



**General Certificate in Education**

**Computing 6511**

**CPT6      The Practical Project**

**Report on the Examination**

*2008 examination - June series*

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## **General**

Centres which entered candidates in 2008 need to read this Report in conjunction with the specific feedback sent to them on the publication of results. The comments below highlight the observations of Moderators during this year's examination and should be used together with the subject specification and assessment criteria to ensure that centre assessment is accurate.

### ***Administration***

Centres which accurately complete the Candidate Record Form, Project Log Sheet and Centre Declaration Sheet can help the Moderators. The centres that have devised their own form of comment sheets with extensive word-processed comments are also to be commended. However these still need to be accompanied by the Candidate Record Forms. It is now a *mandatory*, QCA requirement that the signatures on the Candidate Record Form are completed to minimise plagiarism. These Candidate Record Forms *must* be the current versions obtainable from the AQA website at [http://www.aqa.org.uk/admin/p\\_course.php](http://www.aqa.org.uk/admin/p_course.php) .

Candidates need to be aware that CPT3 contexts must *not* be used for A2 projects as AQA has completed the analysis for CPT 3.

Too many centres send in work late, without prior agreement by AQA. This strategy risks the late publication of their candidates' results. Centres are reminded that it is their responsibility to get the projects to the Moderators on time by using *first class post*. Please do not send projects using a method that requires a signature as most Moderators teach full time and cannot be expected to collect work from the courier at their distribution centres.

Projects need to be bound as a booklet ideally with two treasure tags to enable them to be easily read.

### ***Software***

The majority of candidates used Access with VBA or Visual Basic. There is an increasing number using VB.net and PHP with a few using Pascal/Delphi and C++, ASP, Java. Candidates completing a project entirely with a high level language accounted for nearly all the very high scoring projects.

### ***Project Development***

Low scoring candidates tended to submit simple projects with little complexity and most were assessed appropriately.

There continues to be too many candidates who pursue a project that merely used a package to collect data and produce simple reports with little or no data transformation. This type of project is not complex enough for A2 and cannot score a good mark however well the report is written.

### ***Project Reports***

The majority of the high scoring candidates use a programming language to demonstrate good coding skills and produced well-tested, well-documented effective solutions to real problems, with appreciative user feedback. Candidates that followed the reporting style of the specification and followed this up by completing the log sheets fully usually justified their assessment. More centres used the Candidate Record Forms and Project Log Sheets to record

a quantitative indication of the candidates' achievements, rather than to record how much effort a candidate has put into their work.

Most candidates achieving a high mark addressed fully all the items listed in the specification *in the context of their projects*. The project report is not the place for general theory. As in previous years, those who scored the highest marks included well reasoned and justified explanations of all aspects that are listed as indicators in each section of the specification and, in particular, good programming techniques which, together with a high performance level in the other sections, tended to be the feature that most distinguished the high scoring candidates from the others.

It would assist the Moderators greatly if items are addressed by candidates in the same order as the specification, especially when essential items appear in one or more appendices without accurate references as to where these items can be found. Sampling as described in the subject specification reduces bulk.

### **Analysis**

It cannot be over emphasised how important this section is to set the scope or complexity of the project.

Too few candidates provide a structured investigation using one or more formal techniques. It is not appropriate for the candidate to assume that their personal view of a problem provides enough detail. What is required is a carefully composed interview, questionnaires and evidence of the current system.

The analysis data dictionary remains a problem area with many centres ignoring it or just copying that used in Design.

More candidates produced clear and measurable objectives that were specific to their projects and not generalised, 'text book' type objectives such as 'user friendly', 'system must load in n seconds'. 'SMART'<sup>1</sup> objectives enable them to achieve higher marks in this and the appraisal section. It is good practice to break the objectives down into those that are qualitative and those that are quantitative.

After reading the analysis, the conclusion should be, 'Yes, I know what the aim of this project is.' If this is not the case, and/or all the relevant analysis criteria are not fully met then it cannot warrant a mark from band 4 of the assessment criteria.

