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General Certificate of Secondary Education

Applied Information and Communication Technology (Double Award) 3851

Examiners' Report

2005 examination - June series

- Unit 1 ICT Tools and Applications
- Unit 2 ICT in Organisations
- Unit 3 ICT in Society

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GCSE Applied Information and Communication (Double Award)

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Unit 1 – ICT Tools and Applications

Introduction

This year centres were provided with a detailed marking grid outlining exactly where marks are to be awarded for this unit. The way in which marks are allocated has not changed. Moderators were pleased to note that many centres had used the new marking grid. This practice is to be encouraged. Using the grids enabled moderators to see exactly where marks were being awarded which resulted in detailed feedback being given to centres.

Moderators were concerned that a number of centres did not meet the published deadlines for submission of marks for portfolio work. Centres are reminded that if deadlines are not met there is a serious risk that candidates' results for that centre will not be published at the expected time. Centres are reminded that the three units that make up the specification are moderated and examined by different people, and so sending all candidates' work to one moderator will delay the moderation process.

In order to ensure the smooth running of the moderation process, centres are reminded to check that the portfolios are tied together loosely with a treasury tag through the top left-hand corner, and that each portfolio has the correct Candidate Record Form attached that has been signed by the candidate and the teacher. The completed Centre Declaration Sheet must also be enclosed.

This is the third year that the unit has been moderated. The unit consists of five sections; report reviewing documents, production of documents, description and evaluation of documents, report/presentation on specialist software, and standard ways of working. Although these sections make up one unit, they are to be assessed as individual sections, and so marks allocated for section 1 cannot be awarded for section 3. Candidates must provide evidence for all 5 sections. If candidates use screen prints in any of the sections it is expected that they are of a size that can be easily read.

Report Reviewing Documents

Candidates are required to produce a review of at least two business documents. It is a requirement that the original documents are included. Candidates who failed to submit the original documents were given the opportunity to provide them to the moderator. Candidates who failed to provide their original documents at this stage were subject to a negative adjustment to their marks.

The documents need to show the use of three software applications, which are to be highlighted by the candidate. To gain basic marks, the candidate will describe the content, layout and purpose of the documents. To gain higher marks they will evaluate the documents and make suggestions for improvements.

Handwritten reports are not accepted. Page 26 of the specification highlights that all work (other than annotation) should be word-processed.

Templates, such as letterheads, blank memos, blank fax covers, and blank invoices are not considered complete documents, and so are unacceptable. Ephemeral items such as lottery tickets and CD covers are not considered business documents. When choosing documents for review, candidates should be encouraged to select documents that will give them the scope to extend their discussion on the document. Teachers should take the opportunity to discuss the importance of anonymising information in the event of personal documents being selected for review. Although names may be left, it is recommended for security reasons that details such as bank account details and sort codes are deleted.

Some centres provided candidates with a table format for their report. Although this is helpful in order to guide candidates' thoughts, the space provided was often restrictive and meant that candidates did not provide the depth required. Other centres provided a report format, which again helps to structure the candidates' thoughts. However some of the headings did not provide the candidate with the relevant direction to discuss fully what was required, for example, content, layout and purpose.

Candidates who reviewed documents of the same type limited the amount of discussion that they were able to provide for each. A variety of documents showing evidence of different software applications provides candidates with greater opportunities for discussion.

Candidate produces a basic description of the content, layout and purpose of two business documents produced using at least a single software application (4 marks)

Candidates need to discuss the purpose and both the content and the layout of two documents. Most candidates were able to do this at a basic level. Candidates achieved these marks when they briefly described where the text and the graphics were positioned on the page and highlighted the features of the documents, for example the address, salutation, main body text. The purpose of the document, even at the basic level, must be accurate. Even where candidates had made a good attempt at this, but had not understood the purpose of that document, they cannot be awarded the mark. The purpose, at this level was usually generic, for example, "…the invoice is to tell the customer how much money they owe…"

Candidate produces a more detailed description of the content, layout and purpose of two business documents, produced using two software applications, and attempts an evaluation of the suitability for purpose of the collected documents (7 marks)

Candidates are expected to refer to the documents they are reviewing rather than discussing, in general terms, types of documents. Some candidates produced very detailed descriptions, demonstrating great observation and understanding of the document being reviewed. They referred to the style of document, the paper size and orientation, made reference to margins and used technical terminology, the language used, the way the document was written in relation to the audience, and details within the document. In order for candidates to achieve the detailed descriptions, it is required that both the content and the layout descriptions are detailed. Candidates often concentrated on the layout and failed to further their description of the content. Many candidates discussed the software through the use of brand names. Brand names are not accepted and candidates are encouraged to discuss the types of software used. Candidates tended to discuss the purpose of a document in general terms, for example "The invoice is to inform the client how much they owe". In order to achieve the detailed marks, candidates need to discuss the actual purpose of the document being reviewed, for example "The invoice is to inform Mr X that he owes Company Y £50 and that he has to pay within 30 days."

The majority of candidates managed to provide a simplistic evaluation of the documents, giving either one strength or weakness without any justification as to why.

Candidate produces a very detailed description of content, layout and purpose of business documents produced using three software applications and evaluates suitability for purpose of the collected documents (6 marks)

Candidates need to suggest a third software application used within the documents being reviewed and explain how this software enables the document to meet its purpose. Few candidates were able to give a detailed evaluation of the documents as they often lacked the reasoning as to 'why' something was a strength or a weakness in relation to the purpose of the document.

Candidate produces a very detailed and well-structured description of content, layout and purpose of documents produced using three software applications, and evaluates in detail their suitability for purpose, suggesting how they could be improved (4 marks)

Candidates' reports should show evidence of different structure techniques. The majority of candidates used headings and paragraphs, but few used bullets/numbering or an introduction and a conclusion to the report.

Many candidates were able to suggest improvements to the documents. This alone is not sufficient to achieve the marks. Candidates are required to justify the suggestions they make.

Production of Documents

Candidates are required to create at least three original documents. 'Original' relates to the content of the document, as well as its layout. Some centres provided candidates with the text for the documents. This is not acceptable practice. Candidates are expected to know the difference between formal and informal text and be able to apply this to different situations.

At least two of the documents need to demonstrate the integration of two software applications. At least one document needs to demonstrate the integration of three software applications. Candidates need to show that they can use ICT tools to search, select, and organise information. The documents produced need to be fit for purpose. At least three sources need to be evidenced.

Some candidates produced three very good documents and provided all the evidence required for all aspects of the assessment criteria.

Incomplete items, such as:

- a letterhead
- a fax cover template (without details or body text)
- a memo template (without details or body text)
- a logo

cannot be credited with marks.

Centres are reminded that a database is not a document, but a report created by the database is.

In order not to disadvantage themselves, candidates need to produce at least three documents. If more than three documents are produced, the best three are to be selected, taking into account all aspects of the production including the evaluation.

Candidate produces some documents which demonstrate capability with one software application (5 marks)

The majority of candidates achieved these marks by producing 2 documents that showed a degree of capability in one software application, and with one document satisfying an accepted layout. It was pleasing to note that the advice from previous years had been taken and a variety of software applications were used showing a range of skills.

Candidate produces a range of documents which demonstrate good capability with two software applications, including effective use of ICT to search for, select and organise information from a range of sources (8 marks)

The majority of candidates provided a satisfactory range of documents which showed some degree of capability within two software applications. Evidence was generally heavily weighted towards one software application, primarily word processing, with a lack of evidence for the capability of the second software application. Page 16 of the specification outlines the skills expected to be used by the candidates.

