

Principal Moderator Feedback

Summer 2010

GCSE

GCSE Information & Communication Technology

Full Course and Short Course

(1185 and 3185) Paper 01

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General Comments

The standard of work this year was of a similar standard to the previous years. Most centres gave their candidates clear guide lines and suitable problems to solve, allowing their candidates to maximise their marks.

Projects are on the whole focusing more on the evidence required and therefore becoming smaller in size, but there are candidates who are still including far too many hardcopies of their solution. Very few centres included a blow by blow account of the process which is a waste of the candidates time.

For candidates to score high marks, all sections of the project report should clearly explain how the data will be manipulated to solve the problem.

Centres and candidates that had used the following subheadings usually produced work that matched the marking criteria and therefore scored well.

Identify

- Introduction
- The problem
- Real user
- Alternative solution 1
- Alternative solution 2
- Why is ICT a sensible way of solving this problem?
- Quantitative Objectives

Analyse

- Hardware
- Software
- Input
- Processing
- Output
- Backup
- Security

Design

- Initial Designs
- User Comments
- Final Designs
- Test Plan

Implementation

- Evidence of Error Correction
- Evidence of Testing
- Evidence of the Problem Solutions

Evaluation

- Evaluation of Objectives
- Users comments
- Further improvements

Marking and Submission of Work

Internal Standardisation

Some centres appear to be awarding marks on the candidate's perceived ability and not on the evidence contained in the project work. This makes it difficult to moderate and can affect the marks for the whole centre.

Annotation

Previous Principal Moderator feedback reports have advised that centres must give reasons for marking a project as an extended piece of work. Many centres have failed to do this. This is the most useful piece of annotation a teacher can add to the project and can be added to the CCMS1. Teachers who use the marking grid available on the Edexcel web site need to add very little extra annotation apart from the extended marking features.

Administration

Some centres failed to follow guidelines on submitting work for moderation. Centre must take care to ensure:

- To send the correct sample of work
 - Highest and lowest marked candidates work is required
 - If any asterisked candidates have been withdrawn they should be replaced by other candidates
- OPTEMs
 - Marks not written on OPTEMs
 - Marks on OPTEMs were not the same as candidates work
 - Teacher had failed to sign OPTEMs
 - Increasing number of arithmetic errors this year
- CCCS
 - No indication of standard or extended marking

Coursework Content

Standard and Extended

Centres are reminded that the evidence for extended work should not just appear in the Implementation section but also in the Analyse and Design sections. A significant number of centres had project marks significantly reduced due to the lack of extended evidence. Several centres using the new mark sheets had correctly filled them in showing no design evidence of extended tasks but still awarded the projects marks in the extended range.

One of the best ways to make sure a piece of work is extended is to mark the design section and make a list of the extended features, then check that the extended tasks have been evidenced in the implementation. The mark grids on the Edexcel website have space for this.

Only the extended tasks that have been designed and implemented count towards extended work.

A significant number of candidates are under achieving by failing to include the evidence required in both the design and implementation sections for extended tasks.

Identify

- Introduction
- The problem
- Real user
- Alternative solution 1
- Alternative solution 2
- Why is ICT a sensible way of solving this problem.
- Quantitative Objectives

Nearly all candidates are stating the problem clearly and identifying a 'real user'.

Consideration of possible alternative solutions was often varied with the stronger candidates often comparing an ICT solution to a manual one. To gain top marks, candidates have to justify the use of an ICT solution to the problem eg Why is ICT a sensible way of solving this problem?

More candidates expressed the user's requirements (quantitative objects) clearly but too many candidates are still giving general statements such as: "The user will need to be able to search the database" when an objective such as "The user will need to produce a printed list of everybody who has not paid their bill" gives the candidate an objective that can be used in all the other sections of the solution.

Although the specification only suggests three objectives, this should be looked at as a minimum and the more a candidate can suggest at this stage the easier it is to use them as a check list for analyse and design.

Candidates should not be using technical terms at this stage but should be describing the objectives in layman's terms.

Analysis

- Hardware
- Software
- Input
- Processing
- Output
- Backup
- Security

General - Centre marking of this section was again poor this year with lots of centres giving high marks to candidates for better English, rather than evidence of a more detailed analysis directly relating to the problems solution. The weakest candidates find it very difficult to produce anything other than generalised bookwork answers in this section.

Hardware - Stronger candidates are focusing on the specific hardware to solve the problem. Lots of candidates do not list cameras or scanners when images are required as part of the solution and then only the top candidates are adding meaningful detail related to the problems solution.

Software - Only the software that relate solely to the candidate's solution is required and the choice should be justified by using the objects.

Design

- Initial Designs
- User Comments
- Final Designs
- Test Plan

Input - To score high marks candidates need to include examples of actual data stating how it will be collected and input into the system. Most candidates may find a table format is useful.

