OCR
RECOGNISING ACHIEVEMENT

GCE

Information & Communication Technology

Report on the Units

June 2006

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All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

The reports on the Examinations provide information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the syllabus content, of the operation of the scheme of assessment and of the application of assessment criteria.

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REPORTS ON THE UNITS

Chief Examiner's Report

General Comments

The improvement noted in January has not been maintained by the average candidate. Although some very high marks were awarded to some candidates it is still apparent that the majority are being entered for the A2 written papers without due preparation or revision.

The specification is now 6 years old. There are a multitude of past papers and mark schemes in the system and training is available to teachers through OCR.

The standard of the practical work is high and continuing to improve. Comments on the individual units are available in the Principal Examiners reports, but in general, work submitted by the candidates and administration by teachers is improving. However the huge number of arithmetical errors made by teachers when submitting work for moderation is a cause for concern.

Teachers are urged to study the past papers, to allow student access to the specification from the beginning of the course and to use the learning objectives as a scheme of work. An approved book is available for the students for the AS though sadly no such book is available for A2.

2512 - ICT Information, Systems and Communications

1   General Comments

The overall performance of the candidates seems better than in previous examinations. Most candidates were appropriately prepared for this examination. It was evident that some candidates had learnt sections of the theory by heart.

As with previous sessions, the use of requisite language was well documented yet the more technical aspects of the specification, such as networking and fixed and variable length records, were not particularly well known.

There were few candidates who wrote nothing on questions. However, a significant number of candidates frequently ignored, or misread, the questions' wording to their detriment. Another significant problem was a failure to read, and implement, the instructions on the paper's cover sheet.

Clearly some topics are not being covered adequately by centres. Evidence of having been instructed on the interpretation of keywords was not always to be found in the answers.

Comments on Individual Questions

Question 1

(a)   Most candidates could distinguish between information and knowledge, but a common weakness was a failure to present examples related to the scenario, giving a book learnt response instead and not securing all the available marks.

(b)   Not all candidates could distinguish between direct and indirect. Hence examples were not always clear. Of the examples that were given, 'surveys' and 'questionnaires' featured widely for direct sources, with 'sales figures' a typical of response for an indirect source. Without referring to the precise example of the cinema, given in the question, candidates found it difficult to gain any marks.

(c)   Many candidates were familiar with appropriate data types but guessing was apparent in some cases. Despite the nomenclature of some software packages, 'number' can not be accepted as a data type and centres must consult the specification for those that would gain an award.

(d)   There were many excellent responses to this question, clearly covered well by most centres. Some candidates confused 'coding' with program code or encryption to their cost.

Question 2

(a   The ALU was less accurately described than RAM yet most seemed to understand that the ALU 'performed calculations'. Very few knew that the Control Unit executed instructions and as such this was the most poorly understood component.

(b)   The overall level of response was good although a worrying number of candidates confused input devices with output devices. Some mentioned input devices without thinking how they might be used in a cinema. Most candidates managed some mention of card readers and/or scanners.

(c)   Candidates obviously knew the difference between a back up and the archiving of data but in general, descriptions were weak. Many knew backups were copies. Few realised archiving meant storing off line and seemed to believe that an archive was just a file in the computer.

(d)   The question split the candidature almost exactly into two camps. Those with a realistic perception of the storage capacity needed, along with an appropriate device and those who had not, as yet, understood the concept of mass storage media of this size. Candidates are advised in the specification to keep abreast of new developments in this field and have a grasp of the availability of devices for such tasks. Another factor in gaining marks was to read the question and note the number of Gigabytes that actually required storage. Far too often 'pen drive' was submitted as an incorrect answer.

Question 3

(a)   A large number of candidates were aware of the idea of multiple users but hardly any went further and provided anything on time slicing or scheduling. Many candidates offered answers on file sharing, user ID's and logging on.

(b)   The overall level of response was good. However, being able to expand an identified characteristic into a description proved to be beyond many candidates and in so doing lost three possible marks.

Question 4

(a)   Only a small number of centres had prepared candidates for this section of the specification. Complete answers were few and far between. Those candidates that answered this well had a good appreciation of the issues of truncation and storage space.

(b)   Many candidates answered this well, but the connection between related tables and benefits such as queries, reports, lack of redundancy, relational integrity, etc. were not well known or expressed.

(c)   Candidates either knew an appropriate alternative (mostly 'flat file' given in response) or gave no answer at all. Candidates seemed to be aware of a flat file database as being a pre-cursor to a relational database without command of any inherent benefits the alternatives might display.

(d)   Only a few candidates could give three different access levels, often demonstrating some confusion with file attributes.

Question 5

(a)   Most candidates could provide one valid reason why a test plan is required, but many struggled with a second. Often, answers did not distinguish between the need for a test plan and the point of testing a database for part (b).

(b)   Marks were gained for the idea of making sure it works, but few thought about the end user. There was a lot of crossover between a and b without much appreciation from the candidates of the difference on the question.

Question 6

(a)   (i) and (ii)   The majority of candidates knew the different network topologies and had clearly learnt how to draw them, showing that they had done past papers and understood the need to be able to do this. Fewer candidates read the whole question and therefore lost marks by not labelling all aspects, especially the direction of data flow.