Candidates who provided evidence of using ICT to search and select provided appropriate and detailed screen prints showing the use of a search feature and evidence of the appropriate search criteria, which was entered into the correct field and was related to the content of the unit. There was evidence to show that the information generated had been used in some way in the unit. It was disappointing to note that many candidates did not provide any evidence for this criterion.

Candidate demonstrates capability to integrate two software applications to produce documents, including searching, selecting and organising using ICT tools (5 marks)

Many candidates were successful in this section, providing good detailed evidence of the integration of two software applications to produce an effective document.

Some candidates referred to copying and pasting applications. This is a simplistic integration. Clipart does not show integration of two software applications, unless evidence is provided that it has been altered in some way. A recognised company logo will only achieve a simplistic integration, unless it has been shown to have been altered in some way within an image manipulation application. Candidates who showed screen prints of a before and after shot of the image with an image manipulation package, and then showed it being used within a document, were successful.

Where candidates integrated spreadsheets into a document it was not always apparent that it was a spreadsheet. Evidence of the formulas within the spreadsheet would make this evidence concrete. Where candidates integrated a mail merge it is expected that the fields were shown within the document as part of the integration evidence. Some candidates printed out all the mail merge documents. This is not necessary. The document with the mail merge fields, the database table and one example of a completed mail merge is sufficient evidence.

Candidate integrates three software applications to produce complex documents that are fit for purpose (7 marks)

Many candidates attempted to show the integration of three software applications within one document. Often there was sufficient evidence of integration of two software applications, but not three. See comments above for types of evidence required.

To gain full credit, candidates must show that all three documents are fit for purpose, free from obvious spelling mistakes, and with correct capitalisation and accepted layouts used.

Description and Evaluation of Documents

Candidates are required to show the development of the documents created through the use of annotation. These documents need to be evaluated and then compared with like commercially produced documents. These documents are to be enclosed with the portfolio.

Many candidates produced a step-by-step guide to how they created their documents. This is not needed and does not assist them in gaining additional marks. Most candidates attempted to annotate their work, although the annotations often lacked depth and were generally labels.

Candidate indicates clearly how the software features are used to meet the purposes of the documents produced (6 marks)

The majority of candidates confused the identification of software features with the identification of documents features. Although it is important for candidates to know the features that are required for a document, (the address, salutation, closure, main body text, etc), that is not assessed in this section. Those that did identify the features of the software (use of bold, italics, tabs, text wrap, text boxes, and so on), did so within a commentary or through labelling the documents. Few candidates were able to link these features with the purpose of the documents.

Candidate produces corrected and annotated drafts to show how the documents were developed (8 marks)

This section requires the annotation to be carried out on the actual documents created. Some candidates used sparse labels to highlight errors and omissions, but failed to show a document with the corrections having been made. They did not, therefore, achieve the marks for J1 and J2. Other candidates showed detailed annotations on how the documents were created. It is important to remember that creation of a document does not show errors and omissions corrected, nor the development of a document. It is expected that candidates produce the document with the written text and graphics and from this point develop it. It is unlikely that a candidate will not find any errors or omissions within their documents, however, in the event that this happens, candidates must state that they have checked for errors and the document must show that it is free from errors.

Candidate produces corrected and annotated drafts of documents and attempts a basic evaluation (4 marks)

Few candidates provided meaningful drafts that were annotated in detail to show development. Some candidates used the format for section 1, reviewing documents, to write an evaluation on their own documents. This was a useful task for the candidates, however, many candidates omitted to evaluate the documents in relation to the purpose and audience. Some candidates produced simple statements stating that the documents were suitable for the purpose and the audience. This is not sufficient, on its own, and needs to have some justification as to why.

Candidate produces corrected and annotated drafts of documents and evaluates own documents by comparison with similar commercially produced documents (4 marks)

It was disappointing to note that many candidates did not attempt this section. Those that did were often successful in finding the similarities and differences between their own documents and commercially produced ones. The candidates found it difficult, however, to justify these by reference to the purpose and the audience. Some candidates described all the documents, but failed to compare them.

Report or presentation on organisations using a range of sensing and image manipulation software

Candidates need to describe 'CAD/CAM', 'sensing and control' and 'image manipulation' software, identifying 3 features of each. They need to describe how these are used in organisations and evaluate the impact they have had on businesses. Candidates can present this information as either a report or a presentation. Many candidates who produced a presentation failed to provide supporting speakers' notes, which limited the detail provided.

Moderators were disappointed to note that many candidates appeared to take a 'minimalist' approach to this section. It was also evident that some centres were uncertain of how to use the assessment criteria to award marks.

Some candidates were unclear about the features of specific software. For example, many candidates described how a CAD design could be emailed to someone. This is not a feature of the CAD software, but the use of a completely different piece of software.

For candidates not to disadvantage themselves they need to address all three types of specialist software.

Candidate describes two features of the use by organisations of CAD/CAM, sensing and control or image manipulation software (3 marks)

This section is focussing on **one** of the types of specialist software. Many candidates simply listed the features of the software, rather than describing them. Simplistic bullet points are not sufficient. Candidates are required to describe two of the features of their chosen specialist software. If one of these features provides additional detail an extra mark is awarded. Candidates who provided a description, rather than a list, were more successful in this section.

Candidate describes three main features and purposes of the use by organisations of CAD/CAM, sensing and control, and image manipulation software (4 marks)

Candidates need to describe one additional main feature for the software described in the first part of this section to achieve one mark.

The awarding of the remaining three marks in this section appeared to be misunderstood by centres. Candidates are required to examine the two software types not addressed. Three main features of these types of software need to be described. If two features are described for one and three for the other, two marks can be awarded. If one feature is described for one and three for the other, two marks can be awarded. If only three features of one specialist software are described then no marks can be awarded.

Candidate describes in detail three main features and purposes of organisations' use of CAD/CAM, sensing and control, and image manipulation software and evaluates briefly the impact on businesses of this use (3 marks)

The majority of candidates produced a good description of how one of the software types was used and evaluated its impact on business. However, in order to achieve these marks, all three of the software types need to be addressed.

Candidate describes in detail three main features and purposes of organisations' use of CAD/CAM, sensing and control, and image manipulation software and evaluates in detail the impact on business of this use (3 marks)

Candidates tended to list the impact as 'quicker..., 'cheaper…' rather than including any significant detail. This needs to be specific to a business or organisation and a description as to how this is achieved through the use of the software. The candidates who achieved these marks provided an extended and more detailed description and evaluation of the impact of all three types of specialist software on businesses.

Standard Ways of Working

Candidates need to show that they can organise their work into effective files and directories. They need to show evidence of having regularly saved work and show an understanding of backing up their work. Candidates need to demonstrate an understanding of copyright issues. In addition candidates need to show that they have used at least 3 sources of information and checked to make sure that this information is accurate. Witness statements are not accepted. The sources must relate to the content of the unit.

Where candidates provided detailed screen prints for the directory structure for this unit, which showed the files within the folders, they achieved good marks. Moderators were pleased to see that many candidates showed their back up folder, with its contents, or provided a detailed account of how the school's network was backed up. Some candidates thought it acceptable to mention that they were aware of copyright and this would be sufficient to achieve the mark. Candidates are, however, required to show an awareness of the impact of copyright restrictions on their way of working. Just outlining the Copyright Designs and Patents Act does not show an understanding of personal impact.

It was disappointing to see that many candidates did not attempt to verify their sources of information. Those that did were successful in showing what the source was, what information they were checking, which source it was checked against and whether it was accurate. Some candidates tried to verify a source by showing screen prints of websites. If candidates choose to do this it is expected that they show the information being verified and not leave it to the assessor to try and discover. In these circumstances candidates need to also ensure that the screen prints do in fact show the same information rather than just a home page.

