

Information & Communication Technology

Advanced GCE A2 H517

Advanced Subsidiary GCE AS H117

Reports on the Units

June 2010

H117/H517/R/10

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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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Chief Examiner's Report

There are healthy numbers for the AS and the A2 in ICT. There are a number of centres, particularly for G062, who are giving more guidance than is acceptable.

In the examinations, there is evidence of a distinct lack of complete coverage of the specification by candidates with gaps in their knowledge. There is also a lack of appreciation of examination technique or the application of their knowledge to a context. The essay question is most disappointing – this is a regular and guaranteed question yet the centres do not appear to be teaching their candidates how to answer a discussion question to the depth required at AS and A2. This is not an identification or a description question, it requires reasoning and backing up of arguments with evidence. The structure needs to be taught to the candidates.

Centres need to strike a balance between directing, teaching and letting the candidates produce their own work.

The JCQ Instructions for Conducting Coursework has always been clear that ‘...it is not acceptable for teachers to give either to individual candidates or to groups, detailed advice and suggestions as to how the work may be improved in order to meet the assessment criteria. Examples of unacceptable assistance include: ... the provision of outlines, paragraph or section headings, or writing frames specific to the coursework tasks...’ (paragraph 4.4). While this regulation is set in the context of reviewing candidates’ work, it does set useful limitations on the involvement of teachers and others in the tasks candidates are expected to undertake on their own for assessment purposes. This is not something new and was the same for the legacy specification.

Although templates are not a problem per se, too much guidance will give an unfair advantage to candidates and templates may also place an unnecessary straightjacket on the brighter candidates and restrict their freedom to express their own strengths and so obtain the top marks. The use of templates may also undermine the purposes of assessment, namely, to discriminate between the more able and less able candidates, by making the candidates’ responses all very similar.

G061 Information, Systems and Applications

The question paper had a range of questions to enable candidates of all abilities to achieve good marks. The preparation should include sessions on examination technique and looking at a variety of contexts to teach the candidates how to apply their knowledge and understanding.

Many candidates had a reasonable foundation of factual knowledge enabling them to answer these questions well but a significant number failed to use appropriate terminology.

Many candidates lack good exam technique and fail to answer questions fully thereby restricting their maximum to, for example, 2 marks out of the 4 available. This severely limits their achievement over a whole paper.

Question	Comments
1 a	Most candidates had learnt this well and gained the marks which is understandable as this is the first definition taught in AS and a key underlying principle of the entire subject.
1 b	Most candidates could identify the two methods but a good proportion had problems in explaining why the method was appropriate in the given context.
2 a	This was answered well. The common mistake was to relate static and dynamic to animations.
2 b	The focus of the question was not on the disadvantages of CD-ROMs but on static data. A large proportion of candidates gave answers relating to scratching and breaking CD-ROMs which gained no marks.
3	The diagrams drawn were often badly presented and most candidates could only identify the input and storage and most got the arrows correct as well. Candidates clearly knew the generic i/o diagram but could not apply it to this context.
4 a	Mostly well-answered, especially the advantages. Candidates found articulating the disadvantages more challenging and a small, but significant, minority confused encoding with encryption.
4 b	Most candidates got both answers correct but a few gave number for the Total cost of order. Some candidates answered with possible data types (eg text) but not the most suitable.
4 c	A small percentage of candidates were unable to reproduce these text book definitions
4d	Candidates who read the question did well here, other candidates put 'Field Name' as an answer even though eliminated by the question stem. Stronger responses used examples to aid the description (examples of data type or types of validation).
4e	A significant number of candidates did not answer this question correctly, they usually just defined a complex query, rather than giving an example.
5	This question was not answered well as most candidates didn't understand what was meant by 'characteristic'. This style of question has appeared on most of the G061 examinations and with practice of past papers candidates should be aware of how to answer it. The majority of candidates were able to identify the data stored (contact details, orders) but generally were unsuccessful at identifying other characteristics.
6 i	Most candidates could achieve the mark here.

