

OCR Report to Centres

June 2013

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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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Advanced GCE Information and Communication Technology (H517)

Advanced Subsidiary GCE Information and Communication Technology (H117)

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Overview

The subject continues to see a healthy number of entries and the standard of responses, particularly for unit G061, has continued to improve. It was apparent that the candidates, who had been entered, had been better prepared than in previous series.

Exam technique has continued to improve as candidates identify keywords and then appropriately apply the knowledge that they have to a given scenario. The introduction of more levels of response questions in the form of *evaluate* and *justify* has resulted in a wider range of marks being achieved and good candidates have been able to evidence both the depth and breadth of their knowledge.

It was noticeable that not all centres had registered the fact that changes had been made to the marking criteria for G064 and that marks were to be awarded differently. Some centres prepared candidates using the previous guidelines and then marked to the new mark scheme. It will clearly benefit candidates within centres if the latest version of the specification is used.

G061 Information, Systems and Applications

General comments

The overall quality of responses has improved with less questions being left blank. It is pleasing to see that candidates are looking at the key word and trying to formulate a response that takes this into account. Technical terms are still being confused – validation and verification for example and there are areas of the specification that are being taught better than others.

Candidates who use word processing need to ensure that they correctly label their response. Responses that do not correctly identify which question they are related to are difficult to mark.

As has been mentioned in previous reports, there are three factors that make a good answer – an understanding of the key words and the requirements; the use of the scenario in the response given and the knowledge to underpin the exam technique and the scenario. High marks reflect all three of these.

- 1(a)** This was very well answered with most candidates achieving both marks.
- 1(b)i** A larger number of candidates were only able to superficially describe dynamic data as data that changes without adding any depth to their response.
- 1(b)ii** The examples were generally very good and related to the website.
- 1(c)** A large proportion of responses gave descriptions of thumbnail images rather than focusing on the advantages required by the question. Those that gave advantages achieved half marks and tended to repeat themselves with the second advantage.
- 1(d)** It is still disappointing to see candidates confusing validation and verification. The majority of the validation techniques were well described – the only one that was not well described was check digit.
- 2** The answer required more detail than the responses of many of the candidates. Some thought processes were required to gain full marks.
- 3(a)** Hardware was done very well as was the example of software. The description of software was not done very well with many stopping their description at programmes.
- 3(b)** This was done very well with the majority of candidates achieving full marks.
- 4(a)** A substantial proportion of candidates knew nothing about invoicing systems. In fact a large number thought that it was to do with verbal messaging. As a core system in ICT it is expected that candidates have a detailed understanding of how it works.
- 4(b)** This was very poorly done with many candidates giving responses based on saving files. There were descriptions of file types with little focus on the advantages. Evidence showed that many candidates may not have read the question properly to appreciate what the question was asking.
- 5(a)i** The majority of candidates achieved half mark with a large proportion gaining full marks. Some candidates reversed the terms.
- 5(a)ii** The examples given were weak and did not give detailed examples of how absolute and relative referencing could be used, instead giving a superficial identification of cells.

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- 5(b)** Where the correct definition of range was given, candidates identified the advantages. Very few gave two good advantages to score full marks.
- 5(c)** Organisation was the most common answer. There was a large proportion who confused worksheet and workbook and responses focused on backup, corruption and transferring variables – none of which gained credit.
- 6(a)** The most common mistakes were to omit the and, omit the field names and to get the < and > symbol the wrong way round.
- 6(b)** The identification of the primary key was almost universally answered correctly but the explanation was usually weak and focused on uniqueness without going any further.
- 6(c)i** The primary key was eliminated by the question. It was therefore disappointing to see this as an answer in many candidates' responses. Candidates also need to be aware of the difference between duplicated and repeated data.
- 6(c)ii** The advantages were often identified but the description lacked depth meaning that half marks were often awarded.
- 6(d)** Number is not an acceptable data type on this specification. It was disappointing to see incorrect answers being given to, what should have been, a simple knowledge based question.
- 6(e)** This was done very well with candidates scoring highly.
- 6(f)** The common errors made were to confuse advantages and disadvantages and also to confuse encoding and encryption. Candidates who did not make either of these errors scored highly.
- 7(a)** Many responses gave descriptions of templates rather than focus on the advantages of their use. Those that did give advantages tended to focus on corporate image and speed of creation and did not add the depth to their answer to gain full marks.
- 7(b)** Personalisation was part of the question and could not be used as an advantage in the candidate's response. Many candidates scored poorly on this question, unaware of why a company would use mail merge.
- 8(a)** Hotspot was generally not very well described. Some candidates gave answers to do with wireless and others gave general descriptions than could not be identifiable as a hotspot. Slide Transition was done better although there were still some candidates who confused animation and transition.
- 8(b)** Many responses confused the advantages and disadvantages of bitmap with that of vector and gave incorrect responses. An evaluate response requires positive and negative points and a conclusion to get into the top band. Many candidates gave one side only which limited the marks available.
- 9(a)** This was done very well with the majority of candidates achieving both marks.
- 9(b)** Whilst many candidates understood the role of the password, the User ID was less well understood. A description of the User ID is not the same as the role, a common mistake by many candidates.

