

# **Applied ICT (Double Award)**

General Certificate of Secondary Education 1494

## **Examiners' Reports**

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**January 2011**

**1494/R/11J**

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Reports should be read in conjunction with the published question papers and mark schemes for the Examination.

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# **Principal Moderator Report**

## **General Comments**

Most centres used the Unit Recording Sheets, with many referencing the page numbers where evidence achieving the criteria could be found. This helped with cross-referencing and aided the moderation process. Some centres provided extra annotation within the coursework portfolios and this was greatly appreciated by the moderating team. Some indication where tutors are allocating marks benefits both the candidate and the moderator.

Centres are also reminded that where candidates are taught and assessed by more than one teacher, this should be recorded in the 'teaching group' column of the MS1.

There is a requirement for all Centres to provide a Centre Authentication Form, CCS160, for both units. Failure to send this form could delay in results being released. Centres are requested to send these forms to the moderator either with the MS1 or with the coursework sample.

## 4872 ICT Knowledge and Understanding

The number of candidates entered for all units this year was significantly less than in January 2010.

### Principal Examiner's Report

#### General Comments

As in previous sessions, most candidates were able to demonstrate knowledge and understanding covering the majority of the specification requirements. Fewer candidates lost marks than in previous years by giving brand names rather than generic names. Google now appears in the English dictionary and whilst it is a brand name, *it was accepted as a valid answer*.

Higher marks are dependent on the ability to explain answers by giving valid and coherent reasons; the questions on this paper which required more detailed explanation were not answered well. The final question, which was marked using a graded response method, required a detailed explanation; it was not particularly well answered by many of the candidates.

Candidates should be advised to look at the number of marks available for each question/part question, as this gives a good indication of the level of detail and number of points required. Some candidates failed to answer the question that was being asked because they did not read the question properly.

Many candidates had clearly prepared well for this examination by using papers from past sessions as practice material. Candidates that gave vague answers resulting in losing marks.

Writing down even the simplest spreadsheet formulae appears to be beyond quite a few candidates with the prolific use of SUM being the most common error.

The handwriting of some candidates was poor.

#### Comments on Individual Questions

- 1a Few candidates knew the meaning of 'superscript'. This question proved to be a good discriminator for the higher ability candidates.
- 1b Many candidates had problems with making a distinction between content and layout, thus candidates who wrote about increasing the size of text, boldening text or including images gained no marks. Candidates who wrote about layout were rewarded.
- 1c(i) This question was generally well answered.
- 1c(ii) There was confusion between rotation/inverted and reflection. The image has been 'flipped' and not rotated. Answers stating that the image had been 'mirrored' or 'reflected' were correct.
- 1d In general this question was poorly answered. Many candidates recognised that there was a need to acknowledge or get permission from owners. The more accomplished candidates stated that if the image was to be used for education or trivial purposes then permission was not required and this was permitted. These candidates clearly understood the Act. Those who thought that by taking an image and altering it and then claiming that it was their own clearly did not.

- 1e Most candidates appreciated that text wrapping was to have 'text round the picture' but only the more able candidates appreciated that this could exist in a number of different forms. Some candidates thought that text wrapping was to do with the ability to have text under or over images.
- 2a This was a well answered question.
- 2b This was generally well answered; however, some candidates mentioned scanners or speakers and thus did not put the answers into the context of the question.
- 2c Some candidates wrote USB – this is a port not a device.
- 2d(i) Most candidates stated 'copy' but quite a few candidates referred to storage device or separate locations without reference to having made a copy.
- 2d(ii) Most candidates appreciated that a backup was required in case the original was lost or destroyed but did not realise that they did not need to start all over again.
- 3a Candidates are required to produce such a table in their coursework and consequently this should have been an easy question. It proved not to be the case. Some candidates included fields that were not on the original questionnaire. Many candidates clearly did not understand validation or why the database was set up. Validation for DoB, gender or pay was often poor. Boolean was beyond all but the more able candidates.
- 3b Generally a well answered question although a number of candidates wrote about medical conditions, disability or other irrelevant points.
- 3c Whilst candidates appreciated that the key field needs to be unique, only the more able candidates appreciate the need to identify the record.
- 3d Few candidates were aware of the reasons.
- 4a(i) Imprecise language let down many candidates. Many stated 'drag the line' without any reference to column A or B.
- 4a(ii) Generally a well answered question, however whilst  $=SUM(x*y)$  works it is not correct, and candidates with this type of answer were only awarded half marks. The prolific, incorrect use of SUM needs to be addressed.
- 4a(iii) B2 – B8 rather than the correct answer B8 – B2 were given credit this session. Candidates still have an urge to incorporate SUM in their answer and whilst this works in Excel it demonstrates a lack of understanding and again this needs to be addressed by teachers.
- 4b Successful attempts at this question were often done by giving an example. This is to be encouraged when candidates understand what is required but lack the literacy skills to explain.
- 4c Most candidates understood the question and gave reasonable responses. More able candidates understood the process of modelling.
- 5a(i) Most candidates obtained at least one mark.
- 5a(ii) This was generally a well answered question.