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Question	Comments
6 ii	This was in the main answered well, although many candidates didn't achieve 2 marks as they did not relate their answer to the context.
7 a	This was in the main answered well, with a few interesting answers. Candidates gave a wide range of responses, usually acceptable, although not strictly the correct term. Foot mouse was not an uncommon response even though the question stated the user did not have the use of his limbs. Voice recognition is not a device – the microphone is the device.
7 b i	Most candidates wrote about the advantages or disadvantages of a command line interface rather than its characteristics.
7 b ii	A mixed response by candidates – a lot of them thought 'natural language' referred to the main language spoken by the user. Candidates tended to identify a suitable use for forms.
7 c	The majority of candidates tended to get some credit. However, a lot of responses tended to be repetitious or lacking sufficient, specific detail for the second mark.
8 a	Quite a few answers related to house style in spite of this being part of the question. It was disappointing that a large proportion of candidates descended into talking about professionalism.
8 b	Most candidates got some marks for this questions but few got them all – some again failed to read the question and answered based on house style Customer recognition and branding were the main marking points obtained but the majority were not able to give any other reasons why.
8 c	A lot of candidates didn't read the question and talked about generic features not those specifically for a word processor. Candidates who were able to identify suitable features usually went on to talk about how the feature was or was not appropriate rather than describing it. A notable few included 'mail merge' as one of their answers.
9 a	A fair proportion of the candidates showed that their knowledge of spreadsheets and modelling is very limited in the whole of this question.
9 b	Not many candidates answered this question well enough to gain marks – the answers tended to be far too generic and the examples were not related to the context.
9 c	Again the lack of understanding of the fundamentals of spreadsheets showed in some of the answers to this question. A common mistake was to explain a 'range' in terms of values between two numbers and not within the context of a spreadsheet.
10 a	Answered well with only a few giving 'word fields' in their answers. A small number gave static data items.
10b	Once again most candidates got 1 mark, very few got 2. Some candidates are still giving vague answers such as 'easy' and 'quicker'.
11 a	Most candidates again didn't read the question properly and gave generic answers about bitmap images. A common misconception was that bitmap files are universally small in size.
11b	This was answered well by most candidates with many answers about copyright and quality.
11 c	A significant number of candidates clearly did not know what a graphics library was – as a result this question was generally poorly answered. They confused a graphics library with a clipart library.
11 d	There was a significant amount of confusion over the context of the question – many candidates referred to animation in a general way, not specific to movement of objects within presentation software. The definitions of hotspots were generally better, with some good, relevant examples given. Candidates must not latch onto key words (such as animation and range in a previous question) but look at the context where the word is being used as it may have a different meaning.

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Question	Comments
12	While a lot of candidates got full marks some gave health answers. A few did not give an appropriate problem – food and drink is not a problem per se for example.
13	<p>This question was not answered in a way that indicated any depth of study or understanding of the issues involved. Candidates were giving statements rather than a discussion. This style of question and mark scheme is common. The candidate response is more suited to a describe question than a discussion.</p> <p>Relevant points such as the lack of privacy and the implications of the DPA and RIPA were frequently mentioned but the typical candidate did not go on to fully discuss the impacts and consequences. Some candidates demonstrated confusion over the relevant laws, mixing up features of the DPA, Computer Misuse Act and RIPA. Candidates frequently wrote in very definite terms rather than looking at both sides of the argument. Their answers were superficial and did not reflect a depth of study appropriate to this level of qualification.</p>
14	Candidates responses were generally better than for the previous question – the context was obviously more relevant to the candidates, who have more experience of ICT in schools than of issues in the business environment. Similar issues were apparent as in question 13 – numerous ICT developments affecting students, staff and administration were stated but there were infrequent extensions discussing issues.

G062

General Comments

The presentation quality of candidate work was very good. However it was noticeable that centres had entered younger candidates as their work tended to be presented less skilfully than others.

Some candidates had provided additional step by step evidence of the actions they had taken which was unnecessary for the tasks. Evidence of the final product is all that is required.

Candidates need to be made aware of the need to check through the whole of the question to establish what the user requirements are for the tasks. Evidence suggests that many candidates only refer to the immediate question rather than also checking back through the information (question stem) which is given prior to the question.

Many candidates still fail to provide annotated evidence for questions which specifically require annotations. There are centres that continue to mark this evidence incorrectly by awarding marks to the candidates when there is no annotation. The noticeable areas where this happened this year were task 3b (formulae), task 3b (tutorial) and task 5h (calculations).