(b)   The overall level of response to this question was good, although a small minority confused hardware with software. Those that correctly identified items of hardware often struggled to develop their answer into a description of function.

(c)   (i) and (ii) The purpose of the User ID was more clearly described than the password, with repeated purposes quite common.

Question 7

The overall level of response was very high, although candidates were, in general, stronger when describing the use of e-mail than the use of fax. Most were aware of the differences between email and fax but three adequate comparisons that gained all available marks were not prolific.   The layout of the paper was changed for this question and did lead to more comparisons than has been seen in previous years.

Question 8

Candidates who were familiar with the Act performed well. Those who were not, frequently did not realize that this was not the Data Protection Act. Many candidates lost marks by not making it clear that the crimes were for unauthorised purposes.

Question 9

(a)   Candidates had obviously studied health and safety. However, some candidates had little idea of safety issues, often talking about 'health' instead. A few seconds thought or the application of appropriate examination technique might have led them to better answers.

(b)   Solutions given were sometimes weak. 'Take a break every now and again' being given for all three, but candidates generally had heard of the problems.

Question 10

This question discriminated well. All candidates were familiar with the problem of software theft and a wide range of levels of response was apparent. Some candidates could give two measures but only a few could form an expansion to describe their use.

Question 11

The performance of most candidates suggested they needed more guidance about this type of question and in particular, this key word. Candidates in general produced unconnected points, usually relevant, but which did not allow them to access most of the available marks. The development of a discussion should not be justified by the use of terms such as 'faster', 'easier', 'cheaper' or indeed 'saving money'. Candidates should be given the opportunity to develop reasoned arguments that demonstrate why an impact has a positive or negative effect, and the resultant implications for the body in question.

The use of a conclusion in an attempt to gain a mark seems to be a practice adopted by many candidates. Availing themselves of this opportunity was good to see. However, a poorly discussed question left little reference material and the resultant weak ending was, too often, not worthy of an award.

2513 - Structured Practical ICT Tasks

General Comments

Presentation of work by Centres has continued to improve this year with few Centres sending work in ring binders. The use of plastic wallets is reducing further still and is much appreciated. Most Centres are now encouraging candidates to put task numbers on each page and this helps a lot. The quality of work from candidates is improving significantly and this is clearly due to improved teaching standards, training from OCR, more specialist teachers and most importantly increased ICT skills of students.

As last year, the vast majority of Centres used the official cover sheets and official mark schemes which helped the moderation process immensely. The use of annotation by most Centres helped to identify where marks had / had not been awarded. Where annotation was not included, the moderation process proved to be very difficult. In general, Centres who don't annotate do tend to have marks adjusted more than those who do annotate. This is usually due to incorrect interpretation of the mark scheme and insufficient evidence of marks being justifiably awarded. Virtually all Centres are using the correct cover sheets and mark schemes per candidate but there is a very small minority who do still need to do this.

Unfortunately the number of clerical errors was extremely high again with nearly 50% of Centres making some kind of error – whether it is an arithmetic error or transcription error – this is very unfair on the moderators and potentially damaging to candidates. It is extremely important that Centres ensure the marks on the MS1 match those on the Cover Sheet and that those on the Cover Sheet are added up accurately on both sides and match those on the Mark Scheme. It is essential that Centres get this right as it is their responsibility to ensure the marks given to OCR are accurate. If changes are made to marks then they should be applied to all paperwork.

The marking of testing is getting better again and this is clearly due to experience of teachers and training provided by OCR. Centres are reminded however to read the explanatory notes in the mark scheme which were often ignored.

Again, the general standard of work was better than previous years as teachers are learning more the requirements of an AS Level coursework in ICT – students are then able to reap the benefits of teacher advice. The mark scheme this year gave even more specific guidance and removed a few areas where candidates were gaining 'accidental' marks in previous years – this has led to a wider differentiation between A and E grade candidates which is desirable.

The majority of Centres handed the MS1 sheets in on time – this is an improvement on last year but there are still some Centres who are handing in marks late. The deadline of 15 May is the same every year and so Centres must plan to meet this.

Some Centres were expecting candidates to produce far too much evidence. For example, for task 1 candidates only needed to produce what was asked for but some Centres had commentaries of how every little thing was achieved covering 20+ pages and thus taking up a lot of unnecessary time. Task 1 only needed 6 pages of evidence. Centres are therefore advised to consider carefully how much time and effort is required for each question.

Comments on Individual Tasks

Task 1

(a)   Most candidates achieved 7 out of 7 marks for this task with some E/U grade candidates achieving less due to not including data such as e-mail address of instructor or mobile number of instructor.

(b)   (i)   The vast majority of candidates achieved this mark. The mistakes tended to be where candidates had put redundant data in the data source.

(b)   (ii)   The vast majority of candidates produced the business card well.

(b)   (iii)   As 3 marking points were available for 2 marks, most candidates achieved 2 marks and produced some very good quality mail merges. Those that only achieved one mark may have not provided a data source for b(i) and thus couldn't get mark points 13 or 14.

(c)   This question differentiated E/U grade candidates well. A-D candidates often achieved all 10 marks but where marks were lost it tended to be only including the logo or name of driving school rather than both, not including a data for viewing the vehicle, not including instructions or not specifying fonts, colours and sizes.

