

Examiners' Reports

June 2011

J461/J061/R/11

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

Reports should be read in conjunction with the published question papers and mark schemes for the Examination.

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CONTENTS

General Certificate of Secondary Education

Information and Communication Technology (J461)

General Certificate of Secondary Education (Short Course)

Information and Communication Technology (J061)

EXAMINERS' REPORTS

Content	Page
Chief Examiner's Report	1
B061 ICT in Today's World	2
B062 Practical Applications in ICT	4
B063 ICT in Context	6
B064 Creative use of ICT	8
B065 Coding a Solution	10

Chief Examiner's Report

General Comments

This was the second session for this new specification. There were a significant number of entries for B061. Centres have certainly benefited from the training programme and have consequently been able to give clear guidance to their candidates. It is important to be aware that the external assessment covers all areas of the specification. Consequently, centres should ensure that candidates are sufficiently prepared as questions may be from any part of the specification.

The level of response questions were generally the least well answered ones and, as the principal examiner recommends, candidates would benefit from practising these questions. These questions often require a balanced discussion of the ICT topic identified.

The first of the controlled assessment units, B062 also had a reasonable number of entries and produced some good work. One key point evident in the work seen from centres was the value gained from attending the INSET, the regional network meetings or from using the controlled assessment consultancy services. Controlled assessment is a new approach to practical components and it is important centres are fully aware of the regulations, the range of evidence that can be used and the best fit approach to assessing the work. Training events can be booked through OCR e-booker and a number of centres have also organised regional network meetings to share best practice and discuss these issues with a senior OCR moderator to good effect. We would like to encourage centres to submit the electronic versions of the work for moderation rather than large numbers of screen shots, this will enable the moderator to judge the work more effectively and reduce the time spent by the candidate compiling the report for the moderator. Electronic versions of the work will also reduce the time and costs associated with printing the work and this can be submitted through the OCR repository or by post on a CD.

The second externally assessed unit, B063 had a small number of entries as might be expected. In the pre-release materials topics were identified for study in the context of the scenario. It was clear that candidates who had studied the pre-release brief were better placed to answer the questions than those who had not. The scenario for this unit changes annually with a new pre-release brief being issued every September for use in the January and June examinations sessions for the following year. The questions on these papers will expect the candidate to have studied the identified topics in the given context.

There were only a small number of candidates entered for the second controlled assessment unit B064 and none for B065. Once again there was some very interesting work but also some questions related to the nature of the new controlled assessment units and how these should be delivered. Centres are urged to make use of the guides to controlled assessment issued for these units and also to take the opportunity to attend one of the INSET events or to use the consultancy service if they have any doubts about how these units are to be delivered, evidenced or assessed. Once again it is extremely useful and time saving for the candidates to submit the electronic versions of their work. The OCR repository also provides a simple and secure approach to submitting this work for moderation.

B061 ICT in Today's World

General Comments

It was felt that the degree of difficulty of the paper was appropriate for GCSE level candidates, with a mix of challenging questions for the more able candidate and more structured questions for the less able candidates. There was a wide range of marks as expected for the style and structure of the paper. Although there were some very good scripts, it was felt that many candidates were not adequately prepared for this examination.

It should be noted that candidates appear to lack sufficient skills in answering the questions that require a discussion such as Q2, Q.8. Many answers consisted of lists or generic comments on the topic given in the question rather than a balanced discussion addressing all the aspects of the question. Often, it was noted that the responses did not refer to the scenario given in the question. Centres are reminded that candidates should have practice in answering these types of questions.

There were very few candidates leaving questions unanswered. Candidates had sufficient time to answer the questions.

