



GCE EXAMINERS' REPORTS

**ICT
AS/Advanced**

SUMMER 2013

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ICT
General Certificate of Education
Summer 2013
Advanced Subsidiary/Advanced

Principal Examiner: D Rudge

IT1 Information Systems

- Q.1 (a) and (b) Candidates lost marks by giving general examples of the use. For voice interfaces they wrote 'To speak into a word processor' rather than 'pupils can dictate a history essay directly into the word processor' and for touch sensitive screens that they are 'Found on mobile phones' rather than 'quickly dial a friend's number on a mobile phone'. The mark scheme demonstrates that candidates need to contextualise their answers. Candidates generally gave better advantages and disadvantages for part a than part b.
- Q.2 (a) Too many candidates were unable to give 4 other characteristics as given in the specification. Others could not explain the characteristic without using the same word and hence got no marks. For example, up-to-date requires the date to be up-to-date, furthermore those that did manage to use other words for up-to-date often failed to appreciate that 'time' was important in answering this part. Although the question said other than complete, some included complete whilst others included reliable and timely, which are not terms given in the specification.
- (b) A better answered question this summer possibly because the wording had been significantly changed from previous years. Candidates failed to gain marks when they failed to give an appropriate stage or the cost was fairly trivial e.g. buy envelopes or when they gave different costs covering the same stage.
- Q.3 (a) Some candidates wrote about copyright or pornography for no marks as they are not covered by the Misuse Act. Candidates lost marks by again providing generic examples. Some candidates came up with quite fanciful examples such as hacking into MI5. Whilst undoubtedly this is a correct answer it is also fairly rare and much better every day examples could have been given.
- Q.4 Considering the majority of candidates know and regularly use templates, macros and mail-merge this was a poorly answered question. The question clearly states 'functions of WP/DTP software and yet some candidates wrote about slides and spreadsheets. For the template candidates needed to appreciate that it is a pre-prepared 'document'. For the macro candidates needed to appreciate that it is a set of stored instructions. This was rarely apparent and yet many knew that a macro could be used to add a signature or date. Why candidates wanted to write a macro to print a document when CTRL-P is inbuilt was not explained. The automatic nature of mail-merge was often not appreciated and too many candidates simply wrote that the same letter could be sent to several people without stating the purpose of sending the letter.

- Q5 (a) (i) Too many candidates wrote that validation was to ensure that the data was correct.
- (ii) Candidates often got good marks for this question. Fewer candidates muddled range and length checks as they have in previous years.
- (b) Generally candidates gained poor marks for this question by being not specific enough. For example they wrote about old hardware and old software rather than state the problem of using old hardware and software. Candidates also lost marks by writing about data (precluded by the question) or wrote about hardware more than once, i.e. memory and processor. Too many candidates gave answers which would have stopped computer processing systems rather than affecting their efficiency.
- Q.6 Most candidates answered 'Rotate' correctly but some did not appreciate that it could be viewed from all angles. Hatching/rendering was often thought to do with the finished drawing rather than using different finishes and wire drawing was to do with running electrical wiring around the house. Candidates lost marks for writing 'walking into a house' rather than 'walking inside a house'. Some wrote walkthrough is walking through a house, for no marks.
- Q.7 (a) and (b) Question 7a was often better answered than 7b and many candidates obtained full marks. Too many candidates thought that distance learning allows you to work at your own pace which is a feature of CAL. Many were not sure what CAL software was and thus achieved 1 or 0 marks. Some candidates incorrectly wrote about using whiteboards.
- Q.8 (a) Candidates would have seen bar codes almost every day of the week and yet did not appreciate that they were black and white lines of varying widths. Many thought that they contained the price of the product. Clearly there is a misunderstanding that this data is held on the computer and is downloaded from the computer once the bar code has been matched. Advantages and disadvantages were often well covered.
- (b) The clue to how candidates should approach this question is given in the question. It asks the candidate to describe how JIT works after a barcode is scanned at the POS. The candidate should then think that a code from the bar code travels to the computer and here the candidate should think what happens. Clearly it is matched with a number in the database; the stock level associated with that code is decremented and so on. Many candidates failed to appreciate that the process is entirely automatic but instead wrote about human intervention. For example when the stock reaches a certain level a manager is informed so that (s)he can order more stock. Other candidates thought that every time an item was sold it was reordered. Too many candidates gave the advantages and disadvantages which gave them nowhere to go in c.
- (c) Candidates often wrote about the JIT process rather than advantages and disadvantages but generally it was a well answered question.
- (d) Some candidates did not read the question which clearly states that in addition to having a conventional supermarket it also has an on-line shopping facility. They therefore wrote about the benefits of on-line as opposed to conventional shopping. Most candidates were careful to differentiate the benefits to the company and to its customers.