Conclusion

The feedback forms to centres this year were very detailed in order to assist the centres for future development of this unit. Centres are reminded that ongoing support is available throughout the year. Centres requiring help in the interpretation of the specification or guidance on schemes of work or delivery should contact aqagcseappictpa@aqa.org.uk.

Unit 2 – ICT in Organisations

Introduction

This was the second opportunity for centres to have their candidates' portfolios moderated, and there was a significant increase in the number of candidates since June 2004.

Candidates must understand that the assessment of this unit is based entirely upon the criteria set out in the marking grid and so it follows that they must attempt to meet every criterion if they are to score maximum marks.

There is a requirement at nearly every stage for candidates to explain or to describe, often in considerable detail, what they have done.

Description of ICT Systems

Candidates usually scored a number of marks for **Task 1** but they were mostly the lower level marks and there were major omissions throughout.

Section A: Candidate produces a basic description of two features of the use of ICT by two contrasting organisations (5 marks)

Most candidates scored full marks in Section A. However, candidates should be discouraged from using their own schools as an example. While there is nothing inherently wrong with this from the point of view of the mark scheme, candidates who use their schools tend to produce very similar reports, probably because they are working from the same information sources, usually individuals within the school. The whole class may have been given a talk by, say, the SIMS manager, but this approach may well prevent the higher ability candidates from really showing what they can do.

There is also the question of confidentiality where administrative staff within the school may feel uneasy at providing pupils with information about the various systems. This is less likely to occur in smaller businesses in the area where an individual organisation might only work with one or two pupils at the most.

Most candidates appear to have understood that this is a case study and not a description of what organisation might do with ICT. Very few lost marks for failing to name the organisation but it is worth mentioning this again as a sizeable minority did lose some marks.

Section B: Candidate produces a more detailed description of three features of the use of ICT by two contrasting organisations and describes briefly two advantages and two disadvantages of these systems (4 marks)

B1: Candidates need to break down their reports and make them clearer. A number failed to score this mark because they wrote their reports in a vague manner and did not identify clearly the use to which ICT was put. Passing references to the use of email and the Internet suggest that any research was at a superficial level and may not have been the result of any actual research anyway.

As an example, this response "E-mails could be quickly to pupils home telling them if they are absent" is taken from an actual submission. It is not only grammatically incorrect; the word "could" suggests that this is not actually a case study, the result of research, but surmising on the part of the candidate. Furthermore, it is unlikely that a school would e-mail parents informing them of absence. They would be more likely to telephone.

B2: This section was poorly answered. Ideally candidates should provide an advantage and disadvantage in order to gain a mark, but there was flexibility in terms of awarding a mark for two advantages or two disadvantages.

Overall, the comments made were at a very superficial level. Advantages tended to be described in terms of "quicker" and "easier" while disadvantages tended to focus on initial costs and the problems caused if the systems went down. Again, this suggested a general knowledge approach rather than actual research towards a case study. References to 'quicker' or 'easier' must be explained. For example, this response, "Storing data is easier and more efficient", gives no indication of why this might be the case.

Section C: Candidate produces a very detailed description of the main features of the use of ICT including two advantages and two disadvantages, and the impact of ICT systems within organisations, referring to working practices, cost and also information and processing characteristics, using three different sources (8 marks)

This section was poorly answered.

It would appear that candidates did not really understand what "impact on organisations" and "impact on working practices" actually meant. Where a response was attempted the terms tended to be viewed as interchangeable.

Even where candidates had described the use of ICT in their school and had written about electronic registration they failed to describe how its introduction had impacted on the way in which the register was taken and how the information was conveyed to the school office. Despite being a part of their direct experience they still failed to provide an adequate response to C2, "Impact on working practices"

Very few scored marks regarding cost. Candidates were required to produce more than just a price list. They were expected to provide informed discussion at an operational or tactical level which would compare the prices of say, different types of printer, in relation to their performance, suitability for purpose and running costs.

Very few candidates scored full marks for criterion C4, details of information and processing characteristics. For example, in the case of stock control systems, candidates wrote about re-ordering but failed to really grasp how such systems worked.

I felt there was an overall deterioration in the citing of resources although I am comparing this section in Unit 3 rather than Unit 2. It could be that candidates were confusing the requirement for three **types** of sources rather than just three sources. Criterion C5 requires candidates to provide "evidence of use of three types of sources". The three types could be a website, an interview with a named individual, and a company produced leaflet. Most candidates tended to cite, for example, three websites or three individuals rather than a range of different types of source.

Section D: Candidate produces a very detailed and well-structured description of the main features of ICT use, including advantages and disadvantages, impact, details of information and processing characteristics of the chosen systems, referring to verifying data, security and robustness, using three sources, showing evidence of validation (6 marks)

Most candidates scored the full two marks for the structure and layout of their report, criterion D1.

Very few candidates made any reference to D2, the verification of data by the organisation.

Most candidates scored a mark for D3, the section on security of data but hardly anyone scored marks for D4, the robustness of data. A large proportion of those that did address this issue confused the robustness of data with the physical strength of the hardware, a misconception often shared by their teachers. Others said that the systems were robust because they didn't go wrong but were unable to explain why.

Hardware

This task was reasonably well done but the majority of candidates mentioned or described far too many items of hardware. The specification requires a maximum of three, enabling the candidate to go into some detail from both a technical and non-technical point of view.

A sizeable minority included descriptions of software, something which is not required.

Section E: Candidate produces a basic description of two hardware features of ICT systems (6 marks)

Nearly all candidates scored both marks for E1 where they simply had to name two items of hardware.

Most scored further marks by describing the hardware, E2, but relatively few scored marks for the technical details, E3. It was intended that E3 would demonstrate knowledge and understanding but technical descriptions were often limited to specifications with no comment.

Section F: Candidate produces a more detailed description of three main hardware features of ICT systems including the ways in which components are connected (6 marks)

Very few scored additional marks for F1. Candidates were required to produce a detailed description of three items of hardware. Many candidates described three items; often far more than this as mentioned in the introduction to this section, but failed to increase the standard to above what was expected in Section E. Thus, there was simply more of the same, rather than an in-depth explanation of a limited number of hardware items.

Very few candidates scored any marks for F2, a description of the ways in which components are connected. They tended to say that printers were plugged into the parallel port, the mouse into a serial or PS2 port, but didn't offer any further detail.

A number produced a photograph of the back of a computer showing the various ports, suitably annotated, but failed to provide any description. Note that the banner for Section F refers to the need for a "more detailed description".

Those candidates who did score marks here were those who described the data transfer in terms of bits sent along the wire pointing out that in a serial port the bits are transmitted one at a time in a line whereas the parallel port can transmit 8 bits at a time. Interestingly, USB and PS2 ports were rarely, if ever, described, thus unintentionally setting a ceiling of two marks for this section.

Section G: Candidate produces a detailed and well-structured description of hardware features that determine overall efficiency and cost of ICT systems (6 marks)

Most candidates scored a mark for G1, "description is detailed and well-structured", and this was usually for the use of suitable sub-headings. Fewer scored the second mark which was awarded for the introduction of additional devices to improve the layout and readability. There was often a tendency to present this work in note form, sometimes with a table, but the whole task tended to be approached from a superficial point of view and only the best candidates produced a detailed report. Even those who scored full marks for D1, the layout and structure criterion in Task 1, failed to score both marks here.

Those that understood the concept of efficiency gave reasonable answers for G2 but the rest simply missed it out.

The section on costs was answered by means of a price list without any discussion of the decision making process which an organisation might go through when determining what to buy. No marks were awarded for price lists.

