OCR
RECOGNISING ACHIEVEMENT

GCSE

Applied ICT

GCSE **1494**

Report on the Units

June 2009

1494/MS/R/09

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Applied GCSE ICT (1494)

REPORT ON THE UNITS

Chief Examiner's Report

The number of candidates entered for all units this year was just less than 45% less than in 2008.

The range of achievement noted in both written paper and portfolios suggests that the course is undertaken by candidates of all abilities.

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

4872: ICT Knowledge and Understanding (Written Examination)

General Comments

This paper was attempted by candidates from a wide ability range, with a few showing an excellent, detailed understanding of a wide range of issues.

Most candidates gained at least some marks from a range of questions, covering a number of different areas of the specification. Most attempted to answer in complete sentences but there was still a problem with a minority of candidates whose answers could not be read. It is important for centres to make clear to their candidates that where responses cannot be read by the examiner they cannot be awarded any marks. Additionally, unless the question clearly requires it, a single word is rarely enough to gain a mark.

Although there were a number of candidates who did not attempt every question there was no evidence that they had insufficient time –they simply left out some of the questions targeted at the highest levels.

Candidates working at the lower levels tended to give very brief answers, even to the longer questions, but did sometimes gain at least one mark from these, whilst the more able candidates were able to consider a wider range of aspects in more detail, so gaining more marks.

As in previous sessions there was evidence that some candidates had learned answers from previous papers and reproduced these in response to questions on similar topics but placed in a different context. Generally, candidates who considered the context of the questions were able to give better quality answers.

Comments on Individual Questions

Q No)

1)   (a-d)   Most candidates answered these well, having been taught the difference between input, output and storage devices. Where candidates did lose marks this was mostly through an inability to distinguish between internal and backing storage in parts (c) and (d). There remains a tendency to consider, for example, a hard disk drive as internal storage simply because it is usually physically located in the 'main' box. Centres are advised to ensure their candidates understand the difference between main, internal storage and backing storage, including the different hardware used and the different purposes for these types of storage.

    (e)   Most candidates were able to correctly identify that a printer would be needed although a significant number appeared not to have read the question and tried to give an answer from the list provided.

        Where candidates correctly identified the need for a printer they were usually able to show an understanding that this could be shared across a network, although some candidates wrote instead about not everyone needing to print. The number of candidates gaining both marks for (ii) was less than anticipated, as many failed to explain their answer fully. The ability to share printers across a network does not on its own explain *why* this might be done.

2) (a) Most candidates gained a mark for both parts of this question, although a few gave answers such as 'headset' that were too vague to be able to distinguish input from output.

(b) Most candidates were able to identify the fact that using online telephony (VOIP) means that there is no additional cost for each call, although a number considered only the use of headsets, giving answers about not needing to use hands to hold a telephone, which is not a feature that is exclusive to VOIP systems.

(c) Most candidates were able to show some understanding of the fact that people without the necessary hardware/software would need to be able to contact the company, but many seemed to think that the system would only be usable within the company.

3) (a) Both parts of this question were generally answered correctly, with a minority mixing up the two terms. Other common incorrect answers were 5 and 24.

(b) This question was not as well answered as might have been expected, with many candidates answering 'ID', perhaps suggesting a learned response rather than any understanding.

(c) Most candidates were able to explain the need for a unique identifier for each record.

(d) (i) Although most candidates knew that forms were for data entry many were unable to give any further explanation for a second mark. Understanding of facts such as they show one record at a time, can show fields from more than one table, are more intuitive for non-computer experts and can have buttons to make actions like deleting easier was not generally shown. Common incorrect answers included vague ideas of forms 'showing' records and suggestions that they allowed easier data entry because of features such as validation, drop-down input boxes and input masks, all of which are available when entering data directly into tables. A few candidates appeared to be writing about paper forms.

(ii) Database queries have two main functions – to sort/search records and to select fields for display. Most candidates were able to suggest one or other of these functions but only a very small number gave both. The most common answer was to identify the fact that queries allow you to sort and search, which contrasts with the many queries that are seen in coursework portfolios that show selection of fields and no search/sort criteria.

(iii) In most cases candidates showed a fuller understanding of reports than they did of forms or queries. Many were able to gain both marks by identifying the fact that a report shows the output of a query in well-displayed format for printing.