- Q.9 Too many candidates did not read the question and gave the definition of simulation modelling rather than describe how the model was created. Candidates also lost marks by giving generalised advantages i.e. safer rather than can predict path of hurricanes so people can be evacuated.
- Q.10 Centres have clearly informed candidates of the requirements to number the pages of their spreadsheet documentation and to refer to these pages when answering these questions. Far fewer candidates lost marks because the examiner was unable to find the evidence than in previous sessions. Nevertheless there were still candidates who did not heed this advice and did not reference their work and consequently lost marks.

Some candidates merely referenced their work using just titles, this should be discouraged. Whilst examiners would have searched through candidates work looking for the titles it is easy for work to be missed. Furthermore the use of plastic wallets/folders is not recommended. The number of candidates cropping their evidence has started to increase – it is too be discouraged as it too often removes the backing evidence and hence no marks can be awarded. It also appears that some centres had either given candidates a generic template of a spreadsheet or they downloaded one from the internet, and all the candidates did was to put in their own data. This is not allowed but it did not seem to help the candidates as they had no ownership of the spreadsheet and did not really understand what the functions were doing. Centres get much better results when they get candidates to write simpler spreadsheets using the functions appropriately.

Parts a), c) and d) required candidates to write what they used the function/feature for and why they used it. Candidates were generally very poor in saying why. Again the question therefore needs to be asked about how well they understood the spreadsheet that they produced and therefore how much of it was their own work. Candidates who have wrestled with getting, for example, an IF statement; multiple IF statements; validation routines correct, are very unlikely to forget why they were needed within the spreadsheet. This is also true part c the VLOOKUP question. Many candidates clearly did not understand their lookups and again candidates found that when they input some data other data was found, how it was found was a mystery to many.

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IT2- Presenting Information Task

General points

Most candidates presented clear and easy to follow coursework portfolios with Centres providing detailed and explanatory comments. This aided the moderation process and helped us to support the marks awarded by the teacher.

However where moderators disagree with the Centre it is in generally the same areas as last year.

Analysis

Background. Again this was well done.

Identification of 3 documents.

Many centres have now adopted the approach taken by the exemplar projects and this makes moderation clear and simple. At this stage candidates are only required to supply and identify three different types of document and for each type of document, outline its purpose and its potential audience.

Ethos or house style.

Although this area is beginning to improve there are still some Centres who award marks for descriptions rather than an analysis.

Candidates should look at the three documents collectively, not individually, and ask themselves two questions.

- What is the house style/ethos?
- What tools and techniques are used to portray this image?

Some candidates are still not being analytical and only describe colour schemes, fonts etc. This is a piece of analysis, not a description of what they see in the three documents.

Analysis of an organisation's documents.

This has improved but is still the most troublesome section. The comments are the same as last year. Where mistakes are made it tends to be made by the whole centre. Therefore it is a centre interpretation problem.

Candidates must think of this as three sections.

1. *Analysis of two paper DTP documents*
2. *Analysis of an automated document used by the organisation*
3. *Analysis of organisations website or a presentation used by the organisation*

For Section 1 the candidate must **obtain two paper DTP documents** from their organisation. They cannot use their own documents created in task 1 task 2 and task. They cannot say potential documents for this section.

For section 2 the candidate should try to get an automated document.

However if this is not possible, they can take an approach of identifying a process which could be automated and result in a potential 'automated document' the organisation could use.

For section 3 the candidate should analyse the organisations website or a presentation used by the organisation or similar organisation. If the organisation does not have a website they can analyse the website of a similar organisation or they could describe in detail, the data and multimedia and web features that would be contained within a potential website for their organisation.

NB It is only for the automated document and website that they can take this potential approach. The same mark scheme applies whichever approach they take

Section 1 Detailed analysis of two paper based DTP documents

It is **not** acceptable to use a website in the analysis of two DTP (paper) documents. We are looking for the purpose, **data** and audience of both documents.