Data	Type	Collection	Input	Validation
Cost of product	Currency (2DP)	From Invoice	Keyboard	Not negative
Number in stock	Integer	From stock take sheet	Keyboard	

Processing - Candidates find this section very difficult, with most of them producing a written report on how they are going to create the solution. This often lacks the detail required to gain high marks. To improve on this, candidates should take each of the Quantitative Objectives and explain how they are going to achieve them.

eg Quantitative Object - Produce a weekly profit total.

Process - Subtract weekly expenditure from weekly income.

Output - This section is still very poor with little or no detail included. For some problem types e.g. DTP, WP and Multi Media, this section is very important with lots of justified details required. Candidates should have at least 2 alternative ways of formatting the output. This can also include references to the user interface.

Backup - This should relate to the solutions backup and not the candidate's work. It is therefore recommended that candidates treat this as instructions to their users. It

should include “real” file size, frequency and the medium to be used. An increasing number of candidates used memory sticks for backup. These can only be used if it is clear that they are being used as other types of backup media and are stored in a safe place between backups.

Security - Not all problem solutions need security. Some candidates had elaborate security when the solution required easy access by the general public.

Design

- Initial Designs
- User Comments
- Final Designs
- Test Plan

This is a section where the evidence is very important. Lots of centres are giving high marks for the design when the evidence to support it is missing or lacks detail. Far too many centres are still marking implementation as design. Once a candidate uses the target software, the design process has finished and implementation has started, therefore hand drawn designs are preferred.

Designs should be regarded as working documents; crossings out and changes are acceptable as long as the designs remain readable. For designs to be awarded top marks they should show evidence of progression. This can be done by:

- Producing an initial design and then a second more detailed version
- Adding detail to the initial design in a different colour
- Photocopying the initial design and adding detail to it

When candidates are manipulating images, the original image should be printed out with annotated notes on how the image is going to be changed. These changes need to be executed in a graphics package to be awarded extended marks.

Candidates and teachers would benefit from checking the designs against the objectives, ensuring they have included the objectives that will earn them extended marks. Only the extended tasks that are designed can be awarded marks in the implementation.

Most candidates included user comments.

Test Plan - Although some candidates produced excellent test plans including the data that would be used in the testing, most candidates test plans were poor. The test plan can only score high marks if it contains test data. While all of the objectives need to be tested, candidates also need to fully test the problems' solution. If their objectives are poor then testing then does not mean high marks can be scored. It is good practice to test every formula in a spreadsheet, every search in a database and all the extended tasks. Candidates limit the marks that can be awarded if a test plan is not included.

Implementation

Marking - Centres are reminded that if no real design exists the maximum a candidate can score for implementation is 2 and it cannot be an extended project. The inclusion of hardcopy evidence of the testing cross referenced to the test plan needs to be present for a candidate to score more than half marks on this section.

Candidates are still producing far too much hardcopy in this section. There is no requirement for candidates to include screenshots showing each step in the implementation process.

This should consist of three sections:

- Evidence of error correction
 - 3 to 5 annotated printouts showing the work at different stages of the implementation
- Evidence of the implementation of the test plan
 - Maximum of one annotated printout per test, in practice several tests can often be shown on one printout.
 - Evidence should be cross referenced to the test plan.
 - Ticking a box on the test plan to say the test has been completed without the relevant hardcopy evidence gains no marks.
- Evidence of the problems solution
 - These needs to include any evidence that has not already been printout.
 - If the test plan fully tests the solution then further hardcopy evidence may not be required.
 - Evidence of extended work. These may require:
 - Formulae printouts,
 - Screen shot of queries in design view,
 - Screen shot of how the validation is setup,
 - Screen shot showing columns with text flow.

A lot of candidates failed to show that the problem had been solved. This usually occurred when candidate's evidence of implementation consisted of a series of cropped screen shots. This is not recommended as it fails to produce enough evidence to show that the problem has been solved. Spreadsheets were especially a problem if the moderator cannot see the row and column headers.

Hardcopy evidence of the testing being done linked to the test plan needs to be present for a candidate to score more than half marks on this section.

Evaluation

- Evaluation of Objectives
- Users comments
- Further improvements

The evaluation should be based on the solution of the original problem not the candidate's use of the software.

Most candidates attempted to evaluate their original objectives but often failed to include formal user's comments in the form of a letter or the results of a questionnaire.

The evaluation should be concluded by the candidate commenting on the user's comments and suggesting further improvements to the solution.

Spreadsheet Solutions

Identify

Quantitative objects were less of a problem, but candidates would still benefit by using simple objectives, with at least one objective per formulae used, for example:

- Susan needs to calculate a total for income each week.
- Susan needs to calculate a total for expenditure each week.
- Susan needs to calculate the profit each week.
- Susan needs to have the monthly figure for profit.
- Susan would like to be able to have a graph of income, expenditure and profit for a four week period.