4) (a) Most candidates were able to correctly identify CAD as the most appropriate software package although graphics packages and DTP, along with a small number of brand names, were not uncommon incorrect answers.

(b)   Some candidates demonstrated a good understanding of the use of CAD, often clearly showing that they had some practical experience, which was pleasing. However, many marks were lost through a poor application to professional uses, with little understanding shown that a professional architect will be able to draw both two and three-dimensional views neatly and accurately without the use of a computer. Some learned responses were reproduced, linking CAD with CAM, which had no relevance to the scenario for this particular question.

Many candidates gained one or two marks only in this question, showing an understanding of ease of editing but failing to evidence any more depth of knowledge or understanding of the use of CAD in this type of environment. Those candidates who considered the context of the question gave answers relating to the ease of communication/team working and/or the similarity of many apartments/blocks, which enabled them to access the higher marks.

(c)   Most candidates were able to identify the need to save work to avoid losing it in the event of a computer crashing/shutting down. A few excellent answers considered the need to save *regularly*, identifying the fact that this will reduce the amount of work lost, rather than eliminating loss altogether.

(d) (i)   This question was generally answered well. It is possible that the previous question encouraged candidates to be more specific here about the fact that backups protect work that has already been saved. A few candidates were unable to demonstrate an appreciation of the difference between saving and backing up.

(ii) This question was generally answered well, although the number of candidates suggesting floppy disks was disappointing, perhaps again demonstrating learned responses from previous papers. Some answers, eg 'usb device' were too vague to be credited, whilst others simply suggested 'hard disk', without any suggestion that this might be an external/removable drive, separate from the main hard disk of the computer system.

(iii) Most candidates were able to gain at least one mark from this question, with many gaining full marks. Where marks were lost this was often a result of answers being too vague, eg 'size'. Some candidates suggested considerations such as whether or not a memory stick had a clip on it, showing that they were thinking more about carrying their work around with them for use on different machines, rather than storing backups.

5)   (a)   This question was poorly answered, with many candidates unable to distinguish between features of a word processor and those of a desktop publishing package. Where marks were gained this was usually from a recognition of the existence of templates specifically for newsletters or from showing an understanding of the greater ease with which text and graphics can be moved around.

(b)   Most candidates were able to identify that the process was a mail merge but few gave a sufficiently detailed description of the process to gain the full three marks in (ii). Many candidates simply described what a mail merge does, rather than how it is carried out. The most important features that should have been identified was the storage of personal details in a data file, the linking of that file to a word-processed letter and the insertion of fields into the letter before merging.

(c)   Whilst many were able to identify the fact that not everyone has access to email there were a number of answers relating to hacking, viruses, recipients not checking their in-boxes and emails getting lost, which gained no marks. The fact that the question was about a newsletter, which is created to be read on paper, was not often mentioned.

(d)   This was a very well-answered question, with the majority of candidates earning the full four marks.

6)   (a)   This question prompted the full range of marks from candidates, from those who showed no understanding of types of media to others who well deserved the full nine marks. The best answers came from candidates who clearly thought about the purpose and audience for the presentation and explained their ideas regarding uses for the different media.

       (b)   Most candidates were able to gain at least one mark, by knowing that this is achieved by a hyperlink. A few described well how to create such a link and gained the full three marks, but many gave vague descriptions of what a hyperlink does rather than how it is created.

       (c)   Although this question was well answered by most candidates it was disappointing to see a significant minority simply answering with 'mouse' and 'keyboard', possibly because they had learned that these are input devices and not read or thought about the context of the question.

       (d)   As in part (a) this question elicited a wide range of responses, with marks awarded throughout the whole range available. Many candidates showed a good understanding of the complementary nature of leaflets and electronic presentations.

7)   (a)   Many candidates showed a good understanding of spreadsheet formulas and answered these questions well, although a number showed a poor understanding of the SUM function, with some inserting it unnecessarily in (i) and others failing to use it in (iii). Others chose incorrect cells/columns for their formulas. Most candidates correctly replicated their formula from (i) into the remaining cells for (ii).