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- 10** In many cases the candidates identified the health problem and then went on to give details of how it was caused rather than a description of the problem. The question asked for a different solution for each problem – this was not always given by candidates. Some candidates are still not differentiating between health and safety problems. It was also disappointing to see the reoccurrence of comfortable chair and regular breaks – neither of which gains credit.
- 11** The addition of impacts and consequences to the question stem had the effect of focusing the responses to include them. This led to an overall increase in the average marks obtained for this question. There are still too many responses that fall into one of two categories – those that describe hardware and software that the company could use to communicate with its customers without going into detail about its use or its impacts and consequences and those candidates who gave responses relating to technology that has been in common use for many years, such as web pages, email, radio and television.

G062 Structured ICT tasks

General Comments

The presentation and quality of much of the candidate work was very good. Most centres did provide candidate work that was clearly organised with a cover sheet containing the candidate's name and number and this was appreciated. The level of teacher annotation to indicate where and why the mark had been awarded differed from centre to centre. It is recommended good practice to follow the guidance on marking work, as indicated on the front cover of the mark scheme, which states 'If a candidate meets the requirements for a mark then tick the box next to that mark. It is beneficial to use the numbers on the left hand side of the tick boxes to cross-reference evidence on the candidate's work. Those centres that exhibited best practice made it considerably easier for the centre marks to be verified during moderation.

A wide range of different software applications and utilities were successfully used to solve the tasks this year. This included both freeware and proprietary packages. It should also be noted that some packages will make the solutions to the tasks considerably easier than others for a given task, and centres are reminded that the FAQs provide suggestions for suitable software packages. The FAQs also contain a list of skills that it would be beneficial to teach the candidates before the candidates tackle the tasks.

Many candidates continue to find questions that ask for annotated evidence to 'explain how' a particular feature or routine was implemented difficult. Candidates need to be encouraged to provide detailed explanations that demonstrate that they have a clear understanding of the solution that they have produced. This is often a key differentiator of good candidates. This particularly applies to annotating formulae within spreadsheets and queries and expressions within the database tasks.

- 1(a)** Many candidates scored full marks presenting annotated evidence of how the logo met the requirements. Where marks were lost it was usually through lack of annotation rather than a lack of a completed product.
- 1(b)i** Designs need to be of a suitable quality for an independent third party to be able to implement the design which means all required content must be present. Most candidates achieve this.
- 1(b)ii** Most candidates scored well, and those that dropped marks usually did so because of a lack of attention to detail or failure to explain how the date for the edition was prefixed automatically.
- 1(b)iii** Candidates are starting to create and use styles more fluently but some candidates failed to achieve the mark through lack of annotated evidence of the setting up of the style.
- 1(b)iv** This was answered well by the majority of candidates.
- 1(c)** Most candidates produced a high quality copy of the final newsletter with relevant text and images.
- 1(d)i** Evidence of connection to a data source does require candidates to show screenshot evidence of a link to a data source taking place.
- 1(d)ii** There was a requirement to automatically restrict the recipient list from the mailmerge and most candidates did successfully set up a query or filter to achieve this. Some failed to achieve the mark through completing the process manually.
- 1(d)iii** Where marks had been achieved in d(ii) most candidates went on to successfully complete the merge process and to print the output.