Task 2

(a)   This question tended to be answered well by some Centres, and not so well by other Centres. Where Centres had taught candidates to use arrows properly in diagrams then this worked well and their candidates tended to achieve 6/6 marks. However, Centres that taught the use of hierarchical diagrams without arrows to show how screens can be navigated, students tended not to achieve mark points 7 or 8. Very few candidates achieved the mark point for the help screen. This mark point was offered for those candidates who had thought about it and it was surprising how many didn't achieve it.

(b)   It was clear that students put a lot of effort into producing the presentation for this task and there was some excellent quality in the presentations. As planned, the question did distinguish very well between A/B candidates and E candidates as many E/D/C candidates didn't put in sufficient 'alternative' evidence which should have included evidence such as: screenshot of masterslide, with evidence that it is customised (eg inclusion of a logo or menu button), evidence of animations / transitions, evidence that a button actually links somewhere. The video mark was often awarded for a blue rectangle – unfortunately this isn't sufficient evidence that it is actually a video and the question paper did have suggestions of the evidence that could be shown. Although it was a reasonable thing to expect 17 year old students to take pictures for the driving instructors considering the classroom environment, pictures of Homer Simpson or Meat Loaf with a guitar in his hands were not really appropriate yet some Centres allowed these marks. It was pleasing to see the level of consistency applied by candidates as well as consideration of the audience being given.

(c)   Documentation in the past has always been completed very poorly. However, since last year, standards have risen considerably. The vast majority of candidates are now including full user documentation with introduction, instructions, contents, trouble shooting and glossary – this is clearly credit to the teaching profession. Further, trouble shooting and glossary sections are now far more appropriate to the task in hand. This has unexpectedly resulted in almost all candidates getting the first 4 marks for documentation, especially as 7 marking points will be available. Be aware that in future years there will now need to be less marking points available in order to differentiate candidates. For the

2nd 8 marks in this section, there was good differentiation between candidates. Some tended to be due to the way Centres had clearly taught documentation well, where as most of the differentiation was due to the ability of the candidate to provide clear instructions. Examples of ways in which the Centres had taught well can be seen in mark point 28 where candidates needed to include reference to the file that should be opened. Good instructions are those where somebody could follow them and understand what to do. A common error was to write "look up in the instruction manual how to take a photo" for mark point 31.

(d) (i) This question proved to be very good at differentiating the A/B grade students. Many candidates achieved 2 marks but most struggled with mark point 40. The common mistake here was to use ordinary numbering or page numbering rather than outline / heading numbering.

(d) (ii) This was another good differentiator. Candidates rarely scored 1 mark as it was often 2 or 3 marks. This was because if the screenshot was relevant then there tended to be good annotation to go with it. Many candidates did not attempt to show how the table of contents could be updated but most were able to show how to insert a table of contents.

Task 3

(a) This question was a good differentiator for all levels. Centres are now awarding marks correctly for specifications of fonts, sizes, colours rather than the implication that because something is bigger it is a particular size. Marks that candidates tended to miss were describing any procedures, the size of screen, the button to exit and instructions on screen. Other points tended to be achieved.

(b) (i) Most candidates included a correct lookup table. Where marks weren't awarded was because the data were incorrect.

(b) (ii) Most candidates produced good screens and tended to achieve both marks.

(b) (iii) The formulae definitely differentiated candidates well. Most candidates were able to correctly show the discount formula although often forgot to annotate it as required in the question. Macros often helped weaker candidates gain some marks here too. The correct LOOKUP/INDEX function was often either incorrect or missed out but about 50% of candidates got this correct. Some Centres accepted nested IF statements as correct but this wasn't offered in the mark scheme. Similarly, some Centres allowed macros for the calculations – unless macros made specific reference to a lookup table (as per 3bi) then the mark couldn't be awarded.

(c) (i) Centres are teaching candidates how to do this much better now and it is clear that the differentiation here is between teaching standards of Centres rather than the ability of candidates. When taught well, candidates clearly state what data will be input and what the expected output will be with SPECIFIC references to the actual data that should be used for testing. Where candidates don't identify the input data or output data then this is not a test plan. Some Centres suggested to candidates that they should include one valid, one extreme and one invalid test – however, only valid data was possible as this was a touch screen. Trying to input "4" hours would not be possible as a keyboard would be needed. The only invalid test was for cell protection, but candidates must state where to test. To say "click one of the formulae" as input is not enough, but to say "click the cell that contains the total value" would be good.

(c) (ii) Centres are getting better at understanding that if the test plan has been planned incorrectly, then it can't be followed and thus the mark for c(ii) not awarded. Where candidates lost marks, it was often because they didn't annotate to identify where the input data should be or where the output data should be. The vast majority candidates have been taught well to ensure that they use the data planned in c(i) in c(ii) – this shows that training and previous reports have been effective and that teaching standards are clearly improving.