### **Design**

Some designs were well planned and showed a high level of understanding of the requirements of an A2 project. Many candidates fail to score high marks by not conveying an understanding of the concepts of validation and security beyond a very superficial level, such as field length checks. The high scoring candidates show a good appreciation of data structures, file design and normalisation where this is required. The normalisation process should be clearly

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<sup>1</sup> 1. Specific – Objectives should specify what they want to achieve.  
2. Measurable – You should be able to measure if you are meeting the objectives or not.  
3. Achievable - Are the objectives you set achievable and attainable?  
4. Realistic – Can you realistically achieve the objectives with the resources you have?  
5. Time – When do you want to achieve the set objectives?

demonstrated by showing how the data model develops from the analysis data dictionary to 3<sup>rd</sup> normal form using standard notation.

There seems to be a great reluctance to show the HCI design as clearly annotated sketches or by the use of a graphic package. This allows the candidate to give clear explanations as to the rationale behind the input and output screens, and how they meet the user needs.

Very few candidates gave clear algorithms relating to the data transformation to be programmed by the candidate. These algorithms should be in a form that could be coded in any language and need to concentrate of the complex parts of the system that the candidate is going to code. Algorithms must be given if a high mark is to be scored.

Security, integrity and test strategy are problem areas as many candidates are not addressing these in the context of their system, but giving general theory.

### ***Technical solution***

Many of the candidates who used a programming language produced well-structured listings. High scoring candidates use advanced features appropriately. It is helpful if the code written by the candidate is highlighted and, in particular, the use of advanced features such as user defined data structures and parameter passing need to be clearly indicated. This confirms that the candidate understands what they have done.

There was a surprising mixture of candidates with a high mark in this section gaining a high mark overall and those who seemed to spend the majority of their time on their coding to the neglect of the other sections that account for 50 of the 65 marks.

Many candidates using packages did basic tailoring of the package, with rather simple macros. Some correctly identified where they had done the coding, rather than rely on wizards. It would benefit candidates to give more evidence of their customisation of the package, but this can be credited from either the testing section, system maintenance and/or the user manual.

The Computing specification does *not* require an ICT-style implementation guide. Evidence for the mark in this section comes from the testing and system maintenance sections and possible the user manual where screen shots may be the only evidence of the working system if other sections are not complete.

### ***System Testing***

Testing by many of the average and weak candidates was trivial. It is *not* appropriate to have multiple tests for login passwords and/or to prove that all the buttons open/close forms and/or reports. It needs to be emphasised that what is required is proof that the candidates' coding works to produce accurate results. The higher scoring candidates showed evidence of carrying out a thorough test plan effectively by producing a table of results and prints to prove it; the prints were well annotated - *not* cropped - cross referenced and ideally authorised by the assessor. Once again, the most disappointing aspect of this section remains the failure to appreciate the need for testing the candidates' system rather than just proving that a package works.

### ***System Maintenance***

Only a few candidates produced algorithms or a suitable alternative and only a small number of high scoring candidates produced them at a level that would enable *their* systems to be effectively maintained. All the items listed in the subject specification need to be addressed fully

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so that it can be clearly seen what the *candidate* has done. More evidence needs to be provided by the candidate of procedure and variable listings, together with full details of how a package was tailored, especially annotated design views of reports as well as forms. *Please do not include any package-generated code.*

### ***User Manual***

Some candidates produced good User documentation. Many used the Windows facilities of the packages they were using to embed screen shots in the documentation but too many of these were cropped. This was particularly the case with error messages where the data causing the error needs to be clearly visible as well as the message. Many failed to convince that the system worked, as there was very little data in the system when testing. As with the testing section concentrating on how the candidate written code processes the input to produce accurate results can reduce bulk.

### ***Appraisal***

There were only a few centres that had candidates with significant evidence of user feedback and even fewer that analysed this or used it as a basis for further development. Local assessors should authenticate user feedback especially where it obvious that the candidate has typed this out. Most candidates referred to the objectives set out in their Analysis section but not all fully evaluated how these objectives had, or had not, been met. The requirement for 'further development' should be based on the user feedback.

### ***Quality of Written Communication***

Most centres accurately assessed this criterion, with the general view being that acceptable use of English, a well-structured report divided into the sections detailed in the specification and the appropriate use of word processing facilities could score 3 marks. It is still disappointing that many candidates fail to use a word processor appropriately with many project reports missing such basics as headers, footers and word processor generated page numbers and a table of contents. It is not appropriate to award full marks for this section when candidates put important components of the documentation in appendices, especially if these are not accurately referenced in the sections where they should be situated.

### ***Mark Ranges and Award of Grades***

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