The difference between annotated evidence and labelled evidence needs to be made clear to candidates. A significant number of candidates appear to think that a label is sufficient to meet the requirement for annotated evidence.

Candidates who failed to gain full marks for the questions which require them to explain how things happened tended to provide insufficient evidence to support the actions they had taken. The key word in the question was '**how**' and candidates need to be made aware that questions of this nature will require more than simply showing the end result.

Some centres need to take more care with the marking of candidate work. The mark scheme is not a guide but a final document. Where the marking point requires evidence on a number of items, **all** of the bullet point indicators must be met to gain the mark. If any are missing, the mark can not be awarded.

A significant number of centres are too lenient when applying the marking criteria.

Test plans continue to be an area where candidates do not provide sufficient evidence yet centres incorrectly award full marks for vague statements which are closer to the unacceptable examples than the acceptable examples given on the mark scheme.

Evidence which does not meet the marking criteria cannot be awarded the mark. Candidates cannot be awarded the marks for work which they have done but which is not printed and presented as final evidence.

Comments on Individual Task

- 1a (i) (ii)** The majority of candidates were able to gain full marks for these tasks, however some candidates did not 'print' the spreadsheet but took a screenshot instead. Some candidates made simple errors with the two different rules.
- 1b (i) (ii)** Candidates were able to gain full marks for this task, however there were candidates who failed to annotate the evidence and this precluded them from the marking points.
- 1c** This task proved to be one of the most demanding for many candidates, probably because it was a theoretical task which they did not have to follow through. Test plans continue to be poorly documented by the majority of candidates. Many candidates produced test plans which lacked the necessary detail to be awarded the marks. Some candidates ran the test and presented the evidence of the completed test.
- 1d** Many candidates gained full marks for changing the unit fee price to £3.50 and providing annotated evidence of the affect of the change. Some candidates failed to prove that they had implemented the price change.
- 1e** Many candidates gained the mark for providing annotated evidence of creating the system for the days open, with a summary. Some candidates gained full marks by annotating **how** a routine archived the data and created a new workbook for the following week. Other candidates failed to obtain the full marks because they created solutions which did not complete the task correctly or they failed to annotate **fully** all the code produced. Showing all the code, queries or calculations used are vital to the annotation process.
- 2a** Many candidates gained full marks for the logo stages of development.
- 2b** Many candidates gained full marks for the completed logo. Some candidates incorrectly added *Internet Café* as part of the company name.
- 3a** Many candidates were able to gain high marks for the hand drawn tutorial structure and its pathways. Some candidates provided a hand drawn layout of every slide.
- 3b (i)** Many candidates gained full marks for showing the logo within the tutorial. Many used 'slide master' for this task.
- 3b (ii)** Many candidates gained more than half marks for producing the tutorial to the user requirements. Some candidates failed to provide annotated evidence to support the printed evidence they produced. Some candidates failed to provide enough instruction how to select a local news item by making links to BBC or other national news results.
- 3c** Many candidates gained half marks or more for the user documentation. The standard of presentation varied from candidates who used large font sizes and extremely large images (as would be found at KS3 or KS4) to others who produced high quality booklets.
- 4a** Many candidates were able to gain full marks for the hand drawn menu. Some candidates failed to provide all the required specification details.

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- 4b (i)** Many candidates produced a menu fit for purpose which matched the design. Some candidates made errors which precluded them from the full marks (incorrect representation of the company name MarNet, prices not formatted or menu did not match original design)
- 4b (ii)** Some candidates gained the mark while others failed to show all the merge fields on the menu.
- 4b (iii)** Some candidates gained the mark while others failed to provide annotated evidence how the data source was linked to the menu – all they presented was a screen shot of the data file in a directory.
- 4c** Many candidates produced a second menu with the new items included. However, the most common error was the failure to indicate new items on the menu. Some candidates changed the layout or font sizes on the second menu.
- 4d (i)** Some candidates gained full marks by annotating **how all** the prices were increased by 10% in a single action. Other candidates failed to obtain the second marking point because their evidence showed how one price or one section was changed. Showing all the code or formulae used are vital to the annotation process.
- 4d (ii)** Many candidates produced a third menu with the new prices included. However, the most common error was the failure to display the new prices correctly. Some candidates changed the layout or font sizes on the third menu.
- 5a** The majority of candidates were able to gain full marks for producing tables with suitable data types.
- 5b** The majority of candidates were able to gain full marks for producing an appropriate ERD using computer software.
- 5c** Many candidates produced a data entry form with the required components. However, the most common error was the failure to show the correct customer details (two customers have the same name). Some candidates did not show all the bookings made by the customer or included additional bookings that the customer had not made.
- 5d (i) (ii)** Some candidates gained full marks by annotating **how** the database confirms place availability and the number of places available. Other candidates failed to obtain the full marks because they just displayed the error messages or end result. Showing all the code, queries or calculations used are vital to the annotation process.