Task 4

(a) (i) A lot of candidates achieved full marks for this task. It's good to see that candidates are now aware that telephone numbers are actually a 'string' of numbers (text) and that Boolean data types are being used. Marking errors tended to be because Centres had missed the "Max" marks notices or marks were awarded for the "Customer" as a foreign key by assuming that because it was in the table it was foreign. This is not possible as the only way to prove it is a foreign key is to show its relationship to the primary key. More than half of candidates used the variable data type correctly for VEHICLE notes, but some centre staff were under the impression that "text" is a variable field.

(a) (ii) For the first time, this question produced a variety of results. Usually candidates get all the marks, but the extra demand of requiring the data from table 4.1 proved to differentiate candidates. It was surprising how many candidates did this for Nicola Long and Merrick Woodward but completely forgot about the cars and the lessons. Many candidates also put in Nicola Long's name but made up a completely different address. Candidates should be taught the importance of test data and in this question specific test data was provided. If extra data is required later on in the question, then candidates should add to existing data rather than change existing data.

(b) This question differentiated Centres rather than candidates. There were 2 requirements for each of the marks – **actual test data** and a reason. Therefore saying "data must be in the pattern XX999999X" doesn't actually mean anything. But to say "data should follow the pattern XX999999X where X is a letter and 9 is a digit" is a good reason. Backed up by "the data I will use is JA 44 69 01 C" gets the mark as some actual data has been given. A few Centres also used data that recognised the fact "A-D" were the only valid letters at the end – therefore credit was given in this situation.

(c) (i) This question was the most common cause of adjustment of marks to Centres. The mark scheme has a very clear note about system validation and yet system data type checks and system length checks were awarded marks by quite a few Centres. Validation must be customised otherwise it is no more effort than creating data types when setting up the data structure. Where candidates got 4 out of 4, it tended to be clear that they were A grade candidates. It was also necessary for candidates to say which field the validation was for as otherwise it had no meaning.

(c) (ii) If candidates did c(i) well then they usually did well on c(ii). Problems occurred when candidates did not display the input data used as required in the question.

(d) (i) Most candidates scored some marks if not all on this, the first of the reports, question. Calculations for finish time varied. Some candidates used [start-time]+[length] but this only works if the length field is set to be a date/time field. Most candidates used the DATEADD function correctly. Having to include an appropriate proved to be something that a fair number of candidates didn't do which differentiated candidates who could produce work appropriately for an audience.

(d) (ii) Most candidates achieved 1 or 2 marks here, but on occasions it was difficult to identify whether Nicola Long's lesson had been included. Annotation by Centres that cross-referenced the lesson helped, but the best method of doing this is to use a query that includes the customer forename and surname so that they can be displayed on the report.

(d) (iii) This question differentiated candidates well. Grouping proved difficult for a large number of candidates and appropriate sub-titles were often not chosen.

(e) (i) This question was deliberately designed to be for A grade candidates and thus was difficult. Therefore, the marking should reflect this. Printouts that look like an invoice should be legible and professional. If data values are cut short then this doesn't look like an invoice. When the mark scheme asks for "Total ex VAT, VAT due and Total inc VAT" then these should be present as TOTALs rather than calculations for each lesson.

(e) (ii) This was another A grade task with an element of B. Candidates tended to get either 1 or 3 marks here. The main mistake was in not reading the question where it states "The charges shown in table 3.1 include VAT". By not reading this question, many candidates tried to multiply the lesson charges by 0.175 to calculate the VAT when in fact this put the VAT on twice. The VAT actually needed to be removed and so the calculation should have been lesson charge divided by 1.175 to calculate the VAT. This often meant candidates didn't get the total ex VAT or total inc VAT because they structured their functions completely incorrectly. Unfortunately, many teachers also marked these incorrect functions as being acceptable and this was another cause of adjustments.

(e) (iii) Most candidates annotated the report structure and attempted the query structure but either forgot to show how only 'unpaid' lessons were selected or forgot to show how 'lessons in the past' had been selected.

(f) (i) If candidates got functions in e(ii) wrong, then they were not penalised a second time for f(i), although technically their tests were incorrect. It was felt that candidates should not be penalised twice for the same error. Candidates tended to identify input data values and output data values correctly for this task to test each formula.

(f) (ii) The stem of the question stated "The driving school are concerned that the invoices contain accurate data". Therefore, producing test outputs that only show the data in a query, does not show that the data on the invoices are correct. Unfortunately, many candidates did not identify clearly the input and output data and thus missed out on marks. Those candidates who did this correctly, quite rightly deserve the top grades.

2514 - Practical Applications of ICT

General Comments

This is a scenario-based paper and as such candidates should give examples, when asked for, in the context of the scenario. In some cases it was evident that the candidates had some knowledge but were unable to apply this knowledge to the context of the questions. Failure to do this leads to candidates failing to be awarded marks for examples. Some candidates are still using terms such as cheaper, professional and faster without any explanation or qualification

The examination technique of many candidates hindered their ability to score marks – centres must practice examination technique and assist the candidates to understand what is required by the command words such as discuss, explain, describe, state and so on.

There appears to be a general lack of knowledge of technical terminology relating to applications. There is no doubt that candidates are able to manipulate applications in a practical manner but are unable to apply their practical skills in a theoretical situation.

There are still many candidates whose writing is very difficult to interpret – this slows down the marking process considerably and candidates can often miss out on marks because the examiner cannot read the writing. Candidates should be encouraged to use legible handwriting in order to maximise their chances or earning marks.

