

GCSE

Applied ICT

GCSE 1494

Report on the Units

June 2010

1494/R/10

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This report on the Examination provides information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the specification content, of the operation of the scheme of assessment and of the application of assessment criteria.

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

The number of candidates entered for all units this year was significantly fewer than in either session of 2009.

Most work was presented bound with treasury tags in the manner requested in the portfolio administration pack. A few centres presented work as loose pages in document wallets or plastic pockets, which are difficult to handle and not appropriate for moderation.

A significant number of portfolios came with no Centre Name or Candidate Number on the individual URL sheets, this slowed down the moderation process.

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 moderation process. Some centres are still including unnecessary printouts e.g. multiple copies of data collection forms.

There are still a significant number of arithmetic errors. A number of centres had different marks on the MS1 form from the mark on the URS attached to the candidates work. In a minority of cases, errors were found in the addition of marks on the URS. In some cases centres gave 3 different marks for one candidate.

Before sending MS1 mark sheets to OCR and the moderator it is important to double-check that the mark on the URS has been correctly totalled and that it has been correctly transferred to the MS1. Centres need to ensure that the intended mark is clear on the copy to be sent to 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.

Moderators continue to identify centres that would benefit from a more complete understanding of the specification by attendance at OCR training courses.

4872 ICT Knowledge and Understanding

General Comments

As in previous sessions, most candidates were able to demonstrate knowledge and understanding covering the majority of the specification requirements. Knowledge of basic hardware and software is better than last year. Fewer candidates lost marks than in previous years by giving brand names rather than generic names.

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.

Candidates should be advised to look at the number of marks available for each question/part question, as this gives a good indication to the level of detail and number of points required.

A common error was that candidates failed to use correct ICT terminology. For example, it is expected that candidates should be able to refer to 'RAM' rather than 'memory'.

Many candidates had clearly prepared well for this examination, using papers from past sessions as practice material. Whilst this is clearly helpful, candidates need to ensure they read all questions thoroughly and answer the question set, rather than a question on the topic that either they would have liked to have seen, or that has been asked on previous papers.

Fewer candidates gave vague answers in the hope of gaining marks, candidates need to appreciate that vague descriptions will not gain marks.

Comments on individual questions

- 1a-d Straightforward questions to get candidates started and almost all candidates gave the correct answers.
- 1e Only a few candidates placed the hardware devices in the correct order although the majority of candidates obtained at least one mark.
- 1f Most candidates knew that RAM was the correct answer but few, because it was a 'describe' question, were able to gain the two marks for part (ii).
- 1g Whilst many candidates could answer the first part, the 'why the device effects the speed of the computer' was a good discriminator for the most able candidates. Many thought the hard drive's contents determined the computers speed rather than the access time.
- 2a A straightforward question and only carelessness stopped candidates gaining 4 marks. Benefit of the doubt was given for labels C and D, for B and E the examiner could not determine exactly the feature that was being identified. For label B some candidates wrongly circled both the bullet and the associated text.
- 2b The majority of candidates resisted the temptation of stating that a touch screen is a screen that you can touch, as no more marks are awarded for repeating the question. The majority of candidates gave good answers to the question. The 'advantages of using a touch screen' was also well answered.
- 2ci The majority of candidates correctly answered this question correctly.