Design of ICT System

A number of candidates adopted the headings from AQA's Board-Set Assignment in GCSE ICT Specification A. Not only does the assignment adopt a task based approach rather than a systems approach but the method of assessment is different. Candidates are advised that they should refer to the criteria for the GCSE Applied specification when planning and carrying out their work.

Too many candidates failed to score marks because they did not adhere to or realise the need for descriptions. Candidates included a number of screen shots but did not explain what they showed.

Section H: Candidate produces a basic description of the design for the ICT system, including purpose, benefits and information requirements (4 marks)

This section is intended to enable candidates to set the scene for their system. However, many failed to do this properly. The approach taken in most cases was to say that an organisation, possibly imaginary, wanted them to set up a database. What was not made clear was the reason for doing it, i.e. the purpose, which is awarded a mark under criterion H2. The benefits of the system were often omitted although most candidates scored a mark for H4 where they had to give details of the information requirements.

It was surprising how badly done Section H was. In order to address more fully the requirements of Section H, candidates should describe the existing system before describing their proposal. Too many candidates described the existing system in terms of being paper-based and, because of this, disorganised with a tendency to lose important records pertaining to the organisation. They should be encouraged to understand, that while an existing paper-based system may well need improving, hence the reason for designing their system, it is not necessarily completely inefficient. A proper understanding of the existing system should enable candidates to design and implement a realistic and effective solution.

The lack of purpose meant that subsequent sections, particularly the testing and, to a lesser extent, the User Guide, were also badly done. (See Task 4)

Section I: Candidate describes in more detail the design for an ICT system, and represents (the) system in an appropriate graphic manner (5 marks)

Because detail was lacking in Section H it tended to mean that Section I1, a more detailed description, was not addressed.

However, some candidates appeared to realise this at a later stage and so managed to score marks in J2, "very detailed description of the design of the ICT system" A design which merits maximum marks would be one that was sufficiently detailed to enable a third party to carry out the implementation. Candidates can assume that such a third party would have the ICT capability to do so.

Most candidates scored one mark for I2, the production of a DFD. Those that failed to score any marks either omitted it or produced a diagram which showed the steps which the end user would take in using the system, rather than showing the flow of information through the system.

This may well reflect a gap in the knowledge of those delivering the course.

Section J: Candidate produces a very detailed description of the design for the ICT system, represents system graphically and models system using ICT (7 marks)

Very few candidates scored any marks for J1, the production of a detailed DFD which contained no errors and which made use of the standard symbols used in flow diagrams.

For comments on J2, the production of a very detailed description of the design, please refer to the previous section, Section I.

Most candidates scored full marks for J3, modelling the system using ICT. However, it must be stressed that candidates are required to include a description to accompany any screen shots. It should also be pointed out that drawn designs are not acceptable as the banner for this section, reproduced above, specifically says "using ICT". This was not a problem in practice as candidates who included drawings usually included screen shots as well but it is another example of following the guidelines laid down for Spec A.

Section K: Candidate describes in detail, represents graphically and models ICT system, including evidence of operation of system and commentary on the system development (8 marks)

Most candidates scored marks for K1, evidence of operation of system, but their work was not always very clear. This was particularly the case with solutions which required a spreadsheet. Candidates must provide evidence that the system actually works and so one or two screen shots are insufficient. Candidates should include printouts which show the formulas used, and should indicate the results which these formulas produce. Many candidates included IF statements but did not provide evidence to show that they actually worked. As a general guideline the evidence provided should be clear to a third party whether or not that person was knowledgeable in terms of ICT. This suggests that annotation by way of explanation is essential.

Those candidates whose solution involved the use of a database generally fared better. The use of a database does, perhaps, provide more structure in that the results of searches can be clearly shown.

The commentaries for K2 were generally poor with the result that candidates tended to score 3 or 4 marks for the whole section even though they were probably more than capable of scoring 8.

Section L: Candidate describes in detail and models ICT system supported by evidence of development and describes critical success factors for system (4 marks)

Very few candidates scored any marks for L1.

Most of the success factors / performance indicators described were at a trivial level, e.g. that a search should be done in 10 seconds or that it should be easy to add a new record.

The problem which candidates seem to have here stems from the lack of detail provided in Section H. A suitable example might be that the system correctly produces a set of mail-merged letters identifying those members who have failed to pay their subscriptions but, if this is not stated clearly earlier on, candidates will find it difficult to decide how they will judge the success or otherwise of their system.

Section M: Candidate describes in detail data types and sources, processing requirements and outputs, illustrating solution with a large data set (7 marks)

The main problem here is that candidates failed to understand that each criterion in this section requires a detailed description.

Thus, for M1, most candidates probably assumed that their screen shot showing field names and data types at the design stage of setting up a system in Access would be sufficient. This does not constitute "describes in detail".

Candidates must provide an explanation of the different data types used, e.g. logical where the response is Yes or No. This choice could be elaborated upon by explaining that data entry, when such a data type is used, is facilitated by ticking a box rather than typing in the data. The choice of Date and Time as opposed to giving dates as Text could be explained in terms of "greater than" searches being the equivalent of "later than" if this data type is used.

As a general guideline candidates are expected to explain why they have used particular data types.

It should be noted that those whose solution was spread-sheet based did not address the issue of "data types". This does not mean that candidates have not formatted the cells appropriately but they have neither described it nor provided suitable evidence.

Some candidates scored a mark for M2 but it is likely that many felt that the source of the system's data was self-explanatory when, in fact, it wasn't. Many candidates produced a data capture form which was an ideal way of addressing M2.

Very few provided any information for M3, details of processing requirements, perhaps feeling that a screen shot of a formula was sufficient. In the case of a database solution reference could have been made to the notion of using a search to filter the information in a table for the first mark and to the function of the links between tables for the second.

Candidates scored marks for M4, details of output requirements, but very few, if any scored both marks. A lack of detail is the over-riding impression created by the whole of Section M.

Very few scored any marks for M5, large data set. Candidates and teachers seemed to feel that a large data set was met by having a large number of records in a database even though the fields required had all been set to text. A large data set would use a variety of data types and would include examples, suitably highlighted, of extreme and erroneous data.

Evaluation and Testing of ICT System

Section N: Candidate provides evidence of refinements to system, including results of testing with a range of data, and describes efficiency and robustness of solution (6 marks)

Refinements in N1 refer to aesthetic improvements and some candidates met that, perhaps by adding a logo.

Testing has generally been poor. A high proportion of candidates have failed to provide evidence for testing. Instead, they have presented their test plan in the form of a table and have headed their final column "Outcome" in which they have entered words to the effect of "It worked" or "Correct result". However, the evidence for this is missing. Thus, very few scored many marks in this section.

Candidates should provide a test plan and an indication of expected and actual outcomes with evidence to back it up. Simply saying that the outcome was what was expected is insufficient – there has to be evidence.

As stated earlier M1, details of data types, was very rarely addressed and consequently N3, use of a range of data, was omitted too. It can only be assumed that candidates felt that their use of various data types was obvious and so did not need to be shown. As with any criterion-referenced qualification, evidence is of paramount importance.

Very few candidates addressed the question of efficiency, N4, even though most of them produced a relational database or at least a database with more than one table, even if not actually set up as a relational one. Many candidates included macros which improved the efficiency but, again, failed to describe their use. To gain a mark it would be sufficient to describe how the macro was implemented and to explain how it enables several functions to be automated by issuing a single command, e.g. by selecting the appropriate button with the mouse.