Even though candidates were asked not to mention specific brands of software, many did. Many candidates seem to be under the impression that there is only one type of computer in existence with one operating system.

It is important that all areas of the specification are covered to ensure that candidates have a wide range of knowledge.

Comments on Individual Questions

1   (a)   Many candidates simply gave generic answers to this question. Candidates lost marks as they gave answers such as quicker, cheaper and faster. These answers needed to be quantified for the candidates to gain the marks.

(b)   Many candidates answered this part of the question in the terms of how to use a database.

The most common area where candidates lost marks was to identify search and query as two different ways in which the database could be used. Many candidates simply gave 4 reports that could be generated by Food 4 Pets through the use of the database – this strategy usually meant that candidates only achieved 1 mark.

(c) Most candidates were able to gain full marks on part (i) and (ii) of this question. However, despite the entities and attributes being given, candidates failed to use the correct notation to define the primary and foreign keys e.g. missing the underscore or expanding the word Cust to Customer.

Part (iii) of this question was in a new format. Many candidates were able to show the attributes in the correct entities and define the primary keys. Candidates failed to gain marks when defining the foreign key and the relationships. Many candidates felt that the relationships between the given entities were of a M: M type with many also failing to correctly define the relationships.

2 **(a)** Most candidates were able to identify that one application of word wrap is that the words will automatically move onto the next line yet very few were able to identify that this is a 'soft return'. However, this does not work with hyphenated words.

There was limited evidence of candidate understanding that another application of word wrap is that text can be wrapped around graphics.

There were many instances of candidates confusing templates and style sheets in this part of the question.

Many candidates achieved 1 mark in the part of this question relating to the feature of rotate. Candidates were able to identify that rotation can be done by either a pre-set or user defined number of degrees. However the candidates were unable to give any further description about this feature.

Most candidates were able to describe layering with some providing diagrams to clarify their answers. If these diagrams clearly showed 2 different object overlapping then full marks for this question were easily available,

(b) Many candidates did not answer the question and many answers focussed on the disadvantages of using word processing package to develop the flyer rather than the advantages of using a DTP package.

(c) Candidates generally demonstrated a poor level of understanding about how macros could be used in the production of the flyers. However, many were able to give an appropriate example of use e.g. printing. Layout guides do not appear to be understood and many candidates confused them with page set-up and the setting of margins.

(d) The candidates' responses about how style sheets could assist in the production of the flyer by a team were generally weak. Many candidates appeared to have confused style sheets, template and wizards.

The candidates were able to give a description of a wizard and how wizards can be generally used. Again, few candidates were able to describe how wizards could be used by a team to produce the flyer.

(e) Most of the answers given by candidates were very generic and superficial. Many candidates are still under the impression that the process of mail merge is quicker, more professional etc. The candidates failed to acknowledge that the flyers being produced by the mail merge were to be personalised with many candidates also not fully understanding that a mail merge will only work if a data source is available.

3 (a) There still appears to be some confusion between a master slide and a template.

(b) Candidates lost marks on this part of the question by giving examples of use that were not within the context of the paper. Many candidates gave examples related to the Driving School scenario that has been used in 2513 in 2005/6.

4 (a) This question was, generally, not well answered with many candidates confusing a function with a formula. A significant number of candidates also confused the two in the specific examples with a large number included a function in their example of a formula.

(b) The candidates' responses to this question were very centre-based. Many candidates were able to identify and describe form controls but there was a lot of repetitive use of validation. There were also instances of candidates not reading the question correctly and giving examples of controls that can be used when creating a data entry screen.

(c) Most candidates answered this part of the question well being able to state the most appropriate type of chart.

5 A significant number of candidates discussed the actual contents of the package in terms of what needed to be taught about databases rather than the general features/characteristics of the package. A significant number of candidates failed to achieve good marks as they had failed to read the question correctly and assumed that the self-paced teaching package was to be used in a class situation and/or teacher available on-hand.

2515 – Communications Technology and its Application

General

Very few really good scripts were seen. The overall impression was of candidates lacking sufficient depth of knowledge required for an examination at this level; answers were often too vague to gain full credit.

Some candidates constructed sentences which included the key words in the particular question but which were in no way an answer to the question.

There was evidence that candidates often do not read the question carefully enough before attempting to formulate their response. A good example of this was Question 1 where the question asked for facilities available on a modern telephone system – many candidates ignored the word 'system' and wrote exclusively about mobile phones.

Candidates were often unable to apply their knowledge to the question asked.

Responses were often centre-based where either all candidates answered a particular question well, or no candidates scored any marks.

Question 1

This proved to be a good 'settling in' question and most candidates were able to score some marks, with a number of candidates scoring full marks. Poorer answers included phrases like "to make a phone call", "for video conferencing".

Question 2

(a)   Many candidates related their answer only to the internal organisation of the estate agency and did not consider the estate agency's relationship with the customer. A commonly seen response of "the Internet would be used to send e-mails between branches" gained no credit since the stem to the question clearly stated the presence of a WAN. This is another instance of candidates not reading the question properly.

(b)   (i)   Generally well answered.
        (ii)   Most candidates scored some marks here, although there was a general misconception that such a network would be 'cheaper to set up as no cables would be needed'.

