), (e), (h), (i) and (j) in the Candidate Booklet with the intention of clarifying exactly what a student has to do.

The mark scheme was adjusted to take into account the changes to the tasks.

Most students revealed a good knowledge of the chosen software and provided evidence of setting up a spreadsheet system for a client. Some students produced a high standard of work which was very pleasing.

Some students submitted very long projects, some of which were repetitive. Quality is more important than quantity. It is not necessary to duplicate designs, test plans and tests where these are for similar or identical items. It is also unnecessary to describe the creation of each worksheet in item (h).

In fact, this where this type of repetitive work was presented, it appeared that those students had left themselves insufficient time for other items such as their evaluation.

By contrast many students achieved very high marks with concise documentation. Sadly it was evident that a large number of the clients were fictional, with some being rather unrealistic. Students should try to find a real client wherever possible, as a proper understanding of the client's needs is very important. Without a real client it is difficult to establish any client needs and this is likely to have an adverse effect on the marks gained. The use of a real client adds to the student's overall learning experience.

### **Organisation**

Some students failed to number the pages of their scripts as instructed in the Candidate Booklet.

Nearly all scripts were submitted in the appropriate order (a) - (j) as requested in the Candidate Booklet but some students submitted work which was not well organised and was not securely bound.

### **Choice of project**

Several students submitted booking systems such as for booking facilities at a leisure centre, or renting DVDs. Spreadsheet software is not normally appropriate for solving organisational problems that require data searching and sorting. This sort of problem is more likely to be suitably solved using database software.

Centres are advised to ensure that students select organisational problems that are suitable for implementation using a spreadsheet system.

Many students submitted invoice systems. This is a very good type of project for this unit, but only in a few cases did the output actually look like an invoice. Students would gain much benefit by, for example, examining the documents that are normally output from this type of system. This would be invaluable in designing the outputs required for the solution.

Students should justify why they are using spreadsheet software, such as to perform calculations or create graphs.

## Investigation Time

### Task (a) - Time plan

Most students scored the maximum of two marks on this section with tasks listed in a logical order and estimates of the time required for each.

### Task (b) - Background information

Students are expected to answer the question, 'What is the client's problem and how could a spreadsheet solution be used to address it?'

Most students could state the benefits of using ICT (for example, no need to store volumes of paper, good quality print-outs, reliable, backup, etc) without stating why a spreadsheet was needed, e.g. ability to do calculations, graphical output, macro capabilities.

Those who explained the benefits to the client of a spreadsheet solution gained the second mark available.

Some students did not identify their intended users sufficiently well, often referring only to '*the staff*' or '*the team*' and so not describing the individual user's skill level.

### Task (c) - Client needs

Nearly all students identified some client needs but few showed evidence of client agreement as required in the task and so only gained one mark. Better students also explained how these needs would affect the design of their proposed system.

Students seem to show little understanding of inputs, outputs and processing. Input refers to the data that has to be entered into the spreadsheet such as quantity and item number.

Processing means manipulating the input data e.g. by looking up a price or performing a calculation.

Output refers to information displayed such as total price or a delivery charge.

Too often 'inputs' were simply described as just clicking on a button. For those who attempted to describe input data the description was generally brief with little detail. It was rare to see any specification of input or output formats, or to see sample input and output data.

### Task (d) - Evaluation criteria

Most students identified some quantitative and qualitative criteria. Several students gained higher marks by relating their evaluation criteria to the client's needs stated in part (c).

### Task (e) – Designs

Nearly all students produced some designs. The quality was variable with some scruffy designs and some minimalist; the better ones were fully annotated, could easily have been implemented by a third party, included client comments about the designs and identified features that linked to the client's needs.

### Task (f) - Test plan

The test strategy was generally not done well. Some students referred to no more than 'normal/erroneous/extreme testing' and some reproduced almost the entire Test Plan and called it a strategy.

Most students produced some sort of test plan. Test plans were generally good at testing individual elements of the system, but few students included tests that would test the whole system. Specified data sets to be used were rarely included.

It should not be necessary to include hundreds of repetitive tests in the test plan. Students should test each part of their system (functional and module testing) and then choose data sets that test the system from start to finish (whole system testing).

### **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 A-Level Applied ICT Subject Manager.

Students should be reminded that no electronic files, including image files, may be taken into the controlled conditions sessions.

### **Task (g) - Testing**

Most students provided good evidence of testing where they were producing a system that involved calculating a final sum such as a grand total. This is because input data could be chosen beforehand and the expected interim and grand totals easily documented.

Where students had set up a data storage system the evidence of testing, particularly whole system testing, tended to be less well documented.

### **Task (h) – Implementation**

This section was well answered with nearly half the students getting at least 16 marks out of 18.

There is no need for students to provide screenshots of every stage of creating the spreadsheet system. It is sufficient to provide screenshots of

- The final worksheets (in normal and formula view)
- Macro coding
- Evidence of the system being reusable
- Explanation of how features used meet the client's needs

Where students have used advanced spreadsheet features, this is normally obvious from screenshots of the final spreadsheet and the student can annotate these to explain why they were used. However, many students include unnecessary instructions on how to use Excel to colour the background, change the font, insert WordArt, record a macro etc.

### **Task (i) - Time planning**

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

Too many students used very general comments such as 'completed on time' or 'this took longer than I expected.' It appeared that those students who had monitored their progress as they went along, found this section much easier to complete.

### **Task (j) – Evaluation**

Some students did not leave enough time in the controlled conditions to produce a suitable evaluation. Centres are reminded that item (j) now has up to 10 marks available for evaluation of the spreadsheet solution, self-evaluation and written communication. Students should leave an appropriate amount of time to complete this item.

The best students looked back at the original client needs, the evaluation criteria and the results of testing and demonstrated through this that the needs had been met. They also wrote clearly and fluently. Their work was well described, using good technical language, as well as being checked for spelling and grammar.