The misconception over robustness, N5, was repeated but the better candidates realised that devices such as validation and the use of input masks contributed towards robustness even though they didn't use the correct term. A number of candidates referred to the need to guard against incorrect data entry but didn't relate this to the concept of robustness

Section O: Candidate produces documentation for system written in a style appropriate to the intended user (4 marks)

Most candidates produced a reasonable user guide but, because the purpose of the system was often not identified at the start, many of them described how to set up a complete database from the outset rather than concentrating on its use by an end user.

Two marks are available for the production of a basic user guide. A general guide, recognisable as a user guide would be sufficient for one mark even though it might be incomplete. In order to be awarded the second mark the guide must be complete in terms of the topics covered.

To be awarded a third mark, criterion O2, it is only necessary to include appropriate screen shots.

The final mark is awarded for a user guide that is appropriate to the user. This will depend upon how the candidate approaches it but it is likely that an "appropriate" guide would be one which concentrates on the use of the finished system by the end user. Concentrating on, for example, setting up a database and including details of data types and other design features would be inappropriate for this mark. A user guide is required, not a technical guide.

Section P: Candidate tests system against all practical initial conditions, and produces systematic documentation of results (4 marks)

Candidates did test various aspects of their systems but it was not well documented.

A sizeable number tested functions which are already built-in, e.g. data entry which did not match the data type rather than additional safeguards which they, themselves, had designed and implemented.

A number of candidates tested that a database would accept a new record. Such a test is not relevant in this context as it would be expected that the software would function correctly from this point of view.

Marks were awarded for testing that the candidate's own validation techniques functioned correctly, e.g. a range check with the corresponding error message, and for testing the operation of a macro.

In the case of a spreadsheet solution, marks were awarded for testing conditional formatting. Marks were also awarded for the use of extreme and erroneous data but in all cases the work must be clearly documented. Two marks were available for the testing and a further two for the documentation.

Section Q: Candidate provides evaluation of the system, including evidence from third party (5 marks)

This was generally poorly done and tended to be descriptive rather than evaluative. It was often a repeat in more detail of Section H.

In order to score marks, candidates must identify a strength of their system, 1 mark, and then go on to identify a weakness for a second mark. In order to gain the final mark available for criterion Q1, the evaluation of the system, candidates must suggest how they might overcome the weakness.

The vast majority failed to address the third party evaluation adequately, Q2. Some candidates produced a questionnaire which purported to have been completed by various people but there was generally no response to the answers. Other candidates simply said that they had shown their system to the end user and they responded by saying that they had "made a nice job of it". Again, there was no response to this.

Candidates should elicit reactions from the end user to which they can respond. Suggestions such as, "It would have been better if you could have included ……." could lead the candidate to give a considered response, either by agreeing with the suggestion or ruling it out.

Section R: Candidate provides detailed evaluation of the system and also of user documentation including third party feedback (5 marks)

Since Q1 was rarely answered well very few, if any, candidates scored any marks here.

Most did not seem to realise that an evaluation of the documentation was required, R2. Where there was an evaluation it tended to be trivial, e.g. the addition of more screen shots, or a more detailed description, rather than a more substantial suggestion such as the addition of an index.

Very few candidates addressed R3, third party evaluation of the user guide, and even fewer gave any kind of response.

Unit 3 – ICT in Society

Introduction

During the past year, AQA has provided a large amount of support to centres following disappointing candidate performance in previous examination series. In the summer terms of 2004 and 2005, a series of meetings was held around the country specifically focused at centres about to commence delivery of the specification. These meetings gave detailed information on the content of the specification, and advice on its delivery and assessment. The meetings were well received by the centres that attended, with positive feedback on their usefulness.

In the autumn and summer terms, two series of meetings were held which focused exclusively on Unit 3. These meetings were this year funded by DfES as part of the Applied GCSE implementation strategy, and ran in parallel with standardisation meetings for Units 1 and 2. Whilst the autumn term meetings were very well supported, attendance at the summer meetings was disappointing, despite all centres being specifically invited. The two autumn and summer meetings provided delegates with an insight into candidates' performances in June 2004 and January 2005 respectively and also previous examination series. Previous candidates' strengths and weaknesses were identified, and strategies for improving candidates' performances were suggested. A range of exemplar material was issued, with commentaries explaining where marks had been achieved by candidates. Those centres that chose not to attend were again sent materials by post so that their candidates were not disadvantaged.

The Candidates' Booklet and Teachers' Notes were extensively restructured last year in order to clarify exactly what is required of candidates. Candidates were presented with a series of clearly described stages which combine together to form each task. Working through these stages allowed candidates to produce tasks which demonstrated the depth and range of knowledge and understanding required by this Double Award specification.

Centres were also sent, at the start of the year, copies of the detailed mark scheme used by examiners. Although the allocation of marks has not changed throughout the life of this specification, by considering last year's mark scheme, based on a different set of focus areas, centres will have been able to clarify exactly what candidates are expected to do in order to achieve specific marks, and guide their students accordingly.

The focus areas in the June examination were the same as in the January 2005 examination.

Centres are reminded of AQA's expectation that candidates are taught the ICT content for all five focus areas identified in Unit 3 prior to their starting the assessed tasks. Evidence from Teacher Support meetings and questions raised by centres with Portfolio Advisers suggest that a number of centres did not teach the content in sufficient depth or detail to provide their candidates with opportunities to achieve success. This assessed unit represents one-third of a double award GCSE qualification, and the teaching and study allowed should reflect this, both in the amount of time and depth of preparation. It is clearly unreasonable to expect candidates who have been given reduced teaching and study time to achieve similar marks to those who have received the 5-6 hours per week that would normally be allocated to two GCSEs.

General issues

Examiners were pleased to note during the marking process for the January series that many teachers had clearly taken on board the advice that they had been offered through all the above routes, and the evidence produced by candidates was considerably improved, with a significant increase in the mean mark. However, candidate performance in the June series was somewhat disappointing, with a slight reduction in the mean mark, and a reduction in the overall quality of candidates' scripts.

Many candidates had left large gaps in their evidence, and had not produced the evidence required for certain sections of marks. It was disappointing to note that in some centres, candidates had misinterpreted the purpose of the mark scheme, resulting in a 'minimalist' approach to the tasks. The mark scheme is intended as a guide to candidates, not as a set of discrete questions. Candidates are expected to produce evidence which is a coherent whole and which considers the concepts required, rather than evidence which is a series of sometimes unrelated statements demonstrating little depth of ICT knowledge or understanding.

Examiners were again pleased to note that most candidates had taken note of AQA advice regarding use of software for Tasks One and Three particularly. ICT skills are assessed explicitly in *Unit 1: ICT Tools and Applications*, and so there are very few marks indeed in Unit 3 for skills in the use of desktop publishing or presentation graphics software, and candidates should be encouraged to focus their efforts on the content of the presentation and newsletter/brochure rather than its appearance, whilst at the same time maintaining its fitness for purpose.

A number of centres did not include *Candidate Record Forms* or *Record of Controlled Sessions* with their candidates' scripts, with the result that AQA staff had to contact centres to obtain them. Centres are reminded that both documents are specifically required, and must be included with sets of scripts when they are sent to examiners.

As in the January series, a number of centres failed to send candidates' scripts to examiners by the required date (15 May). Centres are again reminded that failure to meet this deadline is very likely to result in a delay in the issue of results.

As part of the marking process, AQA undertook a detailed item analysis of a sample of candidates' scripts. This identified exactly where candidates had achieved marks, and also where marks had been lost. Some of the results of this analysis are included in this Report on the Examination, and centres are very strongly advised to take note of the points made in their preparation of future cohorts of candidates.

Task One: Presentation on Law and Order

The presentation task this session was changed to be Task One, rather than Task Two as in previous years, although the requirements of the task itself were identical.