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- 2(a)i** Specifications must be suitable for third parties to be able to implement them independently. A number of candidates make assumptions and left out information that is required when providing a full specification and hence lost marks.
- 2(a)ii** It was interesting to see a variety of software and techniques used to achieve solutions for the web banner. Where marks were lost it was usually due to a lack of annotated evidence showing how the requirements were met. Candidates do need to be encouraged to analyse task requirements and then to determine exactly what evidence they do need to present to avoid leaving gaps in the work.
- 2(a)iii** Most candidates scored some marks for the help sheet but it was clear that candidates do need to consider more carefully the steps that would be required by a user to perform a certain process. Marks were sometimes lost for a lack of content rather than the standard of presentation.
- 2(b)** Centres who considered the choice of software found the implementation of an external CSS more straight forward. The level of detail with regard to annotation does need to explicitly explain how the styles created met the requirements. This was often lacking within the annotated evidence.
- 2(c)i** The structure diagrams for site maps were well implemented.
- 2(c)ii** Many good implementations for the required web pages were seen and most candidates scored well for this question.
- 2(c)iii** Some candidates lost marks because they used a manual process, but many did achieve an automated watermarking process through a variety of different approaches that included photo batch processing and online utilities.
- 2(c)iv** Most candidates achieved this mark point.
- 2(c)v** Marks were often lost by candidates who presented evidence of a completed web form but who did not provide annotation to explain how the elements were created or set up. Candidates need to be taught the meaning of 'annotated evidence to explain' so that they can achieve credit for their implementations.
- 3(a)i** Most candidates provided suitable screenshot evidence to show that the worksheet had been named and it was pleasing to see a more organised approach to worksheet naming this year.
- 3(a)ii** Again, many candidates achieved the mark for explaining how to protect cells on a worksheet.
- 3(b)** Marks were varied, but most candidates scored some of the marks available. Those that lost marks did so because they did not submit sufficient evidence. Where a bullet point list of requirements is presented candidates should be encouraged to think about how they can produce evidence for each separate bullet point.
- 3(c)i, ii** Pivot charts had not been seen in the tasks before and it was pleasing to see that most candidates had got to grips with them and produced the required evidence.
- 3(d)i** Most centres have now instilled the importance of printing spreadsheet evidence that shows row and column headings to allow cross reference of the evidence.
- 3(d)ii** Marks varied quite dramatically between candidates and this was due to the level of understanding that the candidates could show through provision of clear explanations. Where a formula such as an IF formula is used it is expected that the candidate can explain the different parameters to the function and then how it works to generate the required solution. A number of centres did award marks incorrectly for labelling of the evidence where candidates had not provided this level of explanation.

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- 3(d)iii** Validation through the use of a drop-down box was well implemented and documented by candidates.
- 3(e)** The quality of testing continues to improve and most candidates did clearly specify worksheet and cell references for the inputs and outputs. Centres are reminded that if a particular test requires two inputs to be identified the candidate should only be awarded the mark if this is done.
- 3(f)** The quality of the user guides varied from very professional to inadequate. It was encouraging that most candidates appreciated that a user guide would be an external document and that they took the time and care required to produce a professional standard of presentation.
- 4(a)i** The table structures were well documented by candidates.
- 4(a)ii** Most candidates produced suitably annotated evidence of the relationships between the tables.
- 4(b)i** This part of the task clearly differentiated between candidates who could and those who could not explain a series of complex expressions and parameters. Where underlying queries are used within expressions it is important that candidates can identify them and explain them clearly.
- 4(b)ii** Email validation was implemented successfully by most candidates and the majority who had implemented a rule achieved the mark for then explaining how the rule generated appropriate outcomes.
- 4(c)i, ii** A variety of approaches were used to generate the data that was required for the reports. A number of query types including simple and complex parameter, left / right joins and cross-tab queries were used to good effect. Understanding and using a variety of query types is a challenging part of the tasks for most candidates.
- 4(d)** Few candidates produced a complete solution to this part of the task that required macros and action queries to implement. Many scored at least one mark for a form design, some scored two marks for showing the table outcome after the routine was run, but very few achieved the full solution.
- 4(e)** It was good to see many students having a go at creating an archive routine and using a range of action queries linked to a macro to achieve the desired outcome.

G063 ICT Systems, Applications and Implications

The performance of candidates was broadly in line with previous sessions. Some candidates had been adequately prepared for the paper and were able to answer questions with the required depth and technical knowledge required by the specification. Other candidates needed to develop their understanding of topics more fully and be able to explain them in a logical and concise manner.

A significant number of candidates required extra space for their answers. Candidates should be reminded that for most handwriting types, the space provided on the paper is sufficient to answer all questions. The quality of some candidates' hand writing was also problematic in a number of cases.

- Q1(a)i** Most candidates gained marks for this question by describing two different activities that could occur during the design stage. A small number of candidates simply listed points. It is essential that candidates use correct examination technique and answer the question asked in order to gain marks.
- Q1(a)ii** Many candidates scored full marks for this question. Some candidates gave almost identical answers for both roles, with the repeated answer not being suitable for credit.
- Q1(b)** While many candidates answered this question well, some candidates gave simple answers such as keyboard and mouse. At A2 level, it is expected that candidates give more appropriate answers in line with their learning over the past year.
- Q1(c)** Some candidates simply described the investigation and analysis stage and the evaluation stage, rather than describing the relationship between the two.
- Q2** While many candidates were able to explain why a test plan was important, a significant number of candidates described the testing process. Again, correct examination technique and the importance of answering the question asked should be stressed to candidates.
- Q3** Those candidates that had studied this part of the specification scored well. Some candidates described features of digital television rather than evaluating the impact on broadcasters. These answers were not suitable for credit.
- Q4** Again, those candidates that had an understanding of relevant legislation scored well on this question. Some candidates simply described the principles of the Data Protection Act, rather than the implications to the company of meeting the principle listed.
- Q5** Most candidates were able to recognise that the answer to the first part of this question was a batch operating system. The second part of the question proved more problematic, with many candidates mistaking a real time operating system for an interactive operating system.
- Q6** This question was answered well, with many candidates scoring highly.
- Q7** Again, many candidates scored well on this question. Some candidates focussed on technical issues for the school. The question asked candidates to explain problems the student could encounter when using the internet to research a school project.
- Q8(a)** Most candidates scored well for this question.