(c)   This required a straightforward definition on data transfer; most got the first mark for 'a set of rules', then got no further – a set of rules for communication was not sufficient for 2 marks.

(d)   Poorly answered by most.

(e)   Generally not well answered, although some candidates scored a couple of marks for points on compatibility of devices.

(f)   This was a straightforward question which should have been accessible to all candidates, and, indeed there were some good responses here.
        However, too many candidates confuse this topic with validation and verification techniques and talked about e.g. 'a person checking the data on receipt and phoning to request it being resent if it is wrong.
        This was a good example of a centre-based response, where those who had clearly been taught scored well.

Question 3

(a) Many candidates still do not understand what is meant by 'distributed databases'. This question required nothing more than a standard definition of three common types of distributed databases and should have been easy marks. Those who had learnt this scored 5 or 6 marks; others scored zero. We are still getting too many wild guesses, the most common being 'email it', 'send it by fax', put it on a CD and post it' etc.

(b)   Most candidates scored some marks here, with a few scoring the full 8 marks.

Question 4

(a) Very vague answers here, usually not addressing the importance of bandwidth in the context given. Many contented themselves with giving a definition of bandwidth.

(b) Well answered by those candidates who related their answer to the context of the question.

(c) Usually well answered.

Question 5

(a) Candidates scored well here.

(b) Candidates struggled here, being unable to relate their knowledge purely to the telephone. Many compared the current system with an on-line system which was not answering the question asked.

(c) and (d) Most scored some marks here.

Question 6

Those candidates who attempted this question were usually able to pick some marks.
A significant number wrote all they knew about networks: others concentrated on the Internet; yet others on different types of network topologies.
However, there were a few excellent answers.

2516 - ICT Projects

General Observations:

The presentation of the work is very good from most Centres. This is important if only because the candidates have spent much time and energy in producing the work and they have the right to expect that it will be shown to its best advantage when it reaches the moderator. There are exceptions and these Centres need to consider the way in which their candidates work is sent. There was still some work sent in ring binders or even lever-arch files. These should not be sent, as they are costly to post and bulky to store. Plastic pockets should also be avoided, especially when sections are forced into one pocket. These almost inevitably split leaving a number of unsecured pages of work. Care should also be taken when Centres parcel up the work. The method of parcelling up the projects is totally inappropriate from some Centres leading to near disasters. For example one large package had to be reparcelled at the local depot because it was wrapped in nothing but brown paper which had split open, spewing forth the contents across the floor of the lorry.

The standard of work still amazes me. The care that many of the candidates put into their work and the results that they get are a testament to the guidance being provided by the staff at most Centres and the candidates would be grateful to you if they did but realise what impressive levels of attainment they are achieving with your guidance. There are exceptions of course where the work was simply not up to the expected standard, but they are few and I would encourage anyone who thinks themselves in that position to attend one of the many courses which OCR provide around the country during the year. Teachers who are new to the course, or who for some other reason are not sure of the requirements and the standards expected are encouraged to make use of the coursework consultancy service. Anyone who is going to use coursework consultancy should ensure that they do not leave it too late, toward the end of the autumn term is ideal in most cases. Coursework consultancy must not be seen as a 'marking' service, it is important that the Centre allows enough time to take remedial action if it is required

There are still a few Centres, very few thankfully, who persist in encouraging candidates to submit work in appendices. For all the reasons stated on these pages in the past can I remind Centres that evidence in appendices is not considered by moderators. There are exceptions such as the two stand alone guides which a candidate may have named as appendices but which does not change the standing of the piece of work, and the letter of acceptance from the client which is strictly not the candidate's work and does seem to turn up all over the place!

Please make note of the following specific points.

(a)   (i)   Right at the start of the project. This sets the tone for the rest of the work. We have discussed the requirements of this section many times in Inset and in previous moderator's reports but there are two points that I want to make. The first is that we expect to know who the client is after reading this section. Some candidates are giving us a better idea than others with interviews, breakdowns of the personnel within the business and others. This is nice, but it is not essential. What is essential is that it is made clear who the person is who is going to be making the decisions. We decided that this could sensibly be broadened to the idea of some kind of a focus group for some forms of project, but the basic idea is still there. The second point is that a major part of this project is about reporting the work to a third party. We have discussed the necessity to provide some means (a contents page is the most obvious) of navigation for someone who is new to the work. Lack of a contents page is something that, thankfully, has been true of fewer and fewer project reports recently. However, there are still reports submitted that do not contain a contents page. In future this could be

penalised by not allowing a candidate to score the full 5 marks in this section if it is missing.

It is pleasing to report that the majority of the reports are scoring 4 or 5 marks here.