The requirement was for candidates to focus the content of their presentation exclusively on the effects of ICT relating to Law and Order on three identified groups. Examiners were again disappointed to note that a number of candidates had produced generic presentations which did not relate to any particular focus area. Presentations of this type were unable to achieve more than a minimal number of marks, as responses were not sufficiently detailed.

For a number of centres it was clear that a significant number of presentations were quite similar, for example they related to the same groups or areas of content. Centres are reminded that candidates must produce individual presentations and be unaided by the teacher whilst working under the controlled conditions. It is totally inappropriate for the teacher to influence this.

It is important for candidates to realise that the presentation must be produced for a specified audience, and must focus on the **effects** of ICT on the three identified types of groups or individuals. It is not sufficient for candidates to offer generic responses which do not relate to the identified groups. The presentation is essentially an opportunity for candidates to demonstrate that they are able to use ICT knowledge and understanding that they have developed through the teacher's delivery of the content, and **apply** that knowledge and understanding to a new context. Many weaker candidates will find that application challenging, and one of the distinguishing characteristics of higher-level candidates is their ability to transfer their knowledge.

Candidate describes types of groups and/or individuals affected by ICT systems (9 marks)

In identifying the three groups or individuals, candidates will establish much of the content focus of their presentation, and so it is important that candidates consider carefully which groups or individuals they will use. The majority of candidates identified groups or individuals that had some relation with the context of law and order, many using examples recommended at Teacher Support meetings. Groups such as police officers, forensic scientists, victims of crime, etc were therefore common. Some candidates ignored advice and opted for groups or individuals which were too closely related, for example 'criminals' and 'victims of crime', or 'criminals' and 'police officers'. Whilst selections such as these allowed candidates to achieve marks for group identification, the inter-relation of information often precluded the award of marks for later items, such as consequences and benefits, and details of future effects, where answers were too similar to be awarded full marks. Some candidates failed to achieve full marks in this section through their identification of inappropriate groups. Examples such as 'people', 'the public' or 'the community' are not sufficiently specific to provide meaningful structures. Similarly, 'me', 'my ICT teacher' or 'Miss Jones' are too specific, and do not constitute a **type** of group or individual.

The majority of candidates attempted to identify three groups, although in a number of cases one or more of these was unacceptable, for the reasons outlined above. Examiners were very disappointed to note that again very few candidates indeed described their groups to demonstrate their own knowledge. Candidates may have felt that the definitions of their groups were common knowledge and therefore unnecessary, which is not the case.
Very few candidates related their groups to the use of ICT, with very little detail of what each of the groups actually used ICT for, to provide a focus for later sections of the presentation. A number of candidates identified 'court officers' as a group, and went on to describe how courts use ICT, in terms of word processing, databases and CCTV cameras. There was often an incorrect assumption on the part of candidates that people do not need to be involved in deciding how ICT is used. This is clearly an area which is outside candidates' experiences, and so must be taught or researched in detail, rather than simply assumed by candidates.

Candidate considers consequences of lack of access to ICT and benefits available through use of ICT (10 marks)

Many candidates interpreted the two requirements of this criterion as being opposites, but they are not. Additionally, many candidates confused **benefits** of the use of ICT with the **purposes** of using it, suggesting that they did not have sufficient understanding of the way in which ICT is used. Consequently, marks achieved were often low.

Many candidates assumed, for example, that if the police did not have speed cameras, then they could not catch speeding motorists, or if there was no national police database then criminals could not be caught, which is clearly not the case. Again, many candidates seemed to be under the impression that it is the technology that catches criminals, rather than police officers supported by technology.

Very few candidates described accurately what would have to be done if there was no access to ICT, for example if there were no speed cameras then speeding motorists could be timed over a fixed distance manually, or followed by police cars. This was rarely mentioned.

Many candidates in this section gave extensive details of features such as DNA testing, fingerprinting, tagging of criminals, but did not relate that information to the use of ICT in relation to law and order, and so rarely achieved marks. Details of how technologies such as these are used to solve crime, or systems which reduce crime, would have achieved marks. Additionally, there was evidence that much of this had been copied verbatim from websites, and so it was therefore inadmissible as the candidate's own work.

Candidate's work is effective and appropriate to the needs of the audience, and is produced using fully the software features available (6 marks)

Included within this section is the requirement for candidates to identify an audience for their presentation. The audience may or may not be related to the groups or individuals identified, but many weaker candidates appeared to confuse the two, thereby losing the mark for audience selection. Some candidates proposed 'generic' audiences such as 'the public' or 'adults' which were unacceptably vague. Audiences such as 'my ICT group' or 'students at a police training college' or '15-year olds interested in law and order' were quite acceptable.

A surprising number of candidates failed to identify an audience at all.

Most candidates who identified an audience also achieved the mark for appropriateness for audience, which was judged in terms of content, language, appearance, format, etc.

Virtually all candidates achieved at least half of the marks available for use of software features, with the majority earning full marks. Some candidates may have included a background, which could have been awarded a mark, but did not achieve that mark as their printouts were produced in black and white. There is no requirement for colour printing in this section, but backgrounds often 'disappear' when printed in monochrome due to the design of the software. A simple annotation by the candidate indicating that a background has been used is sufficient for the background mark to be awarded.

Very few candidates provided evidence of slide transitions or build effects, both of which would have earned marks. Again, a simple annotation or screen print of the transition setup window is sufficient for the mark to be awarded.

Candidate's work includes evidence of the use of ICT to search for and organise information (6 marks)

Most candidates achieved at least 1 mark for providing evidence that they had used ICT to search for information. The most common approach to this criterion was the use of an Internet search engine, with appropriate search criteria included, which is quite acceptable. A number of candidates lost marks due to their use of inappropriate search criteria. Typing in the name of the Task, for example, is not acceptable. Higher-level candidates achieved more marks through appropriate selection of some of the hyperlinks generated by the search and relating that to the content of the presentation. Weaker candidates who included a screen shot of a search engine without any search criteria did not achieve marks.

Most candidates achieved at least one mark for use of ICT to organise information through their use of bulleted items in the presentation. Examiners were pleased to note that large numbers of candidates had followed the advice regarding inclusion of graphical information. Stronger candidates produced graphs of relevant information which were referred to in the presentation. Candidates who included a graph but did not identify its content could not be awarded marks; similarly candidates could not be rewarded for simply including the default graph generated by the software. Worryingly, a small number of mainly weaker candidates included a cartoon image of a graph taken from a clipart gallery, which did not earn marks.

Candidates who had pasted graphs from other sources into their presentation could not be awarded D2 organisation marks, but were often rewarded with C3 use of software marks, for demonstrating the skill of insertion of an object.

Many candidates achieved organisation marks in other ways, for example through the use of tables, flowcharts, some diagrams, etc.

Candidate demonstrates depth of knowledge of the effects of ICT developments on the chosen groups and/or individuals (5 marks)

This criterion is intended primarily to identify higher-level candidates and to provide them with an opportunity to demonstrate their extensive knowledge of the subject. Examiners were disappointed to note that marks were awarded to very few candidates for this criterion. Candidates were often happy to rely on bulleted slides supported only by the briefest of speaker's notes, which did not provide the depth required. A number of candidates simply inserted large sections copied verbatim from websites or other published sources, which could not be awarded marks as it was not the candidate's own work.