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- 5a(iii) The poorer candidates failed to appreciate the difference between files and folders and consequently lost marks.
- 6a This question differentiated between the more able and less able candidates regarding the difference between a search engine and a web browser. Many stated that a web browser was a web page. There appears to be a need to explain the various facets of the Internet. Many candidates described a search engine.
- 6b Most candidates appreciated that it was a link but not to where to. The majority thought that only text could be linked.
- 6c Many candidates over used Wikipedia as an answer and simply repeated the question. Many poorly described an online encyclopaedia; many thought that it was a dictionary.
- 6d Some candidates confused this with a web browser but the majority were aware of what a search engine did.
- 6e Most candidates knew that something was saved but many said saved pages rather than links or addresses. The mention of URLs was notably absent.
- 7 This was a question where candidates had to think about the advantages of using the Internet rather than email, both of which candidates freely use. Few achieved the higher tier simply because they did not address the question. Candidates tended to repeat themselves in order to fill the space.

## 4873 Business Systems Portfolio

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Candidates studied a wide range of organisations, many through case studies. Most candidates produced systems linking database and word processing software. The similarity of solutions from candidates within some centres is a cause for some concern, as the specification requires candidates to design and create their own solutions.

#### Strand A

The purpose of this strand is to enable candidates to learn about hardware and software by studying its use in real organisations. Best work came from centres carrying out genuine research into real organisations, enabling candidates to learn about specific hardware and software used. A significant number of candidates wrote about what they thought organisations should use, rather than what they do use. Many candidates were awarded high marks for work that merely considered peripheral devices rather than the overall hardware infrastructure of the organisations. Where organisations use a network, this is an important aspect that all candidates should consider. There is a minimum requirement, for one mark, to give at least one use of ICT by each of two organisations, along with the information requirements and the hardware and application software for at least one system.

#### Strand B

The purpose of this strand is for candidates to comment on standards of layout, presentation and writing styles on the documents they have collected, drawing conclusions in a word processed report. Some centres awarded middle band marks over-generously when candidates had identified audience and purpose but made little or no reference to the content, layout and style of documents studied. Candidates often scored higher marks where they annotated the documents. There is no requirement in this strand to criticise documents or suggest improvements. The full six marks can be gained where candidates summarise their findings about standards relating to layout, content and style of specific types of documents, including recognition of house style.

#### Strand C

The purpose of this strand is for candidates to prove they have mastered the use of application software. The quality of documents produced for this strand has improved although candidates should produce documents of their own rather than copy examples they have been given. There is a requirement for these documents to be fit for purpose and audience, which means they should have very few errors. Documents should be spell-checked and proof read to check for errors in content, layout and style. Business cards or flyers give candidates very little scope to show their mastery of publication software and tend to gain marks in the lowest band. Candidates should produce, for example, a business report combining text, graphics, charts, photographs etc, and make use of features such as text and graphic frames, columns, headers or footers, text wrap and text flow. A presentation should combine a range of different media effectively and house style which implies more than just adding a logo. Some candidates produce an invoice using spreadsheet software, which does not contribute to marks in this strand. Where candidates fail to meet the basic rubric of producing documents using each of WP, DTP and presentation software no more than two marks can be awarded.



## **Strand D**

A data flow diagram (DFD) shows external entities, processes and data stores, with the flow of data between them. It makes no attempt to show the order of processes. Many candidates are still using the wrong symbols and producing flow charts not DFDs, which do not meet the requirements for marks above the lowest band.

## **Strand E**

The purpose of this strand is for candidates to be specific about what their system will do and what the desired outcomes will be. Consideration of testing strategies is required for middle and upper band marks. Candidates should at an early stage specify a system that is not too challenging for them and that they are capable of completing.

