GCE EXAMINERS' REPORTS

ICT
AS/Advanced

SUMMER 2012

Statistical Information

The Examiner's Report may refer in general terms to statistical outcomes. Statistical information on candidates' performances in all examination components (whether internally or externally assessed) is provided when results are issued.

Annual Statistical Report

The annual Statistical Report (issued in the second half of the Autumn Term) gives overall outcomes of all examinations administered by WJEC.

ICT

General Certificate of Education

Summer 2012

Advanced Subsidiary/Advanced

Unit Statistics

The following statistics include all candidates entered for the unit, whether or not they 'cashed in' for an award. The attention of centres is drawn to the fact that the statistics listed should be viewed strictly within the context of this unit and that differences will undoubtedly occur between one year and the next and also between subjects in the same year.

ADVANCED SUBSIDIARY / ADVANCED									
				Grade Boundary					
Unit	Entry	Max Mark	Mean Mark	A*	A	B	C	D	E
IT1	**6353**	**80**	**35.7**		60	54	48	42	36
IT2	**6948**	**80**	**65.3**		73	66	59	52	45
IT3	**2650**	**90**	**43.0**	81	72	63	55	47	39
IT4	**3573**	**100**	**82.1**	95	90	79	68	58	48

N.B. The marks given above are raw marks and not uniform marks.

***Chief Examiner and Principal Moderator:* Noreen Kay**
***Principal Examiner:* Dai Rudge**

IT1

Comments on Individual Questions

Q.1 (a) An old favourite which most candidates had a good attempt at. Candidates lost marks by explaining in the example what exactly the data was or putting units on them and hence producing information. The example for knowledge was also a weaker area as candidates did not really understand the two part concept of a rule.

Q.2 (a) Candidates lost marks because they could name characteristics but then used this name to describe the characteristic and consequently only gained the mark for a list. They also sometimes invented their own characteristics.

(b) Most candidates could give two costs but lost marks by not being able to discuss different data processing stages or were too vague in their responses.

Q.3 Most candidates could name and describe a check but too often they failed to describe the error that the check is designed to stop. For example 'a range check ensures that the number input is between 0 and 10', failing to say what would happen if say -4 or 24 was input. There also seems to be confusion between what a range check and a length check do.

Q.4 (a) (i) With all the Internet experience that the candidates have then ALL candidates should have come up with a suitable example of a hyperlink. All too often the candidates' example was too vague to warrant a mark and sometimes just did not relate to anything real.

(ii) Few candidates understood the concept of web page frames but instead they thought it was something that went round an image or a piece of text.

(b) Better answered than in previous years as most candidates were able to give one benefit.

Q.5 It was disappointing to see the number of candidates who did/could not name the Acts they were discussing or could not name them correctly, sic Data Misuse Act. Most candidates though gained half marks whilst fewer went on to discuss the consequences of offending against the Acts.

Q.6 (a) The majority of candidates thought that the question was asking about the use of computers in hospitals and ignored the words network and network manager. Many candidates failed to appreciate that much of the work of the network manager can either be done centrally or even remotely and consequently answers about, for example, backing up failed to note that it could be done centrally by the manager. Some candidates wrote about sharing printers possibly not understanding the word 'peripherals' which was in the question.

(b) A poorly answered question. The majority of candidates only had a vague idea of what an intranet was. Some regained a mark by giving an advantage to the hospital of having an intranet.

Q.7 (a) It was disappointing to see the number of candidates who did not understand what EFT stood for. Candidates often then went on about transferring money without appreciating that the money moves from one account to another.

(b) This was better answered and many candidates obtained half marks or more. Most knew what EPOS stood for but didn't then describe how it is used. Too many candidates thought that it was to do with buying goods online. Some did not read the question and gave advantages for the customer which they could have easily changed to advantages for the retailer but failed to do so. For example 'the customer has a shorter time in the queue' instead of stating that 'shorter queues mean that customers are happier and are therefore likely to return'.