Comments on Individual Questions

Q	Part Q	Comments
1	(a)	The vast majority of candidates scored all three marks on this question.
	(b)	This question was quite well answered by most candidates but too many candidates merely explained what an analogue to digital converter did rather than explain why it was necessary for the data logger to have one. Candidates should have explained that the data being received is in analogue form but can only be read by the computer if it is in digital form.
	(c)	This question was not well answered as many candidates assumed that it was the computer being controlled or monitored. Those candidates that did explain that in monitoring the computer just records the data but in control, it acts upon it and makes changes/carries out actions scored the marks. It was pleasing to see that a number of candidates could explain this.
2		This question was marked as a Level of Response question and a significant number of candidates were able to give a balanced discussion of the scenario of the question. However, the majority of candidates were unable to give a range of examples and a balanced discussion, often focussing on playing games on computers and related problems. Those candidates that expanded their discussion to cover other aspects and gave different points of view scored the higher marks.
3	(a)	Most candidates could answer this question well, probably because it is within their own experience of communicating with others. However, many answers were superficial with responses such as "slow", "costs more", or "have to have phone" rather than descriptions that showed that they really understood the differences. Those candidates that described the need for both users on instant messaging to be online at the same time unlike those using email scored the higher marks.
	(b)	This question was answered well by most candidates.
	(c)	Candidates that showed a knowledge of IT and carefully considered the function of the devices they suggested in terms of input or output devices

Q	Part Q	Comments
		scored the highest marks. For example: a webcam is for capturing video/images – a monitor is used to display the results; responses that suggested a webcam is so that the other person can “see” you is inaccurate and did not score marks for the use.
4		Those candidates that responded with the generic type of software application scored the marks.
5	(a)	Those candidates that stated that the user name/ID identifies the user to the system scored the mark; those that merely sated “to know who you are” did not. Some good responses such as “load/apply the correct user policy/allow access to the right set of files” etc were also given credit.
	(b)	The majority of candidates correctly stated that the purpose is one of security, although there were numerous ways of expressing this.
6	(a)	Most candidates were able give appropriate examples but the explanations lacked detail. The better candidates could give an example and explain exactly what the malware did or caused to happen.
	(b)	This question appeared to confuse some candidates who answered from their point of view rather than from that of the school. The better candidates described the action taken by the school and how it would work in practice.
7	(a)	The vast majority of candidates scored this mark.
	(b)	The vast majority of candidates scored both of these marks.
	(c)	Many candidates could give the advantages of using formulas but a significant few did not appear to understand why formulas are used.
	(d)	Most candidates could respond with suggestions for using the features or functions within spreadsheets to find out where or how profits could be made. Disappointingly, many candidates suggested choosing different suppliers, sourcing cheaper goods or selling more goods without reference to spreadsheets.
8		This question was marked as a Level of Response question and a significant number of candidates were able to give a good response covering the principles of the DPA and how it attempts to protect customers' rights. However, many candidates did not cover the majority of the principles enshrined in the DPA or apply them to the protection of customer rights. A few candidates wrote about aspects of the Computer Misuse Act so failed to score any marks at all. Candidates are expected to know about the provisions of the various Acts of Parliament that apply to the use of computer systems and how these work in practice...

B062 Practical Applications in ICT

General comments

The entries covered both tasks available for this session.

There was generally a split between Centres that had followed the assessment criteria closely and marked the work correctly and Centres that did not seem to understand what was required for the assessment criteria and therefore the marking was significantly inaccurate. It was also apparent that those Centres that had used the controlled assessment consultancy service had generally applied the assessment criteria accurately. There are resources on the OCR website to assist teachers in delivering and marking the controlled assessment, for example the Success in B062 Teachers' Guide, which explains what is required for each assessment criteria on each mark band.

Many Centres made full use of the URS mark sheets, highlighting assessment criteria achieved and annotating where the evidence could be found. Where Centres had done this it made the moderation process much easier.

Ideally, candidates will keep a detailed diary of their work each week. If they did this, they did not need to produce a long written report at the end to show what they had done and why. The diary can contain on-going testing and evaluation of the system and talk about amendments made. Where candidates combined this with file versioning, saving different versions of their system as they developed it, then this went some way to showing the understanding required for the higher marks in the practical sections of the assessment criteria.

Comments on individual questions

Investigating a Need

The work of candidates from some Centres was detailed and relevant in this section, with candidates clearly showing that they had worked in groups and how they had obtained their information and shared it with the group. Where clear and detailed research and analysis had taken place, the candidates were able to then identify appropriate software and appropriate software features to use in their system. However, the work from some candidates was superficial in this section and often not applied to the design work to follow. There must be a link between the research and the final system. Some candidates had 'made up' interviews with the user identified in the tasks – this is not what is required here, as the research is supposed to be into real existing systems used by similar organisations, to help candidates decide what approach to use.