(a) (ii) The 'interviews' are still, in the main, very poor. This problem solution is for a single end user (the same comments apply to a meeting of a, singular, focus group) and consequently, the only sensible form of primary information collection is the interview. Think in terms of half the available marks in this section being available for the interview. But, it must be an interview, not a glorified questionnaire. I have written this before, but it is still poor and has become the single most important area for Centres to improve their attainments. The interview must be planned, both the mechanics of the interview and the questions that are going to be asked. These questions should come from a consideration of the evidence that the candidate believes important to find out and the moderator will be looking for this as well. The questions should not be linear in nature. This presupposes that the candidate knows what the answers are going to be before the questions are asked. They should not be unreasonable questions to ask: to ask an end user (in most cases) what sort of software should be used to solve the problem is not only asking something which is beyond their expected knowledge but is also negating the responsibility for the decision which the candidate should be taking later in this section anyway. The results should be analysed which should lead to the necessity to do more data collection or to the sections on choice of solution software and the requirements specification, which can be thought of as being worth half the remaining marks each. We are not saying that this section is marked 10,5,5, according to those three pieces of evidence, what we are saying is that if a candidate does those three things very well they can earn full marks. No one is suggesting that there are not further items of evidence which can turn up in the analysis section, but we are saying that these are the only essential ones.

Moderators also look at and credit other forms of information collection which are relevant to the problem solution. No credit for an aimless questionnaire because the teacher said that it was important to do one, but if the candidate argues that it is a sensible way of collecting information from the other workers in the shop and it will tend to give them some 'ownership' of the eventual solution and hence encourage them to use it sensibly, then that must be worth credit. No marks for just producing some sort of diagram of the present solution. Most that are produced are simply stand alone pages that are never referred to again, never analysed, never discussed with the client or other workers in the organisation. What was the point of producing it in the first place. However a diagram (of whatever type) which does contain some element of analysis and is perhaps referred to at a later date must be worth credit. There are many other examples, but the common thread is, 'Are they valuable evidence which is relevant to this particular problem solution?' The truth is that a candidate who is providing sensible additional evidence has probably already achieved full marks for this section anyway.

I am aware that the major part of this report has concentrated on the analysis section but I make no apologies for that on the grounds that it is the weakest area for most candidates and also that if the analysis is done well then the rest of the work tends to fall into place.

(b) (i) This section is getting a lot better. There are still weaknesses in coming up with sensible lists of objectives but this is easy to understand because candidates do not suffer from such weaknesses until far later in the work, so there is probably an element of 'out of sight…' More noticeable is the poor user involvement. In the majority of reports the user/client is in plenty of evidence in section (a) but we then lose sight of them until the implementation section in c (ii). Please work on the basis that no candidate ever got penalised for too much user involvement, though the 'fake' user still exists in some places. Fake letter heads, notes purporting to be from the manager which are signed, signatures that change hand writing on a regular basis and the

signature done using the left hand (assuming right handedness) have all been seen. This is an important part of the work and should be treated as such.

Validation routines need some attention, they will be particularly important later in the work.

(b) (iii) The important thing is to size the files sensibly and then to draw any conclusions from that. Too many candidates are having a wild stab at the file sizes without producing any evidence to support the assertions.

(c) (i) There has been some very good work here, with most candidates scoring well by testing the solution in a sensible and thorough way. Remember that the definition of full testing is that all the objectives should be tested enough to provide adequate proof that the objective has been met. To this end the one weakness in the majority of reports is the failure to adequately cross reference everything to the original set of objectives.

Many candidates are still including 10s or even 100s of pages of unannotated code, automatically produced by the underlying software. This is of no use to anyone reading the report and as such can only be considered a make weight.

(c) (ii) This is the major place for improvement for many candidates now. The plan should include the normal choices of different implementation methods (explained with the client in mind so that they and not the candidate can make the decision about the method to be used), but should also include training schedules and materials, timetables, consideration of the problems that will be faced and how to solve them. There is also a need for a consideration of hardware requirements that may be above and beyond what is currently available and future servicing options.

(c) (iii) There are still a lot of candidates with no diaries. Plenty of candidates are coming up with alternatives but there is still no more convincing a means of presenting the problems that have been faced and the order the work was carried out than a simple side of A4.

(d) There are a few Centres that are awarding full marks without the necessary evidence. The technical manual can only score more than 7 if it goes beyond a simple 'I solved the problems by doing this…' while the user guide can only be awarded more than 9 marks if there is clear evidence of on-screen help being available to the user of the system. Details have been covered extensively in previous reports and Inset.

(e) (i) The evidence is that most Centres are producing excellent work here. The candidates are not only discussing their success or otherwise at achieving their original objectives but are providing evidence to support their assertions.

(e) (ii) The client must produce an acceptance letter which looks official (headed notepaper should be used, school headed paper if no other is available). There are exceptions which we have discussed before, but generally speaking the candidate has put in a lot of work and deserves to have their efforts graced by something from the 'real world'. There are a number of examples of pre prepared notes like questionnaires which the user fills in to provide structured evidence of their acceptance but these should be seen as an adjunct to the letter rather than as a replacement.

2517 - ICT Systems and Systems Management

1　General Comments

Some very good performances were recorded this session, where candidates were clearly well prepared and had experience of past examination papers. However it seems that many candidates are still being entered for the examination without proper preparation.

Candidates are failing to write conclusions for discussion questions or writing conclusions in describe questions where they are not appropriate and rarely score marks.

Teachers who are unsure or unfamiliar with this type of examination, for which there is no general text book available, should avail themselves of the training offered by OCR. This paper is specifically both synoptic and scenario based and candidates are expected to answer the questions with equal amounts of knowledge and application.