Analyse

Candidates should be encouraged to use actual data in this section.

Input could be in the form of a table with a list of the data required, with columns for method of collection, method of input and any validation required.

In the processing section candidates need to discuss the formulas required in general terms e.g. Profit = income - expenditure.

The output section should focus around the user interface, use of colour, menus, buttons and input boxes and the type of graphs.

Design

Initial designs will not have any detail regarding formulas, but should give the user an idea of what the finished solution would look like. For example, what the column and row headings are and the position and look of the buttons. Then once the user comments have been recorded the candidate will add the detail regarding formulas, look up tables etc. It may be useful to give the candidates a blank spreadsheet printout with the grid on. Candidates need to make sure they have designed the elements which will lead to extended marks being awarded.

A full test plan needs to include the data values of the test data and would test:

- Every objective
- Every formula (replicated formulas only need to be tested once).
- Any other elements that have been created.
- Validation needs to be tested with two values - one valid data item and one invalid data item.
- If buttons are used for navigation the candidate only needs to test **ONE** button.
- Features used for extended work.

Implementation

There is no requirement for the candidate to show the moderator how they have created the solution, but for a spreadsheet a formulae printout should always be included. The only exception to this is for extended solutions. For example, validation and lookup tables may need extra screen shots/print outs.

Evaluation

The candidate should start by evaluating the original objectives, a simple yes or no with a test number is enough.

A letter from the user stating whether they have solved the problem and maybe some things they would like to add or change.

The candidate then needs to explain if the additions or changes are possible. They may also have some comments on how they would change it in the light of their attempted solution.

Database Solutions

Identify

The lack of quantitative objects often got candidates off to a poor start. Simple objectives such as the ones below will help candidates produce a more detailed solution.

- Fred needs to produce a list of cars sold that week.
- Fred needs to be able to search the database by price.
- Fred needs to be able to search the database by manufacturer.
- Fred needs to be able to search the database by engine size.
- Fred needs to print out a list of cars in price order each week for his advert in the local paper.

Analyse

Candidates should be encouraged to use actual data in this section.

Input could be in the form of a table with a list of the data required, with columns for method of collection, method of input and any validation required.

The objectives can then be used to explain the process and output. In the processing section they can describe the queries and reports required and for the output discuss the printed reports and the forms required, plus the user interface.

Design

The initial designs should concentrate on look and feel and therefore will be based on the screen forms and printed output. The user will not need to see the table design. The user comments can be written on the back of the designs.

The final designs will then have more detail added to them such as colour, font types/sizes, plus the designs of any data structures, relationships and simple/complex searches or any other features of the software used.

Several candidates just created the relationship but did nothing with it, this does not gain extended marks.

A full test plan needs to include the data values of the test data and would test:

- Every objective
- Creation, deletion and amending records
- Any other searches/sorts which have been created
- Validation needs to be tested with two values - One valid data item and one invalid data item.
- If buttons used for navigation the candidate only needs to test one button.
- Features used for extended work.

Evaluation

The candidate should start by evaluating the original objectives, a simple yes or no with page references to the evidence is enough.

A letter from the user stating whether they have solved the problem and maybe some things they would like to add or change.

The candidate then needs to explain if the additions or changes are possible. They may also have some comments on how they would change it in the light of their attempted solution.

DTP Solutions

Identify

The problems were often too superficial to gain high marks. Strong candidates produced a reusable solution such as a template which can be used by the user themselves. A candidate needs a problem that will give them a chance to demonstrate different DTP skills and realise that "real" DTP problems are not normally a one off solution. Magazines are often produced monthly, but very few candidates attempted to design a template for repeated use.

A magazine where candidates need to create 3 different sorts of page gives them more scope eg

- A front cover would allow them to display graphic and layout skills.
- A double page spread would allow text manipulation.
- A games page/readers' survey would allow different layout and text skills.

Most Sunday supplements have examples of these every week.

Quantitative objects appear to be a problem for this type of project with candidates falling into the trap of it looking good. This is subjective.

Simple objectives such as the ones below will help candidates produce a more detailed solution.

- The editor requires a front page with a full colour picture in the background.
- The editor requires the middle pages to have an article of 1000 words laid out in columns.
- The editor wants all the headings to be in the same style and size of font apart from the magazine name on the cover.
- The editor needs page numbers at the top of each page aligned alternatively left and right.
- The editor requires a front page with a full colour picture in the background.

Analyse

Hardware - The candidate will probably need to discuss the extra equipment they may need such as scanners, digital camera and printers.

