



GCSE EXAMINERS' REPORTS

**GCSE (NEW)
ICT**

SUMMER 2019

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INFORMATION AND COMMUNICATION TECHNOLOGY

GCSE (NEW)

Summer 2019

Unit 1 – Understanding ICT

General Comments

There was a significant reduction in the number of entries for this unit now that it is only available in Wales.

Statistical information shows that it has similar accessibility to the 2019 winter paper.

Comments on individual questions/sections

- Q.1**
- (a) The question was very well answered by the majority of candidates.
 - (b) This question was well answered by many candidates.
 - (c) Quite poorly answered by the majority of candidates.
 - (d) Tracking and kerning is a new topic that has been added to the new strengthened specification and was quite poorly answered by the majority of candidates.
 - (e) This question was well answered by the majority of candidates. Candidates lost marks by giving different software applications and uses rather than Desktop Publishing documents and uses.
- Q.2** This question was very well answered by most candidates with many candidates gaining all available marks. The tick box format allowed the question to be accessible to all candidates.
- Q.3**
- (a) Well answered by most candidates.
 - (b) Many candidates gained one of the available two marks here for stating that instant messages are received instantly in real time.
- Q.4**
- (a) This question was well answered by most candidates. Most candidates were able to correctly identify that there were eight records in the database.
 - (b) This question was poorly answered by many candidates as they were repeating fields already in the database or repeating data types already used in the database.
 - (c) This question was mostly well answered by candidates.
 - (d) This question was poorly answered by many candidates and many candidates were unable to give the correct search criteria for the wildcard query.

- Q.5** (a) Very well answered by all candidates.
- (b) Extremely well answered by all candidates.
- (c) Fairly well answered by many candidates.
- (d) Quite poorly answered by most candidates. Most candidates were able to achieve at least one mark for giving the correct formula although many candidates to explain why absolute cell referencing had been used.
- (e) Poorly answered by most candidates due to candidates referencing the wrong cell and also leaving out the correct syntax – speech marks and brackets mainly.
- (f) Poorly answered by the majority of candidates.
- Q.6** (a) Fairly well answered, although many candidates did confuse uses of a MIS with advantages of a MIS. Marks were also lost due to candidates giving answers excluded from the question.
- (b) Fairly well answered by most candidates.
- Q.7** (a) A question from the new strengthened specification. Fairly well answered by many candidates due to the accessible tick box format.
- (b) For this question, candidates mostly lost marks due to repeating the features of the MOOC already listed in the table above.
- Q.8** This question was well answered with most candidates giving at least two out of three correct ICT based sources of information.
- Q.9** (a) This question was poorly answered with many candidates describing braille keyboards rather than a concept keyboard use.
- (b) Well answered by the majority of candidates.
- (c) Many candidates were able to gain at least one mark on this question for naming the specialist software. Marks were lost where candidates rewrote the question as their answer.
- Q.10** (a) Well answered with many candidates achieving at least two correct marks for identifying the two items of data. Where marks were lost was where candidates incorrectly gave validation methods instead of verification methods.
- (b) Many candidates were able to achieve one mark out of the two available for stating that once a seat has been booked it cannot be booked again and it will be removed from the system.
- (c) This question was attempted by most candidates and fairly well answered.

Q.11 Many candidates attempted this question; however, the majority of candidates poorly answered it. Marks were lost due to candidates repeating the fact that downloaded music and films could be shared. Popular correct answers included that the film/music industry would lose money due to illegal downloading. Some great answers were seen regarding screen recording devices in the cinema.

Q.12 Many candidates were able to give two different input devices and one output device of augmented and virtual reality. Many candidates achieved one of the two available marks for different uses of augmented and virtual reality. The most popular use given was gaming, however some great answers included filters and virtual furniture for home decoration. The advantages and disadvantages of augmented reality and virtual reality were fairly well answered.

Some very good planning techniques and responses were seen on this extended writing question, and in some cases, answers were impressive and well above the required GCSE standard.

Summary of key points

- A number of the new topics were poorly answered indicating that, in some cases, centres had not reviewed the changes in the strengthened specification.
- Some candidates are not wholly reading questions and giving answers excluded by the question.
- The standard of written extended responses continues to improve.

INFORMATION AND COMMUNICATION TECHNOLOGY

GCSE (NEW)

Summer 2019

Unit 2 – Solving Problems with ICT

General Comments

Centres had encouraged their candidates to store their evidence in one document as they went along. Centres could easily turn the evidence into one PDF document for uploading to the Surpass system. Where centres had complied with this requirement, the moderation process tended to be straightforward. Candidates either evidenced their tasks in a single DTP document or presentation software which was then converted to a PDF before uploading.