The quality of written English remains poor from a significant number of candidates and the legibility of candidates handwriting continues to decline.

2　Comments on Individual Questions

1　(a)　This question was generally well answered, though by failing to answer coherently many candidates failed to gain full marks. Candidates must be made aware that 1 mark awarded means 1 point must be made. This type of question needs careful explanation in the answer as it is not straight-forward ICT fact that is required.

(b)　Many candidates gained marks for their answers to this question but disappointingly few used answers related to the company selling plants and maintaining greenhouses. The ability to answer in a manner other than just with "knowledge and understanding" is crucial to the award of a good mark at this level.

(c)　Generally well answered, though candidates could have maximised their chances of high marks by noting that this was a describe question for 3 marks, so 3 carefully worded and different descriptions of the role of the stock control system needed to be given.

2　(a)　Candidates often failed to score full marks because they gave 2 examples of the same search instead of 2 different <u>types</u> of search.

(b)　Generally well answered.

(c)　Generally well answered.

(d)　Most students found this section difficult. Where they had some understanding of what the words mean they had difficulty in explaining themselves well enough to get maximum marks. Perception was often answered as how the site would work rather than how the user thinks or wants it to work. Memory was often confused with the physical memory of the computer or the download speed of the page, rather than the correct interpretation, that of the memory of the user.

2 **(e)** Many candidates failed to read the question carefully and gave long accounts of the contents of the web pages rather than the contents of the design specification.

3 **(a)** The examiners were disappointed with the generally poor answers to what was a description of an item found in every supermarket in the land. Many candidates failed to mention scales, receipt printer, screen or keypad. Most mentioned a scanner or bar-code reader. The special features needed to work in the hot and humid conditions of a greenhouse were largely ignored by the candidates. Again a lack of examination technique was noted with a great deal of writing for a description question and no obvious attempt to write six points for the six marks.

(b) The majority of candidates had no idea what a process modelling technique was and this question was poorly answered. Many candidates wrote about prototyping which was awarded no marks.

(c) A significant number of candidates confused validation with verification and few gained full marks for this simple synoptic question.

(d) Generally well answered and within context. Some candidates confused artificial intelligence with the normal functions of a computer program such as retrieving items from a database or supplying prices to items automatically. Some candidates did not appear to understand the term "ergonomics".

4 **(a)** This discussion question was generally well answered but many candidates were not able to advance beyond the points made into expansions of those points to illustrate why that type of support might be needed. These discussion questions in this specification represent the highest order skill for the candidate. Study of past questions and the marking schemes is recommended for staff and students.

(b) Generally well answered with the concept of reviews in this context being understood.

(c) Generally well answered though it was apparent from some Centres that the students had not been taught this topic and thought that maintenance of the system involved oil cans and such like.

5 **(a)** Generally well answered, though most candidates failed to get full marks because they failed to make enough individual points or wasted time making the same point twice. Another factor in the answers to this question was the failure of many candidates to read the question carefully which asked, not for general advantages of video conferencing but for advantages to the <u>company</u>. Although the question specifically asked for advantages some candidates wasted time by giving disadvantages as well.

(b) Many candidates tackled this question well, though a number discussed internal change in the company, whereas extern change was asked for and therefore they scored no marks. Again this question was a discussion question and something more than a list of points was expected.

5 **(c)** The answers to this question were very disappointing. Many students just re-wrote ideas that had been mentioned earlier in the paper, such as using the notepad to take orders in the restaurant. This type of question, where the candidates are expected to use their imagination, their wide interest in ICT developments and their reading round the subject to produce an exciting vision for the future, has been in every paper since the start of this specification. Teachers are urged to lead discussions based around the scenarios of past examination papers, with the answer schemes to hand, to help the students understand the responses expected.

Advanced GCE ICT

June 2006 Assessment Series

Unit Threshold Marks

Unit		Maximum Mark	a	b	c	d	e	u
2512	Raw	90	62	55	48	41	34	0
	UMS	90	72	63	54	45	36	0
2513	Raw	120	100	90	80	70	60	0
	UMS	120	96	84	72	60	48	0
2514	Raw	90	60	54	48	42	36	0
	UMS	90	72	63	54	45	36	0
2515	Raw	90	53	47	41	35	30	0
	UMS	90	72	63	54	45	36	0
2516	Raw	120	98	87	76	65	54	0
	UMS	120	96	84	72	60	48	0
2517	Raw	90	57	51	45	39	33	0
	UMS	90	72	63	54	45	36	0

Specification Aggregation Results

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

	Maximum Mark	A	B	C	D	E	U
3838	300	240	210	180	150	120	0

	Maximum Mark	A	B	C	D	E	U
7838	600	480	420	360	300	240	0

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

	A	**B**	**C**	**D**	**E**	**U**	**Total Number of Candidates**
3838	5.1	17.6	39.9	64.8	83.7	100.0	4561

	A	**B**	**C**	**D**	**E**	**U**	**Total Number of Candidates**
7838	6.9	22.9	48.7	75.9	94.5	100.0	2734

7295 candidates aggregated this series

For a description of how UMS marks are calculated see;
www.ocr.org.uk/OCR/WebSite/docroot/understand/ums.jsp

Statistics are correct at the time of publication

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