- 2cii Whilst most candidates obtained one mark, many lost out because they only considered the reason from one perspective.
- 2d The obvious answer 'Text' was often omitted. Candidates who gave animation and video as separate answers only gained one mark.
- 3a Nearly all candidates wanted to 'share files' showing that they have not applied knowledge to the question and are simply regurgitating learnt facts. Sharing Internet and sharing peripherals were fairly common but very few candidates gained all three marks.
- 3bi Few candidates knew enough to gain all three marks. Those that did identified adjustable back support and arm rests. Many mentioned comfortable (comfy) or padded for no marks.
- 3bii Very few candidates gained more than the obvious one mark for 'not hurting your back'. RSI was often quoted without qualification for no marks.
- 3c Only a few candidates, who thought about the consequences of poor lighting, gained both marks. Eye strain was the obvious answer with a few mentioning glare.
- 4ai Again, as in question 2cii, candidates had to think from more than one perspective i.e. taking work in to the library and taking work away. Few managed this and therefore only gained one mark. It appears that many did not read the question but instead wrote about what could be done on a school network.
- 4aii Most candidates gained the mark for this with CD or DVD. Candidates who wrote CD-ROM or DVD-ROM were not awarded a mark.
- 4aiii Those candidates who answered the previous question correctly generally gained full marks on this part.
- 4b This question was answered better than similar questions in previous papers. As a result candidates did well with some very good answers. Nearly all candidates picked up half marks or more.
- 5a Most candidates picked up two marks. The disadvantages rather than an advantage seemed to be easier, with 'books get torn' and 'cannot be updated', as the most common responses. Many candidates do not seem to have experience of book encyclopaedias.
- 5b Most candidates struggled with this question and often wrote about DVD players versus computers. Some candidates picked up a mark for greater range of information with on-line access or easier to update. Many candidates failed to read the question and gave answers on the advantages/disadvantages of DVDs.
- 5c Most candidates got the mark for this but a significant number wrote about video versus sound.
- 6ai A straightforward question with the majority of candidates answering correctly.
- 6aii Most candidates wrote 4 (characters) although some appeared not to notice the five possibilities and consequently wrongly wrote down more than four characters.
- 6bi The majority of candidates obtained full marks.
- 6bii Most candidates gained one of the two marks by simply citing an example. Those who gave the correct definition gained both marks.

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6ci Most candidates gained both marks.

6cii Generally a well answered question.

6d This question was designed to be a high level discriminator and it proved to be just that. The more able candidates understood exactly what was required and quickly gained four of the six marks, whilst the remainder 'waffled'.

7ai Generally a well answered question.

7aii The majority of candidates wrote the data protection act.

7aiii This descriptive question pleasingly illustrated that most candidates did understand the concept of a strong password. However, only a few gained full marks.

7bi A well answered question by candidates.

7bii Many candidates incorrectly thought that when the age field was sorted it would be sorted in the order Infant, Child, Teens, Adult and thus came up with the wrong answer.

7biii This was another good discriminator of more able candidates. Very few candidates were able to fully explain the concept of a query. Quite a few candidates were able to pick up a mark for query and for ordering, but the query criteria was poorly answered.

8a The majority of candidates picked up both marks.

8b The majority of candidates picked up two marks.

8ci The majority of candidates obtained at least one mark from this question.

8cii Another discriminator of the more able candidates. Many candidates understood that you could resize from the corner and thereby maintain perspective but only a few mentioned cropping and when they did it was often vague and did not mention that the sides had to be cropped.

9 The majority of candidate picked up two marks for, 'May not have the Internet' and 'May not know where the website is'.

4873 Business Systems Portfolio

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 overgenerously 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 a 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 deserve marks only 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 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. Teachers must ensure that, at an early stage, candidates 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. Some Centres ensured that this was carried out only once irrespective of the needs for testing the system. 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. Candidates who went to the trouble of producing a separate A5 booklet, presumably using existing user guides to help them, often fared better.

It is important that candidates cover all of the required points in the exemplification. Their user guide must also cover all areas of their system.

4874 ICT Survey Portfolio

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 research, producing 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. There appears to be a misunderstanding as to the meaning of accuracy and bias. Just because information comes from a well know site does not mean that it is not biased and indeed it may also be inaccurate. 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.

Some Centres allowed candidates to 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 well the requirements for high marks. All candidates need to show printed evidence of the formulas 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.

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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 the 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. For example, candidates might write about the communication needs of some groups. Then they 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. For example, in the area of communications those with no access to computers and the Internet will not have the advantages of email – quick and easy communication with friends and relatives. Further explanation that 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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