Practical use of software tools

This section will overlap with the following section and the evidence for both is likely to be found together, mostly in the final system, though there will probably also be evidence in the research stage. Where Centres had submitted the work electronically, either via the OCR Repository or on a CD, it was easier for the moderator to see all the software features used and this also meant that candidates did not need to present pages of screen shots as evidence of what their system contained. The important point to note in this section is that, for the higher marks, candidates needed to show understanding of a wide range of advanced software features. Advanced software features are those that a GCSE candidate could reasonably be expected to have knowledge of and are of a higher skill level than simple formulas or SUM functions in a

spreadsheet or simple queries and reports in a database. Examples of software features which would be appropriate are to be found in the Success in B062 Teachers' Guide. Some Centres had awarded the higher marks without evidence of advanced software features being used. Candidates are also expected to test their system in this section and this tended to be the area that was most neglected; sometimes completed test plans were included but no actual evidence of the tests taking place – this could be in the form of screen shots or short videos.

Practical use of data structure

This was a section where many candidates were lacking in evidence. There is a link back to the research stage, where candidates should have collected relevant examples of data and data formats. They then use this knowledge to enter an appropriate amount of data in the correct formats into the system. The system will then be tested by changing the data and/or the rules in the system, to see the effects this has. The candidates will need to write about their choice of data and how it is appropriate.

Present the solution

Several Centres did not submit any separate work for this section. What is required is a separate presentation, to the intended audience, to show them what the final system does and how it works. The important criteria to note in the middle and high bands is that it should be appropriate for the intended audience, so the language used and level of technical detail should be right for the audience. Some candidates submitted presentations that were detailed and showed exactly what their system could do, but they were not aimed at informing the intended audience (Jo Hill or Robert Black) of how the system meets their needs. Candidates can use a number of different methods to complete this section: most used a short PowerPoint presentation but other methods might include a DTP leaflet or a video showing the end product in use. This is a section where candidates can gain higher marks even if they haven't achieved higher marks for the actual system and an appropriate amount of time should be allocated to this.

Evaluation

Candidates who had kept a detailed diary of the development of their work tended to have covered parts of the evaluation here, which meant they did not have so much to do at the end of the CA. However, many candidates left the evaluation until the end and tended to run out of time, thus not completing it in as much detail as was required. It is important that candidates have time at the end to evaluate the finished system and to look at its strengths and weaknesses; they should also be given time to get back into their groups they worked in for the research stage, to give constructive feedback on each others' systems. Some candidates made statements about how much they had enjoyed the work or what they had learnt, which is not relevant here – what is required is an evaluation of the system's strengths and weaknesses, not of how well the candidates worked.

B063 ICT in Context

General Comments

This syllabus is intended to be taught over two years and candidates sometimes seemed not to have assimilated as much understanding as they would if they had had the extra year.

Most candidates attempted all the questions and interestingly it was the extended writing questions that proved to be the best discriminator with even the weaker candidates gaining a few marks. In contrast to this the lower level question on data types was not answered by the lower scoring candidates.

It was very clear where candidates had studied the research brief and there was clear differentiation between candidates who had and those who were unable to relate the question to the case study Gallery.

Teachers/tutors need to focus candidates' attention to the research brief and ensure that they understand terms such as Cloud Computing when mentioned in it.