Many candidates provided depth of knowledge of the technical aspects of some ICT developments, for example extensive technical descriptions of types of speed cameras were common, as were notes on the intricacies of different types of DNA testing. The language used often suggested that these were copied verbatim from published sources and the candidate did not understand what had been written. Usually technical details such as this did not relate to the **effects** of the developments on the identified groups, and so could not be awarded marks. Responses could have related to the ability to solve more complex crimes in specified ways, increased speed at which crimes can be solved using technology, and stronger reliability of evidence for identified reasons, although many other types of responses could have earned marks.

Candidate makes informed suggestions how ICT developments will affect the chosen groups and/or individuals, based on knowledge of the effects of ICT developments (7 marks)

This criterion again is aimed primarily at more able candidates, as it requires them to interpret the information they have already researched and project that into the future to make realistic predictions. This is a high-level skill, and weaker candidates will find it extremely challenging. Candidates who do not have sufficient knowledge of the effects of ICT developments on their groups will have great difficulty in meeting this criterion.

A number of candidates achieved some marks for F1, which required only basic details, but most candidates limited their responses to suggestions of 'more….', 'better….', 'faster….' or 'cheaper…'. A number of candidates suggested, for example, that security tags fitted to criminals in lieu of prison sentences could be made 'more efficient', without going into any detail, and so could not be awarded marks. It is almost always the case that one-word or limited responses such as this are not acceptable.

Some candidates made suggestions that were actually in place now, such as in some areas of forensics. One suggestion was that police officers could be issued with mobile phones to reduce crime. As well as not earning marks, responses such as this demonstrated the candidates' lack of detailed knowledge.

A number of candidates discussed possible future events related to mobile phones, ATM machines and PDAs, which were usually not related to law and order. Again, these could not usually be awarded marks unless they were linked directly to an identified aspect of law and order

Candidate evaluates own work and details validated sources of information. Candidate recognises and explores ethical and moral implications of access to ICT (9 marks)

Evaluation of one's own work is a skill which most candidates, even those working at a higher level, find particularly challenging. However, examiners were pleased to note that the general standard of evaluations had improved compared to previous examination series. Many candidates were able to highlight the strengths of their presentations, some relating it to the identified audience. However, candidates often found difficulty in identifying weaknesses in their presentations, or suggesting areas for improvement. Weaknesses identified were often trivia such as 'it is too long' or 'it is too short' or 'there is not enough information', without any explanation of the implications of those shortcomings. Weaker candidates' evaluations tended to be largely descriptive diaries of what tasks had been carried out, usually of little or no evaluative merit.

Candidates had been issued for the first time this session with a proforma for recording sources used, and this certainly improved candidates' performances in this area. Most candidates identified some sources of information worthy of marks. A few candidates still included sources such as 'the Internet' or 'the ICT text book' which could not be credited, as full names and details of books, and addresses of specific websites are required. Some candidates simply listed a vast number of websites which appeared to be the output from a search engine, and in many cases it was clear that these sources had not been used, or even considered. Candidates commonly named Internet search engines as sources. Centres are reminded that such websites are content free, and are merely tools to identify other sites, and so cannot be considered as sources.

A large number of candidates attempted validation of sources, although in many cases these 'validations' did not contain sufficient detail to be of any merit. Many candidates made claims such as 'I checked the information with other websites and it was the same', without identifying the information or the other sites, and so could not be awarded marks. Similarly, candidates who claimed 'I checked everything with my teacher and he said it was OK' could not be awarded marks.

It was clear in the vast majority of scripts, however, that candidates had little idea of what was required to validate sources, and centres are encouraged to develop this area, which is also a feature of Task Two and Task Three, as part of their delivery of the specification.

Many candidates attempted a response to ethical and moral considerations, but in most cases answers were trivial or simply a repeat of information included elsewhere. Candidates who simply listed, without explanation, suggestions such as 'hacking', 'paedophiles', etc, did not achieve marks as the criterion specifically requires candidates to 'explore' ethical and moral considerations rather than simply list them. What is required is identification of a number of issues, supported by descriptions and explanations which clarify the issues, and relate them specifically to an area of law and order.

Task Two: Report on Businesses and Organisations

Whereas the presentation focuses on the effects of ICT on identified types of groups or individuals, the report is concerned primarily with the available technology. The requirement is for candidates to focus exclusively on Businesses and Organisations, and to relate the contents of their report to that area. Many candidates produced generic reports which were not sufficiently focused on the prescribed area, and so they were unable to achieve the full range of marks.

Examiners were pleased to note, however, that the general standard of candidates' reports had improved in comparison to previous examination series, with candidates achieving more of the lower-level marks than previously. Higher-level marks for development and predictions, however, were still only achieved by a minority of stronger candidates.

Some candidates appeared, in this Task particularly, to be adopting a 'minimalist' approach, sticking rigidly to the mark scheme wording, often trying to respond in a single sentence. Candidates who simply wrote unrelated sentences in response to each mark criterion, rather than expanding on the task list of requirements, missed out on achieving many of the marks for detail.

Candidates who used the marking criteria as side headings in their report often produced more structured evidence with more detail included.

Candidate produces a basic description of three technologies available to access and exchange information and carry out transactions (8 marks)

The vast majority of candidates identified three technologies, with the Internet, mobile phones, e-mail and PDAs being amongst the most popular technologies listed. Some candidates lost marks by including technologies which were not relevant to Businesses and Organisations, often those that had been identified for Task One.

Many candidates did not describe their three technologies, or their responses did not suggest any significant degree of technical knowledge or understanding. Examples of this were a candidate who discussed the Internet but did not mention the requirement for computers, or a candidate who discussed e-mail but did not include reference to a correspondence between two computers by way of the Internet. Again, as in the descriptions of the groups or individuals for the presentations, it appears that candidates assumed that such items were commonplace and did not require a description.

More candidates achieved marks for H3 by giving technical details of the technologies, despite not having offered a basic description.

More detailed description, including the main purposes of technologies available, giving advantages and disadvantages, using ICT to search, select and organise information (8 marks)

Many candidates appeared confused between the meanings of advantages, disadvantages and purposes, with the result that responses often tended not to distinguish between them.

Candidates rarely achieved more than minimal marks for details of purposes, as their responses did not demonstrate any depth of understanding. Comments often referred to what a piece of technology was **able** to do (often actually an advantage), rather than what is was **intended** to do.

Responses regarding advantages and disadvantages were very often generic, and therefore rarely worthy of marks. Answers such as 'quicker', 'easier', 'cheaper', etc are unacceptable without amplification and reference to context. Examiners were again surprised to note that candidates had included little, if any, reference to effects of the use of technologies on the environment, job losses, etc.

This section in many cases suggested that candidates did not have sufficient depth of knowledge or understanding to formulate a response, and centres are encouraged to develop this area in the preparation for their teaching of future cohorts.

Candidates were again required to search for, select and organise information, as in the presentation. The single mark available for searching for or selecting information was achieved by most candidates mainly through evidence of searching rather than selecting. The comments made in the section of this Report on the presentation are also relevant here.

Very few candidates could be credited with the organisation mark. The requirement is for candidates to organise their own data which could be achieved through the production of charts, graphs, tables, diagrams, etc but most candidates tended to produce a text-only report. Features such as graphs or charts which have been pasted in from published sources are not acceptable for this mark.

Candidate identifies trends over time based on detailed descriptions of purposes, advantages and disadvantages (6 marks)

This criterion is an extension of the previous section, and is intended to provide candidates with opportunities to demonstrate a higher level of understanding by identifying trends through the past, present and future based on the evidence they have accumulated in their research.

Most candidates were able to identify at least one trend and describe it in simplistic terms, although responses were very often bullet-pointed sentences rather than in-depth discussions. Candidates often talked about mobile phones reducing in size over the years but did not offer any explanation as to why this is, or details of the consequences or benefits of that trend. Responses appeared often to be guesswork rather than developments of information researched. In many cases, responses were simply a repeat of information previously included. Consequently, very few candidates were able to be awarded the higher-level J2 marks for additional detail.