1 mark is for identifying the **data** on **both** paper documents

This is a description of the information contained within both of the paper documents, what does it say? what is the content?/ what does the text describe?

1 mark is for identifying at least 4 tools and techniques on either one document or between both documents.

NB.

- the latter does **not** include fonts and fonts styles
- does **not** include clipart/logos unless some photo editing feature is identified.
- all 3 of bold, centre and underline must be present and can only be awarded as 1 mark.

A screenshot or the actual document must be included and candidates have to **annotate/circle/arrow on the screenshot or actual document** at least 4 different features across the two documents. The moderator cannot support marks for features which cannot be seen. **A separate list or paragraph saying the documents have these features is not acceptable.**

Centres were often incorrectly giving this mark when only 2 features were identified or where the same feature was identified twice. Most documents had features which could have been identified but were ignored.

Section 2 Automated documents.

The mark scheme states 1 mark for a description of the purpose, data/information contained in the document and audience of an actual document or a potential document

The second mark is for listing/identifying in detail the individual fields which would be in the database linked to the document. Therefore, for example, name and address are too general. They need to list Title, Firstname Surname, etc.....

Some centres are still giving the mark when they just say address block

Section 3 Webpage or presentation

This was generally well done but it is still worth noting the following for new centres. When analysing an existing or potential web page candidates were required to identify/annotate/circle/arrow at least 4 different techniques which were used. Some candidates identified DTP features instead of multimedia features. If there was no website or presentation and candidates chose to identify potential ones then they must describe in detail multimedia features which could potentially be used to get the second mark. Vague statements such as 'could include hyperlinks, sound and a video' should not be credited. What would the hyperlinks do in detail? What would the video be about and what is its purpose etc.

Many did not identify or describe four **different** multimedia features but some Centres still gave full marks, three hyperlinks do not count as three features.

It is possible to have a mixture of the two approaches. If a website is basic and a candidate can only identify two multimedia features they could suggest how it could be improved by giving two extra concrete suggestions for other multimedia features that could be used.

Task 1: DESKTOP PUBLISHING

Again centres are again to be congratulated on encouraging pupils to give clear evidence enabling moderators to support most centres marking in this section.

Purpose: well done.

Image/ethos/house style. (only one and not all three)

Some candidates still confused image or ethos or house style with the target audience.

Candidates should ask themselves two questions:

What house style/image/ethos do I want to portray?

How am I going to get that image over in my leaflet?

In order to gain the mark candidates needed to explain **how** they are going to get over their chosen ethos or house style in the document, not just describe their colour scheme. They should stress why this colour scheme? why this font style? why this imagery? etc.

The final leaflet must be printed out and included in the coursework.

Detailed design of the document

This was very much improved.

- 1 mark was awarded for an outline layout with inherent page orientation and identifying which frames were text and which were for pictures.
- 1 mark was awarded for **details** of the '**data**' both text and graphics
- 1 mark was awarded for details of fonts and font sizes to be used
- 1 mark was awarded for details of at least **8 special features** used such as tables, bullet points, tab settings, line spacing paragraph styles etc.

Moderators wish to thank those centres who encouraged their candidates to use highlighter pens to make the features stand out.

Design cannot be inherent. There must be evidence of a design process so either hand drawn designs if DTP used to produce the design. The latter must clearly be design and not a first draft of the leaflet.

Use of basic features

Again this was well done.

Candidates **must print out** the final document. **Only features which appear on the final printed leaflet will be given credit.** Some candidates clearly show the construction of the header and footer, page number but this does not appear on both sides of the final printed document and should not be credited.

The only extra evidence required in the evidence of basic features is screenshots of the origin of two different sources of graphics.

Use of Advanced features

It would be helpful if centres would indicate on the IT2 marksheet which advanced features were used. Here supporting evidence is absolutely essential for the features used.

This was usually well done with clear evidence but for new centres it might be worth mentioning the following again:

The features must appear on the final document not just in construction evidence.

Again the most popular techniques attempted by candidates included customised tables, pagination, page or frame borders, and drop capitals for paragraph formatting.

If these are clearly seen on the final document then no further construction or before and after evidence is needed.

Customised tables This is cell merging or rotation of text within a cell not shading borders or cells.

For all other advanced techniques further evidence is required.

A reminder that layering is not moving to objects to one on top of the other. It is showing the objects, one in front and one behind and then reversing their positions.

Before and after evidence of line spacing must be clear. Sometimes there is no perceptible difference in the evidence or in the position of the text on the final document.

Many candidates could have improved their reports by providing clear before and after screenshots for;

- different paragraph formats,
- own tab settings,
- own indents

Superscripts and subscripts both needed to be used and it is essential that screenshot before and after evidence is given or candidates will not be awarded the mark. Many candidates did not realise they had to include both subscript and superscript for the mark. Centres should discourage candidates from inappropriate or nonsense use of superscript and subscript just to cover the marking criteria as they will not be credited with a mark.

Task 2: AUTOMATED DOCUMENT

Many of the mistakes this year were similar to last year.

Purpose: well done

Design of document

This was generally well done but candidates must remember to plan their **three** macros on their design and identify the **mailmerged fields** not just say address block: - what are the actual fields to be used?

A few candidates did not achieve the 'data' mark because they just wrote 'body of letter' and did not describe the content of the letter.

Note: design cannot be inherent. Some '*designed*' letters looked identical to the template letter and could not be awarded any marks.

Use of Basic Features

This was generally well done but some Centres did award marks when there was a clear spelling or capital letter mistake or inconsistencies in the use of capital letters in titles.

Again it is worth noting that **any** spelling or grammar mistake in the database or the letter will be penalised. Candidates should also check for capital letter mistakes in the data from the database.

Most candidates should ensure they had the contact details and the date on the letter or else the letter would not be a suitable format for a professional letter.

Use of Advanced features

- Again this was well done but some candidates need to think about the 'professionalism' of their macros. **Silly, nonsense macros** should not be credited e.g. first macro puts in Yours; second macro puts in sincerely; third macro puts in a comma.
- Candidates should **not** be given credit for macros which already exist on the toolbar **e.g. print and save.**
- There is still a problem with copy and paste macros in a very small proportion of centres. **NOTE: NO copy and paste macros.**
- Please note that **unless the macro code is included**, no marks should be awarded for macros even if construction evidence is there.
- Saving as a mail merge template is still poorly evidenced. Some candidates continue to crop the evidence especially saving their mail merge template as a template document (not letter headed notepaper or a blank page). They display the dialogue box on top of the mailmerged letter so the moderator cannot see it is the mailmerged template. **Candidates should show the mailmerged fields in the background and the saving as a template dialogue box in the foreground. The latter is still the commonest fault. If you cannot see the fields do not give the mark.**
- Candidates should be encouraged to put in one final screenshot of the mailmerged template with the fields clearly visible and the macro buttons on the toolbar for that template. This shows that the code provided for the macros is linked to that mailmerged template.
- Candidates who re-use their mailmerge template must include the template version of the new letter as well as the letters with the merged records.

Task 3: WEBSITE OR PRESENTATION

Again the evidence for this was generally very good. Most centres chose to do a presentation rather than a website.

The main problem areas was the detailed design of data including images and the extra mark for features such as hyperlinks, hotspots, bookmarks, animations, transitions, background template, sound, video and animations

Basic features

Background style

This must be original and not chosen from a library of design styles.

They were generally very well done.

Animations and transitions using **INTERNAL** features of the software provided for candidates use.

Again usually very well done.

For new centres it might be useful to note that candidates creating web pages that;

- For animations candidates could use scrolling banners /leader boards/interactive galleries etc.
- For transitions they can use rollover buttons or some edited the html coding to change the colour sequence from one page to another. If the software has linked features, another alternative for transitions could be interactive image effects.

Evidence must be clearly provided. It must be made clear if the technique is used as transitions and not repeated for animations.

Hotspot/ hyperlinks and bookmarks were generally well done with good supporting evidence.

Advanced features

Use of Sound

Again well done. Most candidates now attempt to capture sound or create original sound rather than load sound files in from a library or backing store in order to gain the extra mark.

Use of original video.

The level of detail in most storyboards was very good but some did not put details of **timings and effects** used on their storyboard.

Many candidates must produce their own original individual video and applied effects but some gave much reduced sized or cropped screenshots so it was difficult to see the evidence. Candidates should be encouraged to annotate their evidence.

Use of original animation using **EXTERNAL** software packages

This was generally well done but a complex animation is not 3 frames/clones where an object moves a very small distance in a straight line. Three frames were given as a guide to **3 different events.**

EVALUATION

Again we agreed with the majority of centre marking of the evaluation section. The quality of evaluations has steadily improved. Most centres are more demanding, expecting more detailed and critical analysis before awarding the marks. However some seem to award marks for very shallow evaluations lacking any analysis and moderators could not support the Centre marks. Again this section was a clear differentiator with a wide variety in the standards of candidates' quality and quantity of answers.

COMPRESSION AND STORAGE TECHNIQUES

Centre understanding of this section of the mark scheme is now very good for the most part. Candidates are expected to discuss in detail the relative merits of at least 3 different compression techniques they have used. They should identify and relate it to their files used and justify their choice of the techniques used.

A few centres **still incorrectly** awarded marks for;

- Zipped files: a description of how they zipped their files will not gain candidates marks.
- Reducing text field length in the database is not compression it is saving memory.

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IT3 Use and Impact of ICT

- Q.1 A significant number of candidates replicated the answers from last January, the general factors of a good HCI, which at most got them 1 mark. This task was about one of those factors, being appropriate to the task, a child learning to read. Candidates also lost marks by not being specific enough, i.e. saying that colour was a factor, when the question asked them to describe and so at the very least they needed to say 'use bright colours to attract the child's attention'.
- Q.2 Most candidates got some marks here but tended to repeat the same point over and over or didn't discuss the first part of the question which was the requirements of the expert and novice users, i.e. that a novice's requirement is speed of learning and an expert's is getting the job done as quickly as possible.
- Q.3 The question stated, other than a code of conduct, and too many candidates then gave points that would be in a code of conduct rather than the rest of the security policy, i.e. not sending abusive emails. Candidates also lost marks by writing about the same factor more than once, i.e. passwords and encryption both from logical methods. Cameras and CCTV do not prevent physical attack, they just help you identify what has happened.
- Q.4 Most candidates gained one of the marks for stating what is meant by FTP but failed to get the second mark because they didn't state it was a standard protocol (set of rules). Others lost marks because they didn't in their example state what was being transferred or described something small in size which would have obviously gone by email.
- Q.5 The better candidates answered this very well and most could give two factors. Candidates lost marks on the performance factor by not mentioning in terms of what or being too vague in their extensions to the factors. Security will only be awarded as a factor if they discuss in their extension why the data is at risk.
- Q.6 Most candidates were able to give 2 advantages/disadvantages but tended not to get more because they just then gave the opposite, or said dialup is cheaper because you only pay for what you use, but this is only true if you are a very light user.
- Q.7 Again most candidates could give one point such as logging off users but failed with the general principle that it is about controlling stations not users and they are not tasks which are generally done at the server. The points condoned in the mark scheme have been included for the last time even though they are in a textbook as I feel they lead to confusion.

- Q.8 Generally very well answered with most candidates getting over half marks. Weaker candidates tended to drop marks by duplicating points or giving opposites.
- Q.9 Very badly answered as candidates still confuse distributed computing with distributed databases. This coloured the following questions as well. What I was looking for was the idea of networked machines, working on the same problem, sharing processing and bandwidth.
- Q.10 It was disappointing to see the number of candidates who could not give an application that used distributed computing.
- Q.11 Those that had thought it was about distributed databases were still able to gain a mark because the security answer is common to both. Those that answered about distributed computing gained two or three marks.
- Q.12 Candidates tended to lose marks by not getting the first half of the definition correct by leaving something out and then not being accurate enough with their factors, i.e. flexible instead of flexibility of the data analysis, as the marker could not be the sure what they were writing about.
- Q.13 A very good discriminator as the best candidates did quite well even though it was the worst answered question. Candidates lost marks by either not stating who the method was used on or used the general people. Marks were also dropped by stating the same expansion for each method, i.e. finding problems, finding problems and finding problems.
- Q.14 Not as many candidates answered this question as the database option. There were some good points made but a number of candidates hampered themselves by writing about moral or ethical issues which have been the thrust of previous questions but not this one.
- Q.15 Most candidates got one mark but hadn't learned the definition well enough to get both marks.
- Q.16 Lack of precision cost candidates marks here, integrity and independence were the best answered but it was still very disappointing to see the number of candidates, at this level, who didn't seem to understand these two terms.
- Q.17 Candidates scored very well on this question but marks were lost by not showing which were the foreign keys and putting ward ID as a foreign key into both of their tables.
- Q.18 Candidates need to learn a definition of a data warehouse and not write that it is a physical depository for a large number of hard drives full of information. Most candidates gained the first mark for the example but could not expand on it.
- Q.19 More candidates were able to explain what is meant by data mining but very few could give an extension to their example.