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- 5d (iii)** Some candidates gained full marks by annotating **how** the system prevented a double booking on any given date, as required by the task. Other candidates failed to obtain the full marks because they just displayed the error messages or end result. Showing all the code, queries or calculations used are vital to the annotation process.
- 5e (i) (ii)** Many candidates gained full marks by explaining which invalid data they would use, with a reason, for a telephone number and a customer title. Other candidates failed to obtain the full marks because they failed to state what the invalid data was or they failed to fully explain the reason for the invalid test.
- 5f** Some candidates gained full marks by correctly annotating **how** the system prevented a double booking on any given date, as required by the task. Other candidates failed to obtain the full marks because they just displayed the error messages or end result. Showing all the code, queries or calculations used are vital to the annotation process.
- 5g** Some candidates gained full marks by correctly annotating **how** to add a new customer and **how** to make a booking for the new customer making use of drop down boxes. Other candidates failed to obtain the full marks because they just displayed the blank input cells on the data entry form. Many candidates produced help sheets that would not have been of use to the client as they lacked detail.
- 5h (i)** Many candidates gained full marks for correctly producing the customer invoice.
- 5h (ii)** Some candidates gained full marks by correctly annotating the calculations used to produce the invoice. Other candidates failed to obtain the full marks because they just displayed the calculation without annotation. Some candidates provided truncated evidence which could not gain the marks.
- 6a** Many candidates were able to gain high marks for the hand drawn website structure and the links between all the pages. Some candidates provided a hand drawn layout of every page instead. Other candidates failed to use two way links between all pages (links to home page only).
- 6b** Many candidates were able to gain full marks for this task. Some candidates failed to meet the full requirements by leaving one item off a page. The majority of candidates gained more than half marks for the task.
- 6c** Many candidates were able to gain full marks for this task although the level of annotation varied with some candidates producing labels rather than annotation.
- 6d** Many candidates were able to gain full marks for this task. Some candidates failed to meet the full requirements by storing the home.htm or index.htm. within a home page folder. The marking criteria clearly stated that these pages needed to be stored within the root directory

G063

General Comments

The performance of the candidates seems very similar to recent examinations held at this time; candidates, on the whole, had either been very well prepared for the paper and were able to answer questions based around the technological aspects of the specification, or their attempts at many of the questions highlighted a distinct lack of knowledge and a disregard for any examination technique whatsoever.

Centres that prepare their candidates appropriately will cover the requisite technical vocabulary and in so doing will give their candidates ample opportunity to demonstrate their knowledge clearly, giving them every chance of gaining maximum marks. These centres are to be congratulated and encouraged to share good practice.

A significant number of candidates still overlook the total marks available for a particular question; they avoid considering the questions' wording and pay no attention to the keywords which should hold an indication of how to structure a response. These approaches are unlikely to gain a mark that takes a candidate beyond the threshold of a pass.

In addition to this, centres should demonstrate to candidates that an ample amount of space is given in which to write a response. Unless a candidate's handwriting is abnormally large, this should prove sufficient. A response that gains the maximum amount of marks for a question usually shows an economy of wording, eschews repetition of the question's stem and focuses on a factual and objective answer.

Centres should also remind candidates that it is difficult to award marks when handwriting is illegible. Whilst it is common to word process subject assignments, this examination relies upon handwritten communication and the opportunity of practicing such responses should be encouraged. Many scripts had to be interpreted before examiners could even consider the content. Whilst every effort is made to credit correct answers, if an examiner cannot see them communicated perceptibly, it is unlikely that candidates will gain a final mark that not only befits their ability, but reflects the effort made towards the examination.