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- Q8(b)** Most candidates scored well for this question. Those that did not simply listed points to describe an extranet, rather than comparing an extranet to the schools intranet.
- Q9(a)** Most candidates scored well for this question.
- Q9(b)** Many candidates failed to score full marks with this question. A number of candidates simply stated that the internet used the IP protocol, rather than explaining how protocols enable communication between network devices.
- Q10(a)** Most candidates scored well for this question.
- Q10(b)** Most candidates scored well for this question, describing facilities they had seen in centres.
- Q10(c)** Although most candidates gained marks for this question, many responses lacked the detail necessary to be awarded full marks.
- Q11(a)** Most candidates scored well for this question.
- Q11(b)** Those that scored well here explained how a user's past experience influenced the design of the systems interface. Some candidates failed to give the required example.
- Q11(c)** Some candidates described other types of maintenance, rather than adaptive.
- Q12(a)** Most candidates scored well for this question.
- Q12(b)** Most candidates scored well for this question, giving answers relating to convenience. Some candidates provided a repeated answer for the second point which was not credited.
- Q13** Many candidates answered this question well. Some candidates explained disadvantages of using encryption. This was not considered a suitable response when justifying the use of encryption.
- Q14** Some candidates scored highly on this question. Those that did not provided answers describing features of a spread sheet, rather than evaluating the use of a spread sheet for modelling costs.
- Q15** Those candidates that had been taught project planning techniques answered this question well. Some candidates produced other kinds of charts which were the wrong type, or not recognisable as a Gantt chart. These were not credited.
- Q16** It is pleasing to see that some centres have been providing guidance to candidates on how to approach this style of question. Answers this year were generally written in much greater depth which allowed candidates to access higher marks. Some candidates still provided many unrelated points that didn't show the depth of understanding needed at this level.

G064 ICT Project

General Comments

Although the new marking criteria have been available since early 2012, a number of centres still used the old criteria to deliver the unit and mark students' work. It was also clear that some centres were still following the structure of the old criteria and this meant that students often missed out on a range of marks as a result. Centres are strongly advised to check the OCR subject page, as updates to the specification and relevant documents, including an exemplar website and database project are also available.

Section a

A large number of centres had misinterpreted the marking criteria for the investigation. Two separate investigations are expected: one for the current system and one for the new system. Many candidates had carried out a single investigation, which attempted to cover both, but also lacked the required depth.

When analysing the current system, candidates should provide an overview of how the system works at present. They should then identify the problems faced and discuss the impact that these may have on the organisation.

More candidates are developing requirement specifications that are specific and measurable. They are also successful in their comparison and investigation of three alternative systems and the justification of hardware and software required to develop the system.

Section b

The designs continue to be developed to a pleasing standard and more candidates are using diagrams and process lists, to explain how data flows within the system.

Test plans are generally completed to a high standard, but candidates should be writing them in sufficient detail, so that a third party could carry them out. This includes providing test data and expected outcomes that are specific, so that it is clear to identify whether tests are successful or not.

Project plans have slightly improved in the level of detail provided for the software development phase, but many centres are still covering the whole project, which is not necessary. The focus for the plan is only on the software development and all tasks required to develop the system should be clearly identified; with suitable timings, predecessors and successor tasks all taken into consideration.

Section c

A number of fairly basic projects are still being developed by candidates. These are frequently over marked by centres. More candidates are developing web-based projects, but they often lack the complexity requirements to be classed as a non-linear system. This could also be said for a number of the database projects seen, which tended to be very basic in their complexity.

The evidence provided for the processing element, often lacked detail. Most centres showed how one aspect of the system was developed, but there was often little evidence to show how it was then tested to ensure that it was working correctly.

Section d

User guides were well presented, containing many excellent features and were marked quite accurately. It should however be noted that the guides should cover all aspects of the system.

Section e

Many candidates had provided a detailed description explaining how each of the requirements had been met. Where elements were unsuccessful, they then discussed why this occurred and what could be done to rectify the issue. Candidates had also provided a range of extensions to the system, but often failed to describe exactly how they would be implemented.

The comparison of the software development and project plan was attempted by most candidates, but often a discussion of the whole project was provided, which is not necessary. Candidates should discuss how the actual system development compared against their plan and why these differences occurred.

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