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IT4- Relational Database Project

GENERAL COMMENTS

Most of the samples submitted showed that centres have a clear understand the requirements of the specification. Many high quality projects were seen. However a few centres do not understand the specification requirements and should note the comments made in the moderator report and look at exemplar material provided by the WJEC. Many centres provided helpful teacher comments and marking grids to show where marks had been awarded but others did not. This meant effectively remarking the work submitted and finding the evidence to find to support the mark awarded by the centre was sometimes very difficult.

Some centres should note that the project is in the following separate and distinct sections:

- Background and Analysis of User requirements
- Design
- Implementation
- Testing
- User documentation
- Evaluation

BACKGROUND AND ANALYSIS

The following comments do not apply to the majority of centres but it is worth reminding existing centres and informing new centres of potential trouble spots.

Background

Some centres were awarding two marks when there was no outline of existing data processing activities

1 mark is for general background and 1 mark is for describing what data handling goes on at present.

Analysis and user requirements

Centres take different approaches to this section and are becoming more demanding in the level of detail required for full marks at A2 but some centres still award high marks for a retrospective list of what the candidate did or a brief very outline of what the system is required to do. Moderators cannot support the marks awarded for the latter.

For full marks there should be a detail description of;

- data and outline data structures required,
- data capture methods and data input methods

- security and suggestions for backing up the database
- data processing including all calculations and searches
- outputs required from the system and user documentation requirements.
- the desired house style,

This should be written up as though an end user had been interviewed or consulted in depth. It should not appear to be a retrospective list of what they did in design or candidates should lose a mark.

Hardware requirements.

Note hardware must be a complete list including mention of keyboards, mouse, type of monitor, type of printer, USB port or other backup devices.

User interface requirements

This was well done with many candidates covering areas such as forms dialogue/menu driven systems; house style for forms and reports; health and safety issues such as eye strain or colour blindness.

DESIGN

Again it is worth noting that implemented features cannot be considered a design. **No marks can be awarded under design for implemented features. There must a clear and separate section.**

Design of queries

Although greatly improved, this is still one of the biggest problems. Candidates doing the same topic e.g. a caravan park, must produce different queries. Candidates doing different topics must produce different queries. It is doubtful if when all candidates in a centre base their first query on a search for 'Mr Jones', that this is all the candidates own work.

Again some candidates do not seem to understand the difference between purpose and reason.

e.g. 'The purpose of this query is to produce a list of sales in Aberaeron'.

This does **not** explain the **reason** why a list of sales in Aberaeron is required by the manager. It only describes the output from the query not why the information is required. Therefore this type of '*reason*' should not be given a mark. A **reason** would go on to say 'because the manager wants to compare Aberaeron sales with other areas to assess performance and see if an advertising campaign is needed to boost sales'.

Although only in a few centres, there is still some confusion about the number and type of query required in the new specification.

NB Candidates are required to design, implement, test and document;

- 2 x queries which use a single table and which **both have criteria and a realistic reason**

SORTS ARE NOT ACCEPTABLE FOR THESE QUERIES.

- 1 query which uses linked tables and which **has criteria and a realistic reason**
- 1 query which uses linked tables and which has **NO criteria and a realistic reason**
(*The most common use of this could be to;*
- *select only certain fields for a report,*

- *sort data*
- *produce a calculation. NB This must be a separate and different calculation to the one done in a different query or form or report so if this is the use for this query, then 3 different calculations need to be done for full marks.*
- 1 query which uses a **parameter search and a realistic reason**. (*This could be on a single or linked tables depending upon the reason*).
- 1 action query (append/ delete/ update) **and a realistic reason**.

In total there are six queries required.

Design of validation

Most centres now understand that;

- Two different types of validation techniques are required not two range checks. If a candidate does 2 range checks the second range check should not be awarded any marks in design implementation or testing.
- Drop down list /combo boxes and input mask wizards provided by Access are not acceptable as suitable validation techniques. Candidates should not be discouraged from using such techniques but they cannot be awarded marks in the validation section. Validation using input mask wizards should not be awarded any marks in design implementation or testing.
- A problem arose with Access 2010 when OR validations were correctly designed and implemented. However testing them was difficult when it was automatically turned into a combo box. If the construction was clearly shown then it was still an acceptable validation. Centres found different ways to test this combo box.

Design of reports

Again improved but centres should note;

- Candidates should design and implement **original** headers and **original** footers. Many design original headers but use the default footers.
- **Calculation in the report should be different to that in the query or form**. Many candidates use the same formulas and this should be discouraged.
- =Date() by itself is not acceptable as a calculation in a report.
- =Now() is not a formula and is not acceptable as a calculation in a form.
- Candidates should not have implemented solutions as their design

Design of automated routines

Again centres should note;

- Timers / =Now() etc / =Date() by themselves are not regarded as sufficiently complex to count as an automated routine.
- Design of buttons to go from form to form (wizards) are not original code.
- Candidates should not have implemented solutions as their design

IMPLEMENTATION

Most candidates gave good evidence of implementation. The following points were made last year but in a few centres they caused problems this year so it is worth repeating them:

- Reports must have original headers and original footers. Many implement original headers but use the default footers. Original footers **does not** include date/page number generated by the wizard. It does not include a result of a calculation or function as this will already have been awarded a mark.
- Suitable test data should be used to show sorted and grouped data on the final report **not just construction evidence**. Therefore this should be evident in the data in final report not just in construction. Reports with only one record cannot show that sorted and grouping worked. Two reports, one showing sorting and a different one showing grouping are not acceptable. The sorting and grouping must take place in the one same report. This will not show if the test data is not suitable.
- Calculated fields in the report should total up data from more than one record.
- Calculations in a report must be a different calculation to that used in a form or query.
- Candidates should create their own macros not use the wizards on buttons in forms. They should create macros which perform two different function not just two navigation macros.
- Splash screens and security VB should be more clearly separated out as two different routines. Candidates are advised not to merge them into one routine.
- The new version of Access caused some centres problems in not allowing them VB code. JCQ guidelines say they should use the design of an original macro tool not wizards to create the outline of the code then editing the code with their own original code. It would appear that most centres using the new software have no difficulty in using VB so perhaps this is more of a centre issue.
- Should centres need to use existing macros for original code **they must edit the existing code to perform some extra function** or this is not acceptable. It would only count as creation of macros. Some centres did this but some just added another macro without any original editing.

TESTING

Most candidates had good and detailed test plans.
Again centres should note:

- Calculation in query or form should be tested. This means the **result** of the calculation should be in the test plan before running the test (dry running). It is not good enough to simply say 'yes it works as you can see in my screenshot' How do we know that is the correct total? Some candidates showed very good screenshots of testing the calculation on the on screen calculator and then comparing the result with that in the form.
- Candidates should test password routines with valid usernames and passwords and also invalid usernames and passwords if they form part of their automated code routines.

USER DOCUMENTATION

This is much improved but the main problem area is still the add, edit and delete a record. Backup and recovery was done very well by most centres but there are still a few that only do backup

Centres should note;

- In user documentation candidates should **show before and after** in the add a record, edit a record and delete a record section. It is **not enough to say 'click a button'** when describing how to add, edit, delete data and run different queries. Candidates should note it should not be direction on how to construct a query so there should be no evidence of queries in design view. In 'User documentation' we want to see evidence of how each of the different types of query are run.
- Disaster recovery needs recovery instructions not just backup. Disaster recover should be extended to a detailed description on how the database can be recovered and reinstalled, not just backed up. It also requires a level of detail. It is not sufficient to say *'the technician backs it up at night and he will recover it if it gets corrupt'*, or any similar general statement.

EVALUATION

As last year we tended to agree with most centre marking of the evaluation section. Centres are demanding an evaluation reflecting A2 standard. The candidates are responding by being more critical and analytical. However it still tends to be an area where some centres are slightly over generous.



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