If the candidate is producing a reusable solution then the actual data may be unimportant eg If the opening article will always be 500 words then the content of the article does not matter and the candidate could use any 500 word article cut and pasted from elsewhere.

The divisions between the inputs, process and output sections can get blurred. The input section should concentrate on where the individual data items will come from in terms of the problem. The vast majority of candidates stated that the data will be downloaded from the internet, when in terms of the problem they would collect it from the editor, photographer, journalist etc. They can then discuss the format the work will be in and what they will need to do with it to get it into the DTP package. If candidates are using a graphics package to manipulate the artwork then they need to discuss what they need to do in the process section. Different file formats and their use can also be discussed and the order they are going to do the work in eg

1. Create template
2. Prepare graphics
3. Insert graphics
4. Insert text

The output section should be discussing paper size, layout and printing.

Candidates often gave their own backup solution here and rarely considered the user. The size of the file was often overlooked; lots of candidates assumed it would fit on a floppy disc when the file would be too large.

Design

The initial design should be a simple blocked design so the user has some idea about the layout. Most candidates then added details regarding the fonts for the final design which was not enough detail for a final design. The individual blocks need detail regarding size, number of words, and the location of the data file. Images will require size and the graphics file location and name.

If the candidate is using manipulated images, then the original should be printed in the design with annotation as to the changes that are going to be made. If they are creating an original image then an annotated hand drawn design is required.

The changes should be made in a different software package to the original problem to gain extended marks. Simple manipulation such as resizing and cropping are not extended tasks.

A full test plan would test every objective, plus any features which had been added during the design.

Implementation

3 or 4 annotated printouts showing the solution at different stages plus the final solution and the evidence of testing is all that is required. If the candidate has manipulated graphical images, then the original pictures should be in the design section with annotated notes on the changes and the altered pictures will appear in the finished solution. The evidence required is one screen shot of the image in the graphics package.

As the final version will need to be printed as the evidence of testing there is no requirement to print another copy without the testing annotation.

Evaluation

The candidate should start by evaluating the original objectives, a simple yes or no with a page references to the evidence is enough.

A letter from the user stating whether they have solved the problem and maybe some things they would like to add or change. When the users are a group of people a questionnaire is a good method of getting user feedback. However the results of the questionnaire should be analysed by the candidate and presented as a report. A single copy of the questionnaire should be included with the report.

The candidate then needs to explain if the additions or changes are possible. They may also have some comments on how they would change it in the light of their attempted solution.

Multimedia Solutions

(See Notes for DTP Solutions)

Candidates often solved very superficial problems. Candidates who attempted a more demanding problem such as a kiosk type solution usually scored very well. This allowed them the opportunity to include a menu system, sound, graphics and video.

Teachers need to certify that features which cannot be printed have been used. One of the simplest ways to achieve this is to add an extra column onto the test plan for the teacher to initial.

Test No	Reason	Data	Expected Result	Teachers Signature
4(MM)	Sound plays for 5 seconds when slide is loaded	William Tell Overture	Hear William Tell Overture for 5 seconds when slide loads	
5 (SS)	Check home button returns user to main menu page	Home button on profit sheet	Clicking on button will close profit sheet and open main menu	

Candidates should be encouraged not to print slides out one per A4 page. As long as the text is readable the candidate can print out 3 or 4 to a page.

Animation is not an extended feature.

Web Page Solutions

(See Notes for DTP/Multimedia Solutions)

A web site should not be a one off, but will need updating by the user once it has been created. Far too many candidates were just making web pages by cutting and pasting from other sites and were not really solving a problem.

Web pages are very difficult to do justice to in hardcopy and teachers should bear this in mind when setting this type of problem. Evidence for extended tasks must be clearly shown.

For example it is possible to show animated graphics by printing out the individual sequence which makes up the finished graphic.

Hyperlinks are not extended tasks when used in web pages.

Word Processing Solutions

(See Notes for DTP/Multimedia Solutions)

Centres should be very careful if submitting Word Processing and DTP solutions; they should concentrate on different skills. Several centres produced an advert via DTP and a flyer and letter headed paper via Word Processing. These are not significantly different skills and may lead to the lowest solution being marked as zero.

It is recommended that centres do not submit work from both of these software types, but if they do then the Word Processing problem should be based on a mail merge.

Statistics

Subject: 1185 ICT (Full Course)

Papers: 01 Coursework

Grade	Maximum Mark	A*	A	B	C	D	E	F	G
Boundary Mark	168	144	124	104	84	67	50	33	16

Subject: 3185 ICT (Short Course)

Paper: 01 Coursework

Grade	Maximum Mark	A*	A	B	C	D	E	F	G
Boundary Mark	84	72	62	52	42	33	25	17	9

Note:

The figures given are the minimum subject marks required for each overall grade.

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