Comments on Individual Questions

Section A

Question 1

- a) Too many candidates gave a description of a prototype rather than prototyping as a method of software development, which was the context of the question. More worryingly still were the many candidates who involved the word 'prototype' in responses which centred around testing. A good number of candidates were able to mention types of prototyping but again, this did not address the question of application in the development process.
- b) Rather like part a), too many candidates overlooked the keyword and indeed the question as a whole and focused solely on the word 'test' rather than considering what test plans are actually for and gave responses which recounted the benefits of testing rather than explaining the importance of test plans.

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With few exceptions, candidates either gave answers which involved 'meeting end user requirements' or ones where 'fixing bugs' became commonplace. Some physical descriptions of test plans were given, yet these were too superficial to earn multiple marks as they did not focus on the point of the constituent elements.

Question 2

- a) Three straightforward definitions for three marks were required. The rote learning that took place to cover these points often reflected the mark scheme. However, many candidates failed to consider the ownership of the infrastructure which ultimately deprived them of full marks.
- b) This question, on the whole, saw far too many definitions and too few comparisons. Candidates need to consider exactly what they are proposing to compare before constructing their response. Many gave answers which focussed on internal versus external access and then floundered.

A common topic of comparison between intranets and extranets was that of protocols. More often than not, this gained a mark for the candidate; the underlying theory was obviously well understood and appropriate vocabulary was accurately used.

Question 3

- a) With only a few exceptions, this was a very well answered question which saw the command of technical vocabulary used in an appropriate and explicit way.
- b) The word 'media' was interpreted differently between centres. Those candidates that concentrated on the data carrying capabilities of a named medium were generally able to extend their response into a full description and gain the available marks. However, those candidates that focused upon the different types of media file being transmitted, whilst understanding the effect on the available bandwidth, were less able to construct a full description which gave any resultant affect.
- c) Some single marks were picked up by candidates with statements that, surprisingly, struggled to form a full description. With six marks available for three disadvantages of something that is not only on the specification but relatively commonplace, it was interesting to see extortionate set up costs being cited as a disadvantage.

Question 4

- a) Many candidates were well able to collect single marks for accurate definitions that gave the constituent parts of an expert system. Given that three marks were available though, candidates ought to have considered the depth of their response against the question being asked.
- b) The vast majority of answers did not seem to make the connection with part a), focusing in some depth on non-experts operating a medical helpline rather than including how the functions of such a system might enable them to do so with some degree of confidence.

Question 5

From the responses seen, it was obvious that some candidates had at least an idea of what a code of conduct is. Clearly describing one, let alone two, disadvantages of having staff abide by such a code of conduct proved too much of a leap in understanding.

Those candidates that kept to the idea of ethics within ICT often related codes of conduct with draconian working practices. Those candidates that related codes of conduct to professional bodies, gave answers about the advantages of belonging to such organisations.

Whilst the three learning outcomes from the specification appear in close proximity and do share some commonality, centres should ensure that candidates are aware of the distinction between the codes of conduct exemplified within professional bodies and the purpose, activities and merits of belonging to such a professional body in its own right.

Question 6

Being able to state the different types of maintenance was not enough for the award of any marks, as the nomenclature appears in the question. However, being able to identify when each would be needed with further expansion detailing the result of such a course of action saw many candidates gaining a well-earned six marks.

Section B

Question 7

- a) Despite seeing many definitions of critical path analysis, a pleasing number of candidates were able to amplify any response given and gain further marks, despite some fragmentation and repetition, for fairly eloquent descriptions.
- b) Very often, candidates were able to identify the link entity, which shouldn't have caused too much difficulty given the wording of the question. The degrees of relationship proved troublesome for a small number of candidates but the vast majority showed a firm grasp of identifying and placing a foreign key.

Question 8

- a) Most candidates were well able to offer a reasonable response which showed some appreciation of the Model Human Processor. Those candidates drawing a full analogy were rewarded with both marks.
- b) Far too many candidates employed gratuitous rambles in an attempt to secure even a single mark. The consistency of layout seemed a popular choice for these prevarications. Those candidates that clearly understood how the Model Human Processor is applied during the design of a user interface more often than not gained all four marks.
- c) Many candidates waited until they explained the importance of colours in the design of tailored data entry screens before offering an answer worth any marks. Tenuous links to 8(b) were attempted for the preceding parts of the question on feedback and consistency, often with a repeat of the prevarications previously seen in an attempt to describe consistency rather than explain its importance. Too many candidates interpreted feedback as the dialogue between designer and client rather than that which is an integral part of the design process.