Comments on Individual Questions

Q	Part Q	Comments
1		Generally a very well answered question with most candidates gaining about half marks. Quite a surprising range of marks; not many scoring full marks. There seems to be a gulf between being aware of technologies and making appropriate choices.
2		Again a well answered question although candidates were better at giving the advantages than the disadvantages. Most candidates could quote at least one advantage but fewer could describe a disadvantage. Many could not cross over from personal to corporate use of such sites which is a vital part of this unit.
3	(a)	Very few candidates managed to answer this question. Almost without exception, candidates showed no understanding of the purpose and nature of a web server, even though it is specified in the case study. A few gained marks by realising that a large hard drive would be needed to store the images. Too many focussed on the hardware needed to capture video and audio to construct a virtual tour, some wrote about software, and a number described audio narratives for the physical gallery with such esoteric accessories as touch screen displays and RFID tags for each exhibit.
4	(a)	Well answered question. Some candidates listed items that would need a web page to themselves rather than occupying space on the home page. The most common vague proposal for an element was text .
	(b)	Where candidates had studied the research brief they scored well on this question. The question aimed to solicit understanding of target audience. Too many candidates listed items of information that might be held about registered customers, such as addresses and telephone numbers, failing to recognise that the question related to profiling the intended audience. The weaker candidate simply added comments like what colour do they like.
	(c)i	Very few candidates grasped that the code was to tell if it was a bot or a real person. Many gave very spurious answers about unique identifiers or a desire to collect telephone numbers.

Q	Part Q	Comments
	(c)ii	Many candidates gained a mark by guessing email but a few of the better candidates did demonstrate how links in the email would be used to confirm the end users email.
5		Although aimed at lower level candidates few seemed to understand data types. Many just listed software or stated "number" in each box. This should have been straightforward for candidates who had been properly prepared for the examination. Unfortunately, many could not distinguish between dates, numbers and currency, whilst others did not know that "words" and "letters" are classed as text. Candidates who wrote "word processor", "database" and "spreadsheet" had perhaps been practising with legacy papers, saw the table layout and acted on impulse.
6		Most candidates gained some marks here stating things like logo and links. Most candidates managed to give one or two valid reasons but were unable to expand on the original point. A significant minority seemed to have no concept of domain names, some even suggesting that they offered protection against hackers.
7		Despite being on the research sheet few candidates understood the nature of an expert system. Many stated that it would show the visitor around the gallery or simple described an ecommerce system. Some even stated that it gave you a valuation on your own painting referring to human art experts rather than a computer model. The better candidate discussed the collection of evidence from experts and the problem with computer based decision models for things such as art preferences. The majority of candidates were out of their depth in this question, displaying very little awareness of the nature and purpose of expert systems. Many described applications which were simple database searches, with occasional sprinklings of words such as "knowledge base" and "inference engine" from their pre-release notes. These were frequently out of context and often mis-spelled (e.g. "interference engine").
8		Most candidates understood what embedded media was. The better candidates demonstrated the needs of the gallery and discussed embedded sources from other sites such as YouTube. Some appear to have been confused by "The Could" Wi-Fi hotspots, whilst others seemed to be describing a variation on a bus network.
9		Again, although on the research sheet some candidates had no idea what cloud computing was. Many mentioned that it was expensive and some even that it was private. The better candidates discussed its flexibility and cross-platform benefits.
10		Most candidates were able to describe how the gallery would benefit from e-commerce. The more able candidate mentioning world wide sales and a few discussing the negative aspects of on-line shopping and ecommerce systems. Few candidates were able to compose a balanced discussion leading towards a sensible conclusion, though most were able to pick up one or two marks through a vague awareness that items could be purchased from websites, paid for by credit card and delivered to your home. Again, there was a tendency to look at the personal perspective and ignore the corporate benefits and drawbacks for the Debunk gallery.

B064 Creative use of ICT

This was the first session in which entries for B064 were made and the number of entries was small with only four centres choosing to submit the work. It was pleasing that most centres opted for digital submission where the products produced were available for the moderator to use. It would be helpful that before submission, centres check that the products still work. Websites especially, will often work on candidates areas but sometimes in the transfer process graphics can become omitted. Setting up a root folder on the candidate's work area and ensuring that all related files are saved to that folder is considered good practice. Multimedia presentations can also have a problem of missing media when videos and sounds are linked rather than embedded - care needs to be taken when transferring these also.

It would also be helpful when compiling reports that the documents are named appropriately to indicate their content or bound into a single document. There are many free portable document creators available on the internet which can be used to turn word processed documents into a single file.