       (b)   Most candidates were able to demonstrate some understanding of an automatic method of replication with many able to describe it sufficiently well to gain three marks. A smaller, but significant, number of candidates demonstrated at least some understanding of absolute cell referencing and gained at least one, if not all, of the remaining marks.

       (c)   This question was targeted at the most able candidates. Most candidates who attempted this question simply suggested that the error message was the result of not having any data to calculate. More candidates were able to answer part (ii) than (i) or (iii), recognising that the formula in question was reliant upon other formulas which themselves contained error messages. The most common incorrect attempts for (iii) were to remove the formulas or not to delete the data.

               Some candidates showed no understanding and wrote about validation, presumably thinking that the error messages were a result of validation checks.

8)   (a)   Those candidates who explained their answers, rather than responding simply with 'quicker' and/or 'cheaper', generally gained two or three marks for this question. Candidates who considered the context of the question and the specific needs relating to *draft* documents had access to a wider range of possible acceptable responses.

(b)   Although a small number of candidates was able to correctly identify the fact that a legal document must be sent in a format that cannot be changed by the recipient, the majority of responses were incorrect, with the most common relating to hacking or suggesting that people cannot sign on a computer, without showing any understanding of the fact that the document can be printed.

(c)   This question was generally answered well although a significant number of candidates suggested email.

(d)   Most candidates were able to identify the risk of viruses and were able to gain at least one mark for (ii) by suggesting the use of anti-virus software, with many gaining full marks for this question. However, some simply recalled answers relating to viruses, such as regular virus scans of saved files, which did not relate to the context of this question. The most common incorrect answer was to suggest that the risk came from hackers.

4873 Business Systems Portfolio

General Comments

The number of candidates entered for all units this year was significantly fewer than in either session of 2008.

Anecdotal evidence suggests that some Centres are still delivering this course in less than the recommended minimum of four hours per week. Candidates are unlikely to gain a good understanding of the subject or master the use of application software sufficiently to access the higher mark levels if time is restricted.

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 URS 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 moderator. Certain Centres are still including unnecessary printouts e.g. multiple copies of data collection forms.

There are still a large number of arithmetic errors. A number of Centres had different marks on the MS1 form from the mark on the URS attached to the candidate's 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.

When completing the MS1 forms, Centres need to ensure that the intended mark is clear on the copy to be sent to the moderator. Centres had often written on the MS1 while resting on other pages, making the moderator's copy of the MS1 impossible to read, or they had not put sufficient pressure on to ensure the bottom copy was legible.

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 who would benefit from a more complete understanding of the specification by attendance at OCR training courses.

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 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. The use of an in-house proforma was often a great help to candidates

Strand c

The purpose of this strand is for candidates to prove they have mastered the use of applications 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.

Frequently, Centres gave inappropriately high marks for work that was not of 'near professional standard'. The quality of work produced by a small number of highly talented candidates was a pleasure to moderate.

Some candidates produced 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 known 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.

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.

Grade Thresholds

General Certificate of Secondary Education
Applied ICT (Specification Code 1494)
June 2009 Examination Series

Unit Threshold Marks

Unit		Maximum Mark	A*	A	B	C	D	E	F	G	U
4872	Raw	100	81	74	67	60	53	46	39	32	0
	UMS	100	90	80	70	60	50	40	30	20	0
4873	Raw	50	48	43	38	34	29	24	19	14	0
	UMS	100	90	80	70	60	50	40	30	20	0
4874	Raw	50	48	43	38	34	29	24	19	14	0
	UMS	100	90	80	70	60	50	40	30	20	0

Specification Aggregation Results

Overall threshold marks in UMS (i.e. after conversion of raw marks to uniform marks)

	Maximum Mark	A* A*	AA	BB	CC	DD	EE	FF	GG	UU
UMS	300	270	240	210	180	150	120	90	60	0

The cumulative percentage of candidates awarded each grade was as follows:

	A* A*	AA	BB	CC	DD	EE	FF	GG	UU	Total No. of Cands
Cum %	1.3	8.2	27.4	53.5	75	84.5	91	97.6	100	1753

1753 candidates were entered for aggregation this series

For a description of how UMS marks are calculated see:
http://www.ocr.org.uk/learners/ums_results.html

Statistics are correct at the time of publication.

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