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General Certificate of Education

Information and Communication Technology 5521

Unit 3 Coursework: The Use of Generic Application Software for Task Solution

Report on the Examination

2007 examination – June series

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General comments

For this series the vast majority of centres focussed their implementation efforts on either spreadsheet or database software. There were other types of work submitted, most notably browser-based projects, but these were in the minority.

Unit ICT 3 demands only a task-based solution and many centres have responded well to this. Their candidates produce good quality documentation making sound use of ICT facilities in the presentation of their report. Teachers at many centres can accurately assess the marks for the work and these teachers often make well-judged and comprehensive comments on the Candidate Record Forms, all of which greatly assist the Moderator in their job.

Some centres still encourage their candidates to attempt systems for this unit and also to incorporate work from the ICT 6 specification. Whilst candidates are not penalised for this extra work, and the need to stretch good candidates is appreciated, the additional complexity required appeared to place additional and unnecessary burdens on these candidates and yet they receive no extra credit in the process.

As has been previously stated in these Reports some centres are still allowing their candidates to select problems that make it very difficult to achieve a realistic solution e.g. payroll and wages. Candidates should be reminded that the solution *must operate* in the real, working environment so tax and National Insurance must be handled in a realistic manner.

Some excellent solutions were seen which made good use of the software features available and thus the full range of marks was awarded across a number of sections. However, there were some task-based solutions, which did not solve a particular problem and made limited, sometimes repetitive, use of the available features.

Specification

Where marking was over generous the Input, Process and Output needs often contained insufficient detail to aid the design and creation of the solution. In particular, the consideration of processing requirements was very limited, so candidates were unable to show that they understood the Input, Process and Output needs for the solution they were tackling. Some candidates attempted to produce data flow diagrams but these were simplistic and candidates may have been better served by simply stating how the data was to be transformed.

A common assessment issue was where marks were allocated yet the candidates' reports did not contain sufficient evidence to support third party implementation e.g. there were omissions such as designs for formulae and/or macros for spreadsheets or queries for database solutions.

The use of implemented screen shots as part of the design is not good practice and candidates are expected to produce the design in advance of progressing onto the implementation phase of the solution. When candidates did not spend time on design work prior to implementation they often showed little understanding of what the solution was supposed to do or how it was to be used.

An issue with spreadsheet design is where the solution depends on a complex macro or macros, yet there is no design work given for the processes completed by the macro(s). Candidates should also be advised that focussing on macros to control a simple spreadsheet solution does not provide the candidate with adequate opportunity to demonstrate a wide range of skills and that extensive coding of a solution, especially in Visual Basic for Applications (VBA), is not within the spirit of this specification.

As ever it is critical that candidates test the functionality of their solutions yet some candidates still spent far too much time testing issues such as validation or navigation at the expense of the critical tasks the solution was intended to deliver.

Implementation

A commentary is expected in this section that details all the software features used by the candidates and their appropriateness for the solution with *clear* hardcopy / screenshot evidence, not a step-by-step description of how to use the software.

The award of marks must be backed up by *evidence* in the *report* of the solution produced. In addition to the commentary this evidence can be taken from the testing section and user documentation (where available) but ultimately clear proof is needed to establish that an effective solution has been built and to show what skills and techniques were deployed.

Testing

As discussed in the comments on the specification, the main functionality of the solution must be fully tested and hard copy evidence of that testing must be included in the report. Poor planning for testing inevitably affected the ability of the candidate to complete appropriate testing activities. Candidates should also be reminded that annotated screenshots or printouts are required to prove that solutions function as stated, and that these images should not be so cropped as to obscure important information or be so small as to make them effectively unreadable.

The marking criteria refer to corrective action and it is disappointing to see that some centres still credit highly work where corrective action has been ignored or is only superficially addressed (for example, where candidates refer to cosmetic changes to the format of the data yet ignore fundamental errors in the functionality of their solution). It was always the intention that testing should take place as the solution is developed and that candidates should show the problems that occurred, the steps they took to solve these problems and any subsequent re-testing to show success. Such an approach would make taking corrective action easily accessible to the candidate.

Evaluation

It is pleasing to see that where candidates give clear requirements for their solutions, candidates are then able to assess how well their solution functions against these requirements. Some candidates pay insufficient attention to establishing clear requirements and a more rigorous approach to this would help to develop candidates' ability to evaluate their solutions effectively. Requirements should focus on what the solution is intended to do and not on what 'items' should be implemented.

User Documentation

This section continues to be well attempted and accurately assessed. Some common faults however are to describe how to use the software package, rather than the solution, and to inadequately illustrate the uses of that solution e.g. showing screenshots with no data present.

Conclusions

A number of qualities have always been expected of candidates in order to achieve the grade E boundary. It is expected that candidates should demonstrate the basic use of analytical methods in specifying - and thus solving - a task-based problem. The design for that solution should show a basic knowledge of ICT structures, human/computer interfaces and applications software. Candidates should also be able to demonstrate basic skills in using generic applications software to solve the pre-stated problem. The candidate should show the ability to test the whole solution, not just its constituent parts, all be it in a limited way. As a consequence, the candidate will then be able to show the basic skills of evaluating their success or otherwise. Candidates should also be able to produce basic documentation for all aspects of the project, expressing their ideas clearly.

These issues have been referenced over several years within the Principal Moderator's Report on the Examination and also at the Standardisation Meetings for centres which occur each autumn. It has been consistently stressed that, while familiar and straightforward task-based solutions are acceptable, the candidate should demonstrate that he/she has used the appropriate software to provide a solution to that problem. Testing should be focussed on testing the viability of that solution and not on superficial, repetitive aspects. Too often Moderators see projects which show skills, but not the *application* of those skills to providing a solution. Equally we have seen testing to a plan, but the plan does not attempt to show if the solution is useable, it only focuses on re-testing the functionality built into the software. Failure to test the solution thus further reduces the candidate’s ability to apply even the basic evaluation skills.

In addition, for the grade A boundary, the candidate should be able to show effective use of the software available to produce high quality, efficient solutions to the problems posed. Candidates should express complex ideas clearly and fluently especially when using appropriate evaluation skills. However, there is evidence of limited solutions where documentation is not always clear and where solutions focus on a single skill.

In light of the observations made above, the grade boundaries for ICT 3 have been revised. The new boundaries are given below.

Grade	Max. mark	A	B	C	D	E
Scaled Boundary Mark	60	43	37	31	26	21
Uniform Boundary Mark	120	96	84	72	60	48

Mark Ranges and Award of Grades

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