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- d) (i) and (ii) Pleasingly, many candidates were able to gain all the available marks for responses which mainly detailed how the limited attention span of a user can be taken into consideration and how audio-visual stimuli would help, along with how consistency of layout will utilise the pre-existing knowledge of users. The literal interpretations of the wording of the question seemed to draw upon personal use. Thankfully, very few responses mentioned 'processing' or 'storage' for memory.

Question 9

- a) Those candidates attaining all six marks showed a consistency in the style of their response; the method of distributing databases was made clear, highlighted on many occasions, and the expansion flowed naturally from the method given. Centres preparing candidates in this way ought to be congratulated as the examiner could quite easily see the depth of response without having to search and interpret dislocated answers and award a mark accordingly.
- b) Pleasingly, issues and not measures used to combat them were given in abundance. Expanding into a description seemed problematic for many though, resulting in many awards of just half of the available marks.
- c) It was this part question that required candidates to suggest measures used in ensuring the security of distributed databases. These were accurately documented with many awards of full marks, yet many over-complicated and awkward expansions were also witnessed within the descriptions, limiting how many marks could be given.
- d) Responses which confused authentication and authorisation were commonplace and centres need to ensure the difference is well understood by candidates.

Question 10

- a) Despite the keyword, it was unlikely that one word answers would sufficiently portray any factor chosen. The ability of candidates to develop an accurate and succinct statement concerning a factor which would affect the decision making process was good to see.
- b) The expanded definitions rather than full descriptions indicate that many candidates know what parallel installation is, yet cannot fully appreciate the rationale behind its existence.
- c) Those candidates who gained marks for this part question did so by mainly concentrating on the inconveniences for the individual rather than including the integrity of data within their answers.
- d) A good number of candidates gave responses which defined or described on-line booking rather than focusing upon the characteristics offered by on-line booking systems employed specifically by hotels. Such misinterpretation is unlikely to gain any of the available marks.

Question 11

Candidates should now be well instructed about the construction of 'discuss' questions. The methodology used by many was admirable. The points to discuss were chosen accurately and with some consideration; many had the ability to detail the impacts, for the hotels, of a wide assortment of external changes. Whilst many candidates are able to detail a single consequence of such an impact, too many candidates are still, frustratingly, unable to extend their answer beyond these basic impacts and deal with the multiple consequences of those changes that they have detailed from either a positive or a negative viewpoint. Descriptions of external changes were commonly seen. The impacts and consequences of both viewpoints were rarely evident and marks given in the highest bandings were almost unseen.

Question 12

Rather like Question 11, candidates seemed well able to document hardware and software developments within the context of hotels functioning in the future. Few suggestions were unrealistic, yet too many lacked imagination and gave current technologies and variations thereof as a response. The impact of the developments in both hardware and software may have been touched upon, but the consequences, either positive or negative, were not related as well as they should have been which, for many, proved to be a disappointing conclusion to an otherwise well executed paper.

G064

General Comments

Candidates again tackled a range of projects, although the majority remain database solutions. Quite a large number of candidates attempted website projects which could have been very successful but didn't meet the criteria; further comment on this later. Centres should try to consider a range of approaches with their candidates as spreadsheets are frequently overlooked but can make very suitable A Level projects.

There was much misinterpretation of the mark scheme and many projects were marked extremely generously by centres. This being the first full session of this unit, it is hoped that centres will avail themselves of training and take note of comments in centre reports in order to apply the mark scheme more accurately in future.

Centres are advised to use the exemplification of the mark scheme document, available from the OCR website, as those centres who did use it tended to be more accurate in their application of the mark scheme. That said, it is important to remember that this document is not a 'tick list' because it is recognised (and encouraged) that candidates may approach their project in a different but equally valid way. The document aims to give some guidance on the level and types of evidence required where the mark scheme allows 2 or more marks for a particular section. Some candidates again produced too much superfluous evidence, particularly in the software development section where showing the step by step creation of their project is unnecessary. Well annotated final screenshots of all aspects of the system are what is required. Teacher annotation also varied but where it was done well it was extremely helpful to the moderators in seeing where the marks had been awarded.