Most of the work was assessed appropriately and assessor comments on the mark sheets helped with the moderation process. Centres should be reminded that marks are awarded using the best fit principle where candidates are awarded for what they have achieved rather than being penalised for omissions. It was pleasing to see that no clerical errors were encountered with all candidates' marks being summed and transferred to the MS1s correctly.

The sample candidate assessment material available on the OCR website is meant to show how answers to the controlled assessment could be derived. Candidates need to be aware that under no circumstances should they copy this material within their own work, or use it as a template. Those who choose to include parts of the sample materials within their work may face malpractice proceedings.

Most of the analysis section of this unit should be completed at a low level of control and candidates should share ideas with one another when researching existing solutions to a similar problem to the one which they are trying to solve. Candidates should then enter controlled conditions to propose their own solution. It is important that the research links to the proposed solution for higher marks within this section. Too often candidates would present their research, then a solution, but with no link between the two. When presenting the proposed solution, candidates should state how their decisions have been influenced by their research. The design specifications produced need to include a clear explanation of the solution and how it solves the problem, a list of tasks which need to be carried out to develop the solution with appropriate timings, consideration of hardware and software required to develop and run the solution and detailed user requirements including measurable (both quantitative and qualitative) success criteria. In some cases parts of the design specification were missing or not detailed enough for the award of band 3.

The design section should be conducted under controlled conditions and requires candidates to produce designs for their proposed solution and comment on how the designs meet the user requirements defined within the analysis task. Designs can be completed on paper or using vector drawing tools on a computer. The quality and detail of the designs should determine the mark awarded for this task along with the level of explanation of how the designs meet the user requirements. At the lower end, brief designs will be included which another ICT competent person may struggle to follow. For the award of mark band 3 candidates need to fully design all elements of their solution in enough detail so another ICT literate person could create their solution. Some of the designs produced by candidates did not include the necessary detail even though a mark in band 3 had been awarded. Mark band 3 for this criterion also requires candidates to explain how the proposed solution meets the user requirements; this was

sometimes missing from the work seen. A simple way to demonstrate this is to list each of the user requirements after the designs and underneath each explains how it is going to be met.

The development of elements task should be carried out under controlled conditions and requires candidates to show how the various components which make up the final product have been made. Evidence for this task was frequently evidenced as screen shots which can be time consuming for candidates to produce. This specification was not designed to be a test of how competent candidates are at producing write ups and the focus needs to be on the skills used. A more straightforward way for candidates to produce evidence for this task would be for them to produce a diary noting down how things have been made - with a few selected screen shots to explain things which they may be having trouble describing with words. In some cases more evidence of developing elements for the solution should be included for high marks.

The development of the overall solution task should be carried out under controlled conditions and marks should be awarded for the functionality and quality of the product which the candidates have produced. The best way to showcase these to the moderator is to submit the work either via the repository or on CD. For mark band 3 a good level of features need to be included and the products should be fully functional - missing graphics and hyperlinks within websites are not acceptable for the award of marks within band 3.

The testing task should be carried out under controlled conditions and requires candidates to follow the test plan developed in the design section to check that their product works the way in which they intended. All of the mark bands within the testing section require some form of user testing and unfortunately some candidates had not carried this out which should lead to lower marks being awarded. User testing should be restricted to peers within the group as the work needs to remain in the centre, although arranging outside visitors (for example primary school children) to come into the classroom during the controlled time to test products is acceptable. Higher marks for testing should only be awarded when there is clear evidence that testing in different situations has been considered. Testing websites, games and multimedia products on different hardware, operating systems / browsers and screen resolutions should be considered and carried out as far as possible. A few old machines at the back of the class room loaded with different software provide an excellent opportunity for candidates to test under different situations.

The evaluation task should be carried out under controlled conditions and should critique the product made and the candidate's performance when working within groups. For the award of mark band 3 candidates are expected to produce a high quality evaluation which reflects upon what the solution does, its strengths and weaknesses, areas for improvement, how limitations found during testing have been dealt with and an evaluation of their and others contribution to group work. Some of the evaluations seen failed to include enough sufficient detail and a lower mark would have been more appropriate.

B065 Coding a Solution

There were no entries for this series.

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