## **Strand F**

The purpose of this strand is for candidates to record the implementation of their system, not a set of instructions for the use of the software. Those scoring high marks used cropped screenshots as part of a coherent report. In order for someone else to re-create their system candidates should provide printouts showing data they have entered. Printed output is necessary evidence that implementation has been completed. If a database is set up there should be sufficient records to enable candidates to show that their system works efficiently. Twenty records should be considered the minimum.

## **Strand G**

The purpose of this strand is for candidates to test and evaluate their system. Candidates gain marks for testing their system using normal, abnormal and extreme inputs. Normal data is within the expected range, extreme data is at the boundaries of the expected range and abnormal data is outside the expected range. For example, if the range is 0 to 100, 20 and 70 would be normal, 0 and 100 would be extreme, whilst -5 or alphabetic data would be abnormal. For marks in the highest band candidates should provide clear evidence of improvements made as a result of testing, and should evaluate their system against user requirements.

## **Strand H**

The purpose of this strand is for candidates to produce a user guide for someone to use the system they have set up. There were some excellent examples of user guides from candidates who used annotated, cropped screen prints to produce 'quick start' guides which would allow a novice to start using the system quickly. High attainment was often aided by use of user-friendly menus or switchboards in database systems. It is important that candidates cover all required points in the exemplification. Their user guide must also cover all areas of their system.

## 4874 ICT Survey Portfolio

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The general purpose of this unit is for candidates to use ICT for meaningful research. There was a significant difference in the standard of reports for strands E, F and G, with some candidates producing thorough, well-researched reports; whilst others showed little or no evidence of research and produced superficial reports, often including much repetition. The spreadsheet and database should be designed and created by the candidates. The similarity of these elements from candidates in some centres is a matter of some concern.

#### Strand A

In this strand candidates must produce a bibliography of sources they use in the entire portfolio. Some centres approached this as a separate task rather than as evidence of research carried out for the rest of the unit. A significant number of candidates did not list sources used in their research for strands E, F and G. Candidates should also show how well they can use the Internet as a research tool. Higher band marks were frequently awarded on the strength of evidence that candidates had used the advanced search page option of a search engine, regardless of the quality of criteria entered. Candidates at this level should also provide evidence of cross referencing sources to check for accuracy and bias. When listing web sources these should be URLs for the actual pages of useful information rather than for website home pages. Where research is restricted to the Internet, marks can only be awarded in the lowest band.

#### Strand B

Candidates who achieved well started with clear statements or aims for their survey, and this focus allowed them to produce a meaningful report of their findings. Some candidates carried out purposeless searches without arriving at any conclusions from their survey. Candidates from some centres split a single data table into two rather than using a true 'one to many' relationship. Others set up related tables but did not make use of related data, and produced queries using only one of their tables. This does not meet the criteria for the higher mark bands. Centres should note that sorting is a requirement in all mark bands. Evidence of this was often missing.

#### Strand C

Candidates from many centres produced reports summarising effective analysis of complex spreadsheets, meeting the requirements for high marks. All candidates need to show printed evidence of formulae and functions used.

#### Strand D

Candidates often created good media elements, many using sound or edited digital photographs with a few using video clips they had filmed themselves. Unfortunately some centres gave high marks to candidates who had used a limited range of media and links. Clip art sounds and animations are basic features which do not satisfy the criteria for higher band marks. Additionally, many candidates failed to produce a storyboard or structure diagram showing the variety of routes through their presentation. Centres are advised to ensure the printouts provided in the portfolios accurately evidence the range of media and interactivity in the presentations. Where this is not the case, teacher witness statements can detail the different elements used.

### **Strand E**

A number of candidates wrote in general terms rather than clearly identifying specific groups or individuals affected by developments in ICT. Bulleted lists or brief sentences in a table structure are unlikely to reach the higher mark bands.

### **Strand F**

Candidates who had obviously specifically addressed this strand often gained higher marks than those who tried to meet the requirements of strands E and F together. Where 'needs met' by the uses of ICT are not explicitly considered marks are restricted to the lowest mark band. A need is defined as satisfying a basic requirement whilst a benefit is an advantage of meeting these requirements, e.g. candidates might write about the communication needs of some groups and will identify some of the advantages of using ICT to meet those particular needs.

### **Strand G**

This strand must be related to specific groups or individuals, e.g. in the area of communications those with no access to computers and the Internet will not have the advantages of email for quick and easy communication with friends and relatives. Further explanation that would suggest this might result in people becoming more isolated, left out of activities, losing contact with friends over time, etc, is required before middle and higher band marks can be considered. Some centres gave candidates credit in this strand for negative consequences of the use of ICT, rather than consequences of little or no access.

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