Candidate produces a well-structured description, including a list of sources of information, with each source evaluated and validated (8 marks)

Most candidates were able to achieve at least 2 of the 3 marks available for the structure of the Report through the use of sub-headings, appropriate paragraphs, bullet points, numbering, etc. Very few candidates indeed provided acceptable introductions or summary conclusions to their reports to obtain full marks.

The candidates who identified lists of sources generally did well and achieved marks, with most able to relate the source specifically to a section of the Report content. Some candidates, however, gave information that was too vague, such as, 'I used this book to find out about mobile phones,' rather than a more precise description. Candidates who chose to use the proforma provided did significantly better than those who used their own format, and centres are again asked to encourage their candidates to use the structure provided.

As discussed in the presentation, validation of sources is still proving difficult to a majority of candidates, with responses such as, 'I checked it with my teacher,' or, 'I found it again on another website,' very common unacceptable responses. The comments made earlier regarding validation are relevant in this task.

Many candidates did not attempt to evaluate a source, those that did tended to produce descriptive responses rather than evaluative reflection. Evaluations of websites tended to say that they were 'useful' or 'good' with no reference to detail, appearance of the site, ease of finding the information on the site, whether there was a search facility, etc. Examiners were surprised to note this weakness, as evaluation of websites, and other documents, is a feature of the Key Stage 3 ICT strategy.

Task Three: Newsletter or Brochure on Legislation

This task is more constant each examination series in that it always focuses on ICT legislation as detailed in the specification. Candidates are required to produce a DTP document, this year for a new employee of a company, discussing the purposes and effects of legislation related to ICT. Marks are awarded predominantly for content rather than technical DTP skill, as this is assessed explicitly in Unit 1: *ICT Tools and Applications*.

Examiners were disappointed to note that this task was often executed poorly by candidates. A number of candidates appeared to have started but not finished the brochure, possibly due to lack of effective time management on their part. Some candidates simply produced essays on the various acts, rather than structuring the required newsletter or brochure.

Many candidates did not know the proper names of the Acts, and some candidates discussed irrelevant issues such as the rules of ICT rooms in their own school or college. The important Acts are listed in the specification, although candidates may wish to include other pieces of legislation.

Those candidates that did this task well, however, produced some very impressive documents which demonstrated detailed knowledge and understanding.

Candidate produces a simple description of the main purposes of legislation covering working with, and using, ICT (4 marks)

This initial section requires candidates to identify and describe the purposes of the various Acts. It does not require detailed working knowledge of the Acts' contents.

Most candidates were able to describe purposes of 2 or 3 Acts adequately, but few scored full marks. Many candidates thought that the main purposes of the Acts were to make something 'illegal', without identifying the precise purposes. A large number of candidates identified some purposes of the Health and Safety at Work Act, but referred to the non-ICT issues such as heavy lifting, dangerous substances, etc which did not achieve marks. Some sections of the Health and safety Act are related to use of ICT, such as reference to trailing wires, time spent looking at monitors, etc, and these will achieve marks.

Candidate produces a more detailed description, which includes an explanation of implications for users of implementing the legislation (7 marks)

This criterion is an extension of the previous one and requires candidates additionally to identify the implications for users, at any level, of the Acts they are considering. These implications could be related to working practices, efficiency, costs, etc, and may be different for different types of users.

Very few candidates achieved significant marks in this criterion, largely due to their lack of detailed responses. Candidates tended to provide the most comprehensive information about the Data Protection Act, but often this was simply a list of the principles of the Act, rather than a discussion of what the implications of it are in practice.

Candidate produces a detailed and well-structured description which includes details of the sources of information, and validates these as part of a detailed evaluation of the work (7 marks)

A number of candidates produced word processed 'essays' rather than the required newsletter or brochure, and so could not be awarded the marks for structure. Some candidates had used software templates or 'wizards', which is quite acceptable, but had selected a template which did not provide space for sufficient detail, and so lost marks. The majority of candidates, however, earned at least 1 mark for structure, most achieved 2.

Details of sources has been discussed earlier in this Report, and the comments are again relevant here. Most candidates, however, achieved the source mark for this task, although again very few produced an acceptable validation. These usually consisted of checking with the teacher, or including the ISBN number of a book, neither of which approaches are worthy of credit. Details of specified pieces of information that have been located in two or more identified sources would have achieved marks for candidates.

Most candidates did not produce an evaluation of their document. Evaluations, where they were produced, were usually brief and descriptive with little substance, rather than evaluative. Candidates found it difficult to justify why a particular feature was a strength or a weakness. Successful evaluations usually consisted of details of identified strengths and weaknesses, appropriateness of format, content and language to the intended user, and suggestions for possible future improvements.

Conclusion

This report contains the findings of examiners from both the January 2005 and June 2005 series. As has been previously stated, examiners were disappointed with the standard of some candidates' work in June, and centres are very strongly encouraged to note carefully the comments in this Report when preparing candidates for future examination series.

Centres should always be prepared to seek advice or clarification from their Portfolio Adviser, or from ICT Subject Support at AQA.

Mark Range and Award of Grades

Unit	Maximum Mark (Raw)	Maximum Mark (Scaled)	Mean Mark (Scaled)	Standard Deviation (Scaled)
Unit 1 - ICT Tools and Applications	100	100	46.7	21.4
Unit 2 - ICT in Organisations	100	100	42.2	21.8
Unit 3 - ICT in Society	100	100	24.7	11.3

For units which contain only one component, scaled marks are the same as raw marks.

Unit 1 (10070 candidates)

	Max. mark	A*	A	B	C	D	E	F	G
Scaled Boundary Mark	100	84	72	60	49	40	32	24	16
Uniform Boundary Mark	100	90	80	70	60	50	40	30	20

Unit 2 (9140 candidates)

	Max. mark	A*	A	B	C	D	E	F	G
Scaled Boundary Mark	100	84	70	56	42	35	28	21	14
Uniform Boundary Mark	100	90	80	70	60	50	40	30	20

Unit 3 (6848 candidates)

	Max. mark	A*	A	B	C	D	E	F	G
Scaled Boundary Mark	100	62	54	47	40	32	25	18	11
Uniform Boundary Mark	100	90	80	70	60	50	40	30	20

Overall (8834 candidates)

	A*	A	B	C	D	E	F	G
Cumulative %	1.0	5.1	16.2	35.4	53.1	68.1	80.7	91.1

Definitions

Boundary Mark: the minimum (scaled) mark required by a candidate to qualify for a given grade.

Mean Mark: is the sum of all candidates' marks divided by the number of candidates. In order to compare mean marks for different components, the mean mark (scaled) should be expressed as a percentage of the maximum mark (scaled).

Standard Deviation: a measure of the spread of candidates' marks. In most components, approximately two-thirds of all candidates lie in a range of plus or minus one standard deviation from the mean, and approximately 95% of all candidate lie in range of plus or minus two standard deviations from the mean. In order to compare the standard deviations for different components, the standard deviation (scaled) should be expressed as a percentage of the maximum mark (scaled).

Uniform Mark: a score on a standard scale which indicates a candidate's performance. The lowest uniform mark for grade A* is always 90% of the maximum uniform mark for the unit, similarly grade A is 80%, grade B is 70%, grade C is 60%, grade D is 50%, grade E is 40%, grade F is 30% and grade G is 20%. A candidate's total scaled mark for each unit is converted to a uniform mark and the uniform marks for the units will be added in order to determine the candidate's overall grade.