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RECOGNISING ACHIEVEMENT

GCSE

Applied ICT

Report on the Units

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Applied GCSE ICT (1494)

REPORT ON THE UNITS

Chief Examiners Report

There were fewer entries for each unit than in 2006 but there was evidence of achievement across the entire grade range. An increasing number of Centres are preparing their candidates well, with much very good work seen in all units. However, the number of Centres where portfolio marks had to be scaled because of incorrect interpretation of the specification requirements remains a cause for concern. A programme of training for teachers is offered for this specification and Centres are encouraged to make use of this opportunity.

Centres are reminded that there is a recommended minimum time allocation for this specification of four hours per week. Whilst the exact time requirement will depend upon candidates' understanding and skills upon starting the course, Centres should not expect good results if candidates are not given sufficient time to cover the requirements of the written examination and to meet the extensive portfolio requirements.

4872: ICT Knowledge and Understanding (Written Examination)

General Comments

Overall, candidates found this paper accessible, with most attempting all or most of the questions. Few relied on single-word answers. The exception to this was question 5, where some candidates simply did not recognise the terms CAD and CAM.

Some of the higher-level questions, requiring longer or more detailed answers, were not so well answered, with very few gaining full marks. This led to fewer candidates than in previous sessions gaining very high marks overall for the paper.

There was evidence that many candidates have a good understanding of ICT and its uses, although this was not always reflected in the marks gained, as many were unable to word their answers clearly and unambiguously enough.

Candidates from some Centres had obviously prepared for the examination by completing question papers from previous sessions. Whilst this is clearly helpful, candidates need to understand that every paper is set in a different context, and whilst some questions might appear on similar topics, the answers will not necessarily be the same, due to the different context. There were numerous instances where answers from previous years' questions were given.

A number of candidates extended their answers beyond the space provided, adding extra comments in the margins, despite the explicit instruction on the front of the paper.

Comments on Individual Questions

Q No)

1) (a) This was well answered by the majority of candidates. Identifying the DVD writer as an output device was the most common error.
   (b) Although many candidates knew what the letters RAM represented, fewer were able to go further to describe the *function* of RAM. Many confused RAM with backing storage. Very few candidates were able to identify any specific function of the processor, beyond 'processing data'.
   (c) Most candidates were able to identify one or two advantages, although there were many suggestions that did not depend upon a network, for example the ability to have a password-protected area for each user. Where no marks were obtained this was often because the candidates were unable to distinguish between a LAN and the Internet, or where they thought that a Local Area Network linked up different businesses in the local area.
   (d) Most candidates were able to gain at least one mark for identifying the need to use anti-virus software in (i), although many appeared unable to distinguish between anti-virus software and firewall software. Few gained both marks by expanding this answer. In (ii), most candidates were able to identify the problem of unauthorised access/hacking, although some answers were very vague, failing to distinguish between authorised and unauthorised access. Most were also able to suggest the use of a firewall.
2) (a) Most candidates were able to identify the required elements, although a number failed to distinguish between a *bullet* and a *bulleted list*. A few failed to follow the instruction, which clearly asked them to *circle* each element.
   (b) This was generally well answered, with the majority of candidates showing an understanding of the use of underlining for hyperlinks.

(c)   This question was answered much better than similar questions in previous sessions. The majority of candidates appear to have learnt the definition of multimedia.

(d)   The majority of candidates gained one of the two available marks for this question. The most common suggestion was to change the hyperlinked text into something more helpful. Few explained why their suggestion would improve the slide. A few candidates wrote about adding more slides whilst others failed to note that the question asked them to explain **one** improvement, and simply listed a number of ideas.

(e)   Although many candidates gained the mark in part (i) It was clear that a number confused touch screens with interactive white boards. Some, whilst perhaps knowing what a touch screen is, gave answers that were clearly incorrect, such as 'it is a computer that can be controlled by touching the screen'. Many advantages given for part (ii) were very vague references to speed and ease of use. Other candidates wrote about the advantages of the presentation being interactive rather than the hardware in the question.

3)   A small number of candidates gained no marks at all for this question, showing little or no understanding of the uses of database software.

(a)   This question was poorly answered. Although some candidates were able to write about setting validation rules, many thought that these would tell the user when incorrect data was entered. Many candidates appeared to think that the purpose of setting data types is to minimise errors. The use of a spell check was a common incorrect answer.

(b)   This question was quite well answered, with many candidates gaining 1 mark for suggesting post code. Other candidates failed to read the question carefully and gave two *existing* fields whilst others suggested useful items of data such as telephone numbers, which would not be needed in order to address an envelope.

(c)   In order to gain the maximum six marks for this question candidates needed to give a complete and correct answer. Very few candidates gained more than four marks, with the criterion for the Model Purchased field rarely given correctly. Most candidates gained at least one mark for identifying the need for a query.

(d)   Most candidates correctly identified that this would require a mail merge, with a small minority suggesting the acceptable alternative of using a database report. However, a significant number suggested copying and pasting names and addresses by hand and/or creating address labels. Few gave sufficient detail to gain the maximum five marks.

(e)   Many candidates gained one mark for this question, for identifying the fact that a relational database contains linked tables. Fewer were able to relate this to Amir's needs, although there were a number of excellent answers that demonstrated a clear understanding of relationships.

4)   (a)   This question was generally answered well, although some candidates gave only a brand name. Other incorrect answers included database and DTP.

(b)   This question was very poorly answered, with most candidates giving very vague answers about speed and accuracy that did not show any real appreciation of the relative strengths of spreadsheet software and the use of a calculator. Although many wrote about the use of formulas, the advantage of this was not considered.

(c)   This question was misunderstood by many candidates, who wrote about entering quotes into a database rather than managing files on the network. Those who understood the question generally gained one or two marks for considering folder structure or sensible file names, with better candidates considering both of these and gaining three or four marks. Some candidates, whilst possibly knowing what to do, lost marks because they failed to use the terms folder and file correctly.

5) (a) Most candidates correctly identified CAD and CAM, with many giving good explanations. However, many failed to answer the question about how these would be used *by Fox Cars*. A small minority of candidates failed to answer this question, with others clearly guessing. Those who understood the terms often gained at least one or two marks for advantages and disadvantages, although once again many answers were too vague or failed to appreciate that the alternative to CAD/CAM is not to make cars by hand.

6) (a) This question was answered well by many candidates who clearly understood the main issues relating to RSI. However, a number wrote about general health and safety issues that they had learned, often unrelated to RSI.

   (b) Most candidates were able to gain at least one mark for this question. However, many gave vague answers such as 'they must be comfortable' or 'they must be stable'.

7) (a) This was generally very well answered, with the majority of candidates gaining the maximum five marks.

   (b) This was well answered by many candidates, with the use of a search engine being the most common answer. However, some failed to understand the question and wrote about typing in the URL. A few candidates gave only a brand name for (i). Although there were a number of advantages that were too vague to be awarded the mark, one of the most common incorrect answer for (ii) was the fact that a search engine will come up with a number of different sites to choose from.

   (c) Although many candidates wrote a lot for this question, few gained very high marks. Many considered the advantages and disadvantages to the customer, rather than to the company. Others answered questions from previous sessions that had asked for a comparison between a website and printed leaflets. Many candidates wrote a lot about viruses and hacking as disadvantages of a website. Many also suggested that a website would allow other companies to see Southlands' prices.

8) (a) Candidates from some Centres answered this question extremely well, showing a good understanding of the role of the ISP and of intermediate servers, although a number failed to recognise the fact that the email is not downloaded to Ken's computer until he logs on and requests his mail. This may reflect the increasing number of candidates with broadband Internet access where this process is not so obvious. However, most candidates demonstrated only limited understanding of the path of an email, with many thinking that it travels directly from one computer to another.

   (b) Most candidates gained at least one or two marks for this question, showing an understanding of what spam is. The possibility of it carrying a virus was a common answer, with many candidates then going on to describe the effects of viruses rather than answering the question. A common misconception is that spam 'slows the computer down'.

Principal Moderators Report

General Comments

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.

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.

There were a large number of arithmetic errors this session. 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 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 produced flow charts, 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. 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 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. When listing web sources these should be URL's 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.

General Certificate of Secondary Education
Applied ICT (Double Award) 1494
June 2007 Assessment Series

Unit Threshold Marks

Unit		Maximum Mark	A*	A	B	C	D	E	F	G	U
4872	Raw	100	77	69	61	54	46	39	32	25	0
	UMS	100	90	80	70	60	50	40	30	20	0
4873	Raw	50	47	42	37	32	27	22	17	12	0
	UMS	100	90	80	70	60	50	40	30	20	0
4874	Raw	50	47	42	37	32	27	22	17	12	0
	UMS	100	90	80	70	60	50	40	30	20	0

Entry Information

Unit	Total Entry
4872	4936
4873	4972
4874	5374

Specification Aggregation Results

GRADE	A*A*	AA	BB	CC	DD	EE	FF	GG	UU
UMS	270	240	210	180	150	120	90	60	0
Cum %	0.8	7.0	23.5	45.1	64.8	78.9	88.7	95.9	100.0

5847 candidates were entered for aggregation this series

For a description of how UMS marks are calculated see;
http://www.ocr.org.uk/exam_system/understand_ums.html

Statistics are correct at the time of publication

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