Centres who have candidates tackling a website project need to be very clear that the project may end up being linear. This is perfectly acceptable, but will lose 6 marks in the software development section as per the mark scheme. However, all other mark points are equally accessible. It is perfectly possible to produce a non-linear website project but this must involve a database or spreadsheet back-end because to be non-linear the data collected must be processed in more than one way for more than one output. Candidates risk losing more marks, however, if they claim to be attempting a website with a database back end (for example in their requirements specification) and then proceed to only show the design and development of the website.

ai) The vast majority of candidates again gained full marks on this section and it was completed satisfactorily.

aii) This section was frequently over-marked by centres. In order to gain the first mark in this section candidates must consider why they are choosing an interview and consider the why, where, when and who of it. A questionnaire is rarely suitable as an alternative to the main interview, but is a good additional method of information collection. There should be evidence of communication between candidate and client. Candidates frequently gave no reasons for asking their questions and the mark scheme clearly states that questions should be reasoned. Often candidates had not considered a full range of questions and 4 marks were being awarded for a list of 4 questions. Clearly candidates are not going to extract the required information from a few basic questions.

aiii) Although this section presented few problems on the whole, the requirements specifications were generously marked. They must contain very specific requirements which can be measured for success during the testing and evaluation stages if full marks are being awarded. Candidates also did not fully consider the hardware and software requirements; for example, paying no consideration to email software even though a requirement of the system might be to send emails.

bi) Candidates generally produced very clear and complete designs, but centres who have candidates tackling a project with two elements (for example a website with a database back-end) should ensure that candidates are aware of the need to show designs for the database as well as the website pages. In addition, although flow charts and data flow diagrams are not essential requirements of the project, the candidate must have some way of showing the data flow in their system. Structure diagrams and file structures are helpful in gaining the pupils the first 4 marks in this section.

bii) The project plan only needs to encompass plans for the software development and test plan stages of the project. The dates should roughly tie in with those in the activity log/diary.

ci) Very few candidates produced test plans worthy of full marks, but those who did really were excellent. Those who gained low marks here lost them because they had not fully considered the testing of validation rules, buttons and had not fully tested against the requirements specification. Centres must consider, when marking the test plans, whether the plan presented really would test the system thoroughly. Candidates who produced a linear project with one method of processing for one output can achieve no more than 2 marks for software development. Candidates were much better during this exam series, at evidencing their HCIs. Ongoing testing was not done at all, but was generously marked, in many cases. These marks are not for testing the final solution, but testing elements of the system work whilst the development is under way. For example, testing with some sample data, that a query works.

cii) This section was done quite superficially in many cases. Although it is accepted that many candidates will not actually install the software, this section should allow them the chance to carefully consider how they would install it and train the staff. For 5 marks it is expected that candidates will consider the alternative changeover methods, installation processes including how data files will be created or transferred, the timescales and any limitations they may face. They should also be consulting with the client about training needs and carefully considering how these can be met.

d) User guides were often very comprehensive and candidates on the whole knew how to present these effectively. Use of screenshots was excellent and candidates tended to use accurate contents pages, page numbering and/or indexes. Candidates should be aware that the guide should cover all aspects of the system and presentation is important. It is important that candidates consider who the user guide is for. For a database system it is straightforward and generally aimed at the end user of the database. Therefore it does not need technical details of how to set up queries etc. For a website, it is generally far more appropriate to have a user guide aimed at the person maintaining and updating the website and dealing with the data collected; therefore a more technical guide is useful. Bear in mind that unlike the old specification, there is no requirement for a technical **and** user guide.

e) Although some evaluations were very thorough, a number were generously marked, where the comments were very superficial. 6 marks are available here and I would only expect 6 marks for a comprehensive evaluation which gave full comment on the extent to which the requirements were met and comprehensive evaluation of shortfalls and possible extensions.

Reports on the Units taken in June 2010

f) Presentation was not particularly strong in many cases. Candidates would be expected to have an appropriate means of navigating the project, including page numbering, section headings and appropriate sub-headings. Spelling and grammar is taken into account in these marks too. A diary or project log is essential for 3 marks.

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