Q.8 (a) Most candidates could outline three methods of computer based registration. Marks were lost by inadequately explaining the method. Just naming a method was not awarded a mark. Candidates also lost marks by not being able to give different disadvantages.

(b) A fairly well answered question, although some candidates wrote generally about computer use for no marks. Candidates sometimes did not match up their advantages and disadvantages to specific uses.

Q.9 (a) The definition often did not relate to a computer or software /program and hence did not gain a mark

(b) Generally a well answered question although some candidates wrote about 'scene of crash' investigations for no marks or were too vague in their responses.

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. Never-the-less there were still candidates who did not heed this advice and did not reference their work or did not display the formulas and consequently lost marks. All four parts require as in previous sessions for the 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. 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.

General Comments

Most Centres now seem to be aware of the requirements as regard to evidence and many make very helpful and supportive comments explaining why they awarded advanced marks. However, where moderators disagree with the Centre it is in generally the same areas as last year. Centres are advised to use exemplar material produced by WJEC as a guide.

Comments on Individual Sections

Analysis

Background. Again this was well done.

Identification of 3 documents
This has improved with most candidates now realising that they are only required to state the type and purpose of the three different types of documents.

Ethos or house style
Some candidates still describe colour schemes, fonts, etc, without analysing or explaining how this contributes to the 'ethos' or house style. However the majority of candidates are now trying to analysis what they see. A very few centres still do not relate this to the documents found and still describe the mission statement of the organisation copied from the internet.

Analysis of an organisation's documents
This has improved but is still the most troublesome section.

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 from both documents. One mark is for identifying the **data** on **both** paper documents. One mark is for identifying at least four tools and techniques on either one document or between both documents.
N.B.
- tools and techniques does **not** include fonts and fonts styles
- tools and techniques does **not** include clipart/logos unless some photo editing feature is identified
- identifying all three of bold, centre and underline counts as **only** one feature.

A screenshot or the actual document must be included and candidates have to **annotate/circle/arrow on the screenshot or actual document** at least four 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 two features were identified or where the same feature was identified twice. Most documents had features which could have been identified but were ignored.

Automated documents
This improved and many candidates actually included an existing automated document used by the organisation. The purpose, data and audience of an actual document **or a process which could be automated** must be described in detail. Some Centres gave full marks when candidates failed to describe or suggest in detail suitable merged fields or potential automated fields in the document.

Webpage or presentation
There was evidence of improvement in candidates detailed descriptions of the purpose, data and audience of an actual website or presentation or potential website or presentation. When analysing an existing or potential web page candidates are required to identify/annotate/circle/arrow at least four 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 four describe four different multimedia features but some Centre's still gave full marks. 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

Centres are to be congratulated on encouraging candidates to give clear evidence enabling moderators to support most assessment in this section. Many candidates still confused image or ethos or house style with the target audience or gave a general description. In order to gain the mark candidates need to explain **how** they are going to get over their chosen ethos or house style in the document, not just describe their colour scheme.

Only features which appear on the final printed leaflet should be given credit. Some candidates clearly show the construction of a header and footer or watermark but this does not appear on the final printed document and should not be credited.

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

Detailed design of the document
This was very much improved but it is still worth noting that:

- One mark is awarded for an outline layout with inherent page orientation and identifying which frames are text and which are for pictures.
- One mark is awarded for **details** of the **'data'** *both* text and graphics
- One mark is awarded for details of fonts and font sizes to be used
- One mark is awarded for details of at least **eight 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.

Use of basic features
Again this was well done but some omitted screenshot evidence showing the origin of two different sources of graphics they used. Many candidates produced a printed leaflet and a scanned one. They annotated their scans using arrows to show where they had used different features and this did help the moderator to detect them more quickly. **Both headers and footers** need to be present to gain the mark. Some candidates gave only a header or a footer and hence were not awarded the mark. Sometimes the footer was lost in the body of the text if margin sizes were not suitable or it was obscured by a large border and candidates could not be awarded any marks. It is also important to note that if candidates put in automatic pagination they gain a mark from the advanced section and something different is needed to claim the header and footer mark. There was often evidence of headers and footers being used in the final document but only appearing on one page, or there was evidence of construction but they did not appear on the final document.

Use of Advanced features

This was usually well done with clear evidence but for new centres it might be worth mentioning the following again. It would be helpful if centres would indicate on the IT2 mark sheet which advanced features have been used. Supporting evidence is absolutely essential here for the features used. **The features must appear on the final document not just in construction evidence.** The most popular techniques attempted by candidates included layering, watermarks, page or frame borders, line spacing and customised tables. 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 before and after screenshot evidence is given or candidates cannot be awarded the mark. Many candidates did not appear to 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 these are not be credited with a mark. *Customising tables* does not mean shading borders or cells, it needs to be cell merging or rotation of text within a cell to be credited.

Task 2: Automated document

It is worth noting that **any** spelling or grammar mistake in the database or the letter should be penalised. Candidates should be encouraged to spellcheck their final document, proof read it and in particular check for capital letter mistakes and basic grammatical errors. Candidates should also check that the content of the letter matches the stated purpose. Many of the mistakes seen this year were similar to last year. Most candidates did ensure they had the contact details and the date on the letter so that the it could be considered a suitable format for a professional letter. The comments made last year are applicable to this year and any new centres should note them.

Design of document

This was generally well done but candidates must remember to plan their **three** macros as part of their design work and identify the **mailmerged fields**. Just writing address block is not enough; they should add the names of 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.

Use of Basic Features

This was generally well done but Centres did award marks when there was a clear spelling or capital letter mistake or inconsistencies in the use of capital letters in titles. Candidates should also check for capital letter mistakes in the data from the database.

Use of Advanced features

This was well done but some candidates need to think about the 'professionalism' of their macros. Silly nonsense macros should not be credited and also macros which already exist on the toolbar **e.g. print macros and save macros** cannot gain credit. **Copy and paste macros** are still a problem; these are unacceptable as they will not work as part of a template. Please note that **unless the macro code is included,** no marks should be awarded for macros even if construction evidence is there.

Although improved, 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 the mailmerged template below. **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.

Task 3: Presentation

The evidence for this was generally very good. The main problem areas were 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. Some centres interpreted the latter multimedia mark as DTP features which is not acceptable for this mark.

Background style
Very varied and inventive and well done..

Animations and transitions using INTERNAL features of the software provided for candidates use
For new centres it might be useful to note that candidates doing web pages could use scrolling banners /leader boards/interactive galleries, etc, for animations. For transitions they can use rollover buttons or edit 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 image effects (e.g. thumbnails as illustrated by YouTube or Flickr. CS4 has a new feature called Web Photo Album. There is also an add-on called Lightbox which can emulate what you see on major websites). Evidence must be clearly provided and it should be understood that if a technique is used as a transition it can not repeated to count as an animation technique as well.

Use of Sound
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 storyboards was much improved but some did not put details of **timings and effects** used on their storyboard. It should be a storyboard for the movie not the animation. Candidates must produce their own original, individual video and apply effects; some gave very small or cropped screenshots so it was difficult to see the evidence. Candidates should be encouraged to annotate their evidence.

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

Evaluation
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. This section was a clear differentiator with a wide variety in the quality and quantity of candidates' answers.

Compression and storage techniques
This was very much improved. Candidates are expected to discuss in detail the relative merits of at least three different compression techniques they have used. They should identify and relate it to the files they have produced and justify their choice. Most candidates did discuss three different techniques but some did not identify their files nor did they consider alternatives and justify their choice.

A few centres still incorrectly awarded marks for:
- Zipped files; a description of how candidates zipped their files should not be given marks.
- Reducing text field length in the database as this is saving memory not compression.

IT3

Comments on Individual Questions

1. Too many candidates did not read the question and instead of concentrating on the differing needs of a novice and expert computer user, just regurgitated the general features of a good HCI. They were still then fortunately able to get some marks.