Centres should not try to upload all of the candidates work stored in several folders. This is time consuming and often takes up too much memory. Centres sometimes had to be contacted to send work directly to moderators to avoid harsh scaling. This delayed the moderation process. It is the responsibility of the centre to provide the evidence in the required format.

Most centres have a good understanding of the requirements of the controlled test and most assessed accurately.

There were two live tests:

- Sports for All
- Personalised

Some centres did an earlier test, this can lead to a loss of credit and is unfair to candidates.

Centres that used the one sheet marking grid were generally more accurate and moderators could clearly see where marks had been awarded. This is downloadable from the WJEC website.

The main problems found by moderators were not new and were similar to previous years.

Comments on individual questions/sections

FILE HANDLING

Most centres provided good evidence but some areas needs highlighting.

- Evidence of backup folders on an external device. Screenshots should show the end process not just the copying. The screenshot must show the root folder not just one file saved on a USB or external device/different network drive.
- Demonstrate careful version management. This applies to several files **not including** the draft and final DTP / presentation documents they are already required to do.
- There should be evidence of two different folder operations e.g. copy, move.

RESEARCH AND DATA COLLECTION

This is still problematic for some centres.

- Sources logs should have more than 2 different types of links. Candidates should be encouraged to show about 4 links at least with a variety of types e.g. some links to websites and some to pictures.
- For full marks in searching the internet, there is a minimum of three screenshots required containing searches and their results:
 1. 1 key word search using a search engine
 2. A second keyword search for a different purpose using a search engine.
 3. 1 URL search **showing the keyword search box empty** and typing the URL address directly into the address bar. This is generally misunderstood with screenshots of pages of links. There should be no produced links on this screenshot.
- Blank questionnaires should not be awarded marks. Questionnaires must be filled in to show they have acquired information.
- Emails should be to some external source and not the peer group as in the later section. They should also include a reply with some information in before they can be awarded a mark.

EMAIL

Evidence has greatly improved but in a few cases, there were similar problem areas to last year.

- Email activities must be fit for purpose as specified by the controlled task. Centres show screenshots of candidates doing email activities but have no content which has any bearing on the stated task. Therefore, they should not be awarded any marks.
- Again, some moderators complained that screenshots were so small as to make them hard to understand. If the moderator cannot read the content, then they cannot support the marks awarded by the Centre.
- The mark for using a contacts list is not for selecting a contact; It is for using a contacts list to add and amend and delete entries. All three must be evidenced.
- Attachments must be opened.

COMMUNICATING INFORMATION

Formative evaluation: (8 marks)

Centres should encourage candidates to provide more detailed and relevant comments to improve their work. As in previous years the quality of the formative evaluations in the emails tended to be of a general nature and would do little to help the candidate show they had responded to those comments in improving their individual work.

Many marks cannot be supported because the comment is of a general nature and would do little to help the candidate improve their individual mark. Comments such as the following should not be awarded a mark:

- add more pictures
- change colour
- use bigger text
- I like your work

Comments from others and own comments to improve the work.

Some centres have significantly improved the quality of response but in general, comments were again very weak. Such general comments are not worthy of a mark.

Drafts and final documents

Although assessment was generally accurate it is still worth noting that marks can only be awarded if the feature appears on the final document.

Evidence could be strengthened for:

- insert, crop or resize and position, an image fit for purpose needs, a before and after screenshot and it would be helpful if these could be annotated by the candidate.
- on a web page or in a presentation, sequence a set of events needs a screenshot showing the selected custom animation if submitted on paper.
- use a **second** different sources for data. Some centres used original animations or sound but evidence of these was needed.

MODELLING

Candidates should be encouraged to produce more original solutions.

Please note that the requirements of the controlled test changes as the task does.

Candidates need to show their spreadsheets in formula view as well as data view otherwise marks for formulae cannot be supported.

All formulae used should be included in the *explanation*.

Although improved it is probably still worth noting that the marking of '*Explanation of formulas/function/ feature*' tended to be generous.

Please use the following for guidance:

- Sum is used to add up the range of numbers = 0 mark band
- Sum(B2:D2) is used to give the total points gained = 1 mark band
- Sum(B2:D2) is used to give the total points gained by adding up the points given for goals, assists and appearance = 2 mark band

'What if' investigations

This is still a major problem area. These are some of the most disagreed two marks in the test.

'What if' investigations need to have a reason for undertaking them and a conclusion.

Some candidates just say '*what if I change this data?*'. Another wrong approach is '*I predict the total will go up if I change the price*'. Candidates are required to say why they are changing the data i.e. why is there a price change? If the candidate does not give a reason why they have changed the data, then they should not get a mark. In addition to qualify for this mark they must show and describe the impact/ knock on effect of the changes they have made.

This also applies to the investigation changing formula.

Advanced features

Sports for all required candidates to do a mailmerge or print macro which meant only 3 other advanced marks were available in Modelling. Some candidate chose 4 advanced features and did not do a macro and hence lost a mark. The code for the macro should be included in their evidence.

Personalised allowed them to choose any four advanced features in modelling.

DATA HANDLING

Basic features

This was generally accurately marked

Advanced features

Candidates were asked to use the 'Sportstrip' database to produce a *report* showing the itinerary for each booking for the sporting event. *Use this database to produce a report showing the itinerary for each booking for the sporting event. 1 mark.* This meant they could only choose three other advanced features.

The *Personalised* database of Orders did not have such restrictions and candidates could choose four advanced features to undertake.

The following should **have reasons why the data produced** as a result of these operations is needed. If there are no stated reasons for the search or sort, no marks should be given.

- use logical operators / wild card/parameter search must have a reason why the output is required
- sort on multiple fields must have a reason why the output is required

Calculations must be shown in design view, so the formula can be seen.

EVALUATION

The marks for the formative evaluation earlier (8 marks) are added to the seven marks for the summative evaluation on the banded IT2 form.

Summative evaluation (7 marks)

The marking of this section has improved but some centres have given marks for what is effectively a list of what they have done, rather than a critical evaluation.

Candidates are expected to write a critical evaluation on each of the following not just make one brief comment on each.

The summative evaluation should cover all of the following:

- analysis of data and information used in modelling (*Data/formulas graphs*)
- analysis of data and information used in data handling (*Keyfield extra fields+ data validation*)
- concrete suggestions for improvements (*modelling and data handling*)
- evaluation of other tools + techniques (*all tasks: Final choice of DTP features/ investigations/ sorts/ searches / etc*)
- review of feedback (*Just a statement saying they considered improvement*)
- analysis of research methods/ data collected/data used (*Internet/ paper sources/email*)
- evaluation of working practice (*data protection/security/health and safety*).

Summary of key points

Contained within comments on individual questions/section (as above)

INFORMATION AND COMMUNICATION TECHNOLOGY

GCSE (NEW)

Summer 2019

Unit 3 – ICT in Organisations

General Comments

There was a reduction in the number of entries for this unit now that it is only available in Wales.

Statistical information shows that it has similar accessibility to the 2019 winter paper and the previous legacy specification examination sat in 2018.

There was a significant increase in the number of Welsh medium entries.

Comments on individual questions/sections

- Q.1** (a) All candidates attempted this question and almost all candidates did well.
- (b) Almost all candidates attempted this question and most candidates attained two marks. Marks were generally lost due to no terminators.
- Q.2** (a) All candidates attempted this question and almost all candidates did well.
- (b) (i) All candidates attempted this question and almost all candidates did well.
- (ii) Most candidates attained a mark. A minority of candidates did not attain for stating that it was a type of verification again or for saying it ensures the e-mail address is correct.
- Q.3** (a) Almost all candidates attempted this question and almost all candidates did well.
- (b) Generally answered well. Most candidates were able to give compression as a method. A minority of candidates stated things such as “faster internet connection” although the question asked for ways the image could be prepared.
- Q.4** (a) Generally well answered. Most candidates stated a motor or an actuator to attain a mark.
- (b) Poorly answered. With the stem of the question including one reason, only a minority of candidates were able to attain full marks.
- Q.5** (a) Answered well by most candidates.

- (b) Generally well answered but some candidates lost marks due to giving the same advantage for both formats.
- (c) Generally well answered.
- Q.6** (a) (i) Generally well answered although a minority of candidates gave advantages for the employee or stated a number of that were all connected to cost.
- (ii) Answered well by a minority. Answers tended to be vague.
- (b) The majority of candidates were able to attain some marks. A minority were only able to attain full marks.
- Q.7** (a) (i) Generally well answered.
- (ii) Poorly answered. A small minority of the candidates could state a method of data capture.
- (b) Answered well by the majority of candidates.
- Q.8** (a) Generally well answered.
- (b) (i) Answered well by the majority of candidates.
- (ii) Answered well by the minority of candidates. Most candidates were able to give one interactive component.
- Q.9** (a) Generally well answered. Where some candidates lost marks, it was for stating payment methods that were in the stem of the question or not available for use at a POS.
- (b) The majority of candidates were able to pick up some marks with a minority able to show a full understanding of how an automatic stock control system works.
- Q.10** Most candidates attempted this question and gained some marks. Most candidates were able to name some HCI's and give advantages and disadvantages. Some candidates lost marks for giving an advantage for one type of HCI and then giving the opposite and a disadvantage of another type of HCI.

Summary of key points

- A number of the new topics were poorly answered indicating that, in some cases, centres had not reviewed the changes in the strengthened specification.
- Some candidates are not wholly reading questions and giving answers excluded by the question.

INFORMATION AND COMMUNICATION TECHNOLOGY

GCSE (NEW)

Summer 2019

Unit 4 – Developing Multimedia ICT Solutions

General Comments

It is recommended that centres encourage candidates to upload (to the Surpass system), one PDF containing all the required evidence and also their final published presentation or website. It does require centres to take a more systematic approach to recording evidence as the candidates create it.

It is recommended that candidates should submit a single evidence report of their work to support the skills they are trying to display. The report containing screenshots of features is essential. These need not be a complete record of every little step a candidate took but might provide sufficient evidence of features used.

Some centres uploaded every folder and file the candidate had produced or used. They had no structure and the required evidence was often not in the named folder. This can result in candidates being moderated harshly.

When the candidates folder containing every picture that had researched from the internet exceeded 150 Mb, then the work of the candidates could not be downloaded. Centres should ensure that only relevant information is included in the candidates' evidence. Raw files of music etc are not needed if the evidence is presented properly.

Centres should ensure all the candidates' relevant work is uploaded, as centres had to be contacted to send candidate work on USB or disc to ensure fair moderation. This considerably slowed down the moderation process.

Centres should ensure features awarded marks are embedded in their presentations etc. Some candidates only gave a shortcut to the website, presentation or animation which was stored on the school server and hence could not be accessed by the moderator.

Moderators should not be required to download additional software in order to open candidates work e.g. Serif. Please ensure that work is presented in either PDF or Office formats where applicable.

Centres must take steps to ensure all features awarded marks are clearly evidenced and appear on the pages of their final solution.

Many of the comments from last year are applicable this year.

Comments on individual questions/sections

ORGANISATION OF FOLDERS AND FILES

Evidence of backup folders on an external device

Screenshots should show the end process not just copying. The screenshot must show the root folder and not just one file saved on a USB or external device/different network drive.

Demonstrate careful version management

This applies to the several files not just one file.

Sources log

This came in many forms and was generally fine. NB candidates should be encouraged to have at least 4 different links and not just all picture links. There must be some website links as well.

RESEARCH AND DESIGN

Analysis of websites

Describe the target audience of each

Again, this was generally well done. Candidates should be encouraged to be more specific. General phrases like customers / people are too vague. They need to say what age group/ specific group of people etc.

Compare and contrast multimedia or web features

Again, this is the main problem area with the work that candidates submit.

- Candidates must label the multimedia features on the two chosen websites. Candidates should clearly identify them on the website by drawing an arrow to them **not** just listing them as a set of bullet points. Some centres set up a table and had pupils copy and paste a screenshot of the feature into the table and label it.
- Candidates should not identify DTP features/data/ pictures/logos for this section.
- Candidates should identify multimedia e.g. flash animation/movies/podcasts etc or web features hyperlinks/hotspots/shopping trolleys etc.

Please note as this can be a major issue for centres who are out of tolerance. If they had not labelled the multimedia or navigation features in the ways outlined above, then they should not be awarded up to eight marks.

Having identified the features, for maximum marks, they had to compare four similarities and four differences between the features on the websites.

Identify file type and file size of two different features on the websites

Again, this section was not done well. They could be on one website, they do not need two on each site.

- They must also **identify or indicate the size of the file** (in memory/pixels/on screen measurements /percentage of template etc.) **as well as the type.**
- They must be **different types - not 2 jpegs**

Research individual presentation or web page

This is a design phase and there must be evidence of planning and design. No design marks can be given for an implemented system i.e. it cannot be inherent.

Candidates were expected to write a paragraph about the purpose of their web page or presentation. This should include purpose and target audience

Candidates are expected to explain how or why their solution is fit for purpose and audience. They should give an outline, describe the content of each slide or web page.

e.g.

Page/slide 1 contains information on.....

Page/slide 2 contains information on.....

Etc. for 6 pages or slides.

Candidates were expected to hand draw the design of a master page and scan it in or use a paint type package **or** use DTP features to design in outline their master page.

- 1 mark basic layout
- 1 mark adding navigation features to be used

An implemented master slide is not design.

Collection and design of mood colours/mood board

Colours or images alone should not be awarded a mark.

Some Centres gave marks where only imagery was identified.

Moodboards must consist of at least two out of the three of – images/ colour schemes / fonts.

IMPLEMENTATION

Only features present on the webpