**General Certificate of Education (A-level) Applied
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Applied Information and Communication Technology	**IT10**

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

Unit 10: Advanced Spreadsheet Design

Report on the Examination

Unit 10: Advanced Spreadsheet Design

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

Some candidates submitted very long projects, some of which were very 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 repetition was often counterproductive as those candidates left themselves insufficient time for their evaluation.

By contrast many candidates achieved very high marks with concise documentation.

Sadly it was evident that a large number of the clients were fictional. Some were neither real nor realistic. Candidates should try to find a real client 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 a great adverse effect on the marks gained. The use of a real client will add to the candidate's overall learning experience.

Organisation
Some candidates 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.

Choice of project
Several candidates 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 suitably solved using database software

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

Many candidates 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. Candidates should pay attention to detail by, for example, examining the documents currently used. This is invaluable in designing the outputs required for the solution.

Investigation Time

Item (a) - Time plan
Most candidates scored the maximum of two marks on this item with tasks listed in a logical order, each having an estimate of the time required for completion.

Item (b) - Background information
Candidates are expected to answer the question, 'What is the problem the client has and how could a spreadsheet solution be used to address it?' in order to gain marks on this item

Most candidates could state the benefits of using ICT (no need to store volumes of paper, good quality print-outs, reliable, backup, etc) but did not state 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.

Candidates are also expected to identify the user(s), consider their skill level and state how this will affect the designs for their proposed solution. Most candidates were awarded one mark for identifying the user and their skill levels. Those who went on to describe how this would affect the design of their system gained the second mark.

Item (c) - Client needs

Nearly all candidates identified some client needs but few showed evidence of client agreement as required in the Candidate Booklet. Better candidates also explained how the client needs would affect the design of their proposed system.

A significant number of candidates are now presenting inputs, outputs and processing in a table. In many cases the work presented was brief, with little detail. It was rare to see any mention of input or output formats, or to see sample input and output data. Existing documents can be used to show output formats and investigate input requirements.

Item (d) - Evaluation criteria

Most candidates identified some quantitative and qualitative evaluation criteria. Some candidates gained higher marks by relating their evaluation criteria to the client's needs in item (c).

Some candidates recognised that some evaluation criteria need to be assessed by the client and provided evidence that the design work had the client's approval.

Item (e) – Designs

Nearly all candidates produced some designs. The quality varied greatly, with some untidy designs and some designs in outline only. 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.

Item (f) - Test plan

A good proportion of candidates managed to produce a test strategy. The use of data sets for testing should be encouraged, to help reduce the number of individual tests required and improve integration testing. Data sets should include the expected outputs as well as inputs.

Most candidates produced some sort of test plan. Sadly, few candidates included a test plan that tested all processes, for example by following the flow of data from input into the system to its relevant outputs from the system.

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.

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

Item (g) - Testing

Most candidates tested some parts of the system but few tested the system as a whole.

Many candidates tested validation extensively using extreme or erroneous data but did not test whether the overall spreadsheet system worked with acceptable data.

Some students demonstrated that they understood the purpose and function of testing through their use of sensible, predetermined data sets that reduced the number of tests required.

Item (h) – Implementation
This section had one of the highest average marks with over 75% of the candidates gaining at least 13 marks out of 18 on this section.

There is **no need** for candidates to provide screenshots for 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

Candidates who did create extensive commentaries on the implementation often left themselves with not enough time to properly evaluate their system and their own performance.

Some very good examples of the use of spreadsheet software were seen and the best candidates linked much of their work to the client needs as described in item (c).

The following documentation was included by some candidates unnecessarily and gained no credit:
- guides to using the spreadsheet software
- user documentation
- hardware and software requirements

Item (i) - 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.

Too many candidates put simplistic comments such as 'completed on time' or 'took longer than expected.' which were not sufficient to gain the second mark. Those who had explained why their use of time differed from the original time plan were awarded the second mark.

Item (j) – Evaluation
Centres are reminded that item (j) now has up to 10 marks available for evaluation of the spreadsheet solution, self evaluation and quality of written communication.

Performance on this item was good, overall, with nearly 80 per cent of candidates gaining half marks or over.

The majority of candidates provided evaluation comments that were related to the client's needs and/or evaluation criteria. Most candidates also tried to identify their own strengths, weaknesses and areas for improvement. The best candidates provided evidence to back up their conclusions, such as screenshots and/or cross referencing to test results.

The best candidates wrote clearly and fluently. Their work was well described, using good technical language, as well as being checked for spelling and grammar.

Many candidates did not appear to realise that 10 marks out of 38 (in the controlled conditions) are devoted to this item. Candidates' time plans often allocated less than an hour to Item (j). Consequently, their evaluations were often brief, or badly presented and not checked for mistakes.

Centres should ensure that candidates are aware of the need to allow sufficient time to carry out a thorough evaluation.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the Results statistics page of the AQA Website.