2. Most candidates were able to make a good attempt at this question but a number threw away marks by either not mentioning the actual disability or not matching up with how the HCI can help. Lack of mobility is usually a reference to someone not walking well rather than not being able to move their hands and arms.

3. Not very well answered with many candidates unable to describe what the term network topology meant and only describing a network or listing different topologies.

4. Most candidates could mention one or two factors and could develop one of them. Only the best candidates scored well on this question and gave enough detail/depth in their extensions.

5. Most candidates gained at least two marks but a number failed to gain more because they seemed to be answering the question about the difference between ring and star topologies not peer-to-peer versus client server.

6. Generally well answered with most gaining at least two marks.

7. Weaker candidates either couldn't give four guidelines or tended to give examples of the same guidelines and hence couldn't gain more than one or two marks.

8. Generally well answered with most gaining at least two marks. It is still disappointing to see some candidates not reading the question and giving answers like a website which is in the stem or not using correct terminology to describe the requirements.

9. Most candidates made a good attempt at this question but did lose some marks by either giving duplicate answers, e.g. business trading 24/7, shoppers shopping 24/7 or something as an advantage and a disadvantage.

10. To get the initial mark on a concern candidates needed to show why a parent should be concerned (consequence) and weaker candidates seemed to find this hard and just gave a number of bland points.

11. Most candidates could give two factors and develop one of them.

12. Most candidates tended only to get one mark for the description of FTP because they only talked about the transfer and weaker candidates lost further marks by not mentioning files and not being able to give a proper example and just being too vague.

13. Generally badly answered as candidates either did not understand what maintenance is and consequently could not describe why you would need to do maintenance or just mentioned the terms perfective, corrective or adaptive.

14. Better candidates scored well here as they understood the features of an effective MIS and could develop them. Weaker candidates just wanted to give advantages and disadvantages so gained few marks.

15.   Most candidates could write about tables and links and hence gain one mark.

16.   Generally well answered but I am still amazed at the number of candidates who either haven't a clue about a loan system or tables, which they would have needed for their coursework.

17.   Candidates found it a lot harder to give a full explanation of the term normalisation and the weaker candidates just described a relational database again.

18.   Not very well answered by a number of candidates as they got confused with distributed computing or were not detailed enough with their advantages/disadvantages.

19.   Fairly well answered but candidates tended to give the same bland consequence to each threat and did not write about three distinct threats.

20.   It was disappointing to see how many candidates did not understand the term operational procedure or gave different examples of the same procedure.

General Comments

Most of the samples submitted showed that centres have a clear understanding of the requirements of the specification and have heeded the advice given in previous *Examiner Reports* and in past moderator reports. Most Centres have very much improved the presentation of the evidence required enabling moderators to support their assessments.

However, whilst moderating two general themes became apparent:
- Complacency. Some centres who have previously been accurate allowed 'slips' in things like reasons for queries or detailed design of reports. Centres should ensure internal standardisation takes place.
- Wrong messages. Despite previous emphasis that single table queries need criteria some clusters of centres suddenly decided they were going to do sorts instead, even though they had not done so in the past.

Although it only appeared in two centres, it is worth noting that the project is in the following distinct sections
- Analysis of User requirements
- Design
- Implementation
- Testing
- User documentation
- Evaluation

Each section should be separate and distinct.

Some centres ran all sections into one by giving user requirements for the queries, then designing, implementing, testing, creating user documentation and evaluating them.
They then moved onto the next feature and followed the same pattern. This approach **is not suitable.** It was very difficult to decipher what was going on as no supporting comments were available from the centres. As many as three different moderators had to look at the work in order to decipher what was going on and avoid heavy scaling. Implementation looked as though it was in the design section and this was not acceptable and some candidates missed out the design or it was too sketchy, as they only annotated the implemented sections. Some of the presentation of testing and user documentation merged into one so it could only be given marks for one or the other but not both.

It is worth noting that implemented features are not design. **No marks can be awarded under design for implemented features.**

It would be good practise for all centres, whether new or old, to revisit the advice given in examiners reports or to review exemplar material and their commentaries which also point out the problem areas.

Comments on Individual Sections

Analysis and user requirements
Centres are beginning to be more demanding in the level of detail required for full marks at A2. Some of the problems we saw last year were less evident 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. Hardware must be a complete list including backup devices, monitors, printers, etc, or candidates can not be awarded the mark. Consideration of user interface requirements improved this year 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 of queries
The biggest problem this year was centres not sticking to the specification and again a cluster effect seems to be evident.

Candidates are required to design, implement, test and document:
- two queries which use a single table and which **both have criteria with a realistic reason. There should NOT be a sort**
- one query which uses linked tables and which **has criteria with a realistic reason**
- one query which uses linked tables and which has **NO** criteria **with a realistic reason**
  (The most common uses of this could be to select only certain fields for a report, to sort data and to produce a calculation).
- one query which uses a **parameter search with a realistic reason**. *(This could be on a single or linked tables depending upon the reason).*
- one action query (append/delete/update) **with a realistic reason**.

Although reasons have improved in some centres they are still descriptions of what the query does. Reasons for queries could be strengthened by including fieldnames, operators and criteria where required. Where candidates do a similar topic, e.g. hotels, they should be encouraged to design different queries.

Design of validation
This was much improved but some centres still need to note:
- two different types of validation techniques are required not two range checks
- **drop down list and input mask wizards provided by Access are not acceptable** as suitable validation techniques for A2. Candidates should not be discouraged from using such techniques but they cannot be awarded marks in the validation section. Candidates could use range checks, OR, date validation or **original** input masks.
- validation using input mask wizards should **not** be awarded any marks in **design implementation or testing.**
- if a candidate does two range checks the second range check should **not** be awarded any marks in **design, implementation or testing.**

Design of reports
Again improved but centres should note:
- Candidates should design and implement **original** headers and 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() 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
Centres should note:
- Timers / =Now() etc / =Date() by themselves are not regarded as sufficiently complex to count as an automated routine.
- Candidates should not have implemented solutions as their design

Implementation
Most candidates gave good evidence of implementation.

Centres should note:
- Candidates should be encouraged to screenshot or print out their tables of test data to prove that their queries work. I have seen a few pieces of work where there was only traceable evidence of one record.
- Reports must have original headers and footers.

- Suitable test data should be used to show sorted and grouped data on the final report not just construction evidence. This should be evident in the data in the final report not just in construction. Reports with only one record cannot show evidence that sorting and grouping worked.
- Calculated fields in the report should total up data from <u>more than one record.</u>
- Candidates should create their own macros not use the wizards on buttons in forms.
- Splash screens and security VB could be more clearly separated out as two different routines.
- The new version of Access caused problems in some centres 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. Most centres did this but some just added another macro without any original editing.

Testing

Most candidates had good, detailed test plans.

Centres should note:
- There were still some candidates giving no evidence of the dialogue box and hence the search criteria in testing the parameter query.
- Calculation in a 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). 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.

User documentation

Centres should note:
- In user documentation candidates should show the before and after of adding a record; editing a record and deleting a record. It is not enough to say click a button when describing how to add, edit, delete data and run different queries. Users do not need to know how to construct a query so there is no need for evidence of queries in design view. In 'User documentation' we should see evidence of how each of the different types of query is executed.
- Disaster recovery needs recovery instructions not just backup. This section should be extended to include a detailed description of how the database can be recovered and reinstalled.

Evaluation

Centres are now generally demanding an evaluation reflecting A2 standard. Candidates are responding by being more critical and analytical. However it still tends to be an area where some centres are slightly over generous in awarding marks for descriptive accounts.

WJEC
245 Western Avenue
Cardiff CF5 2YX
Tel No 029 2026 5000
Fax 029 2057 5994
E-mail: exams@wjec.co.uk
website: www.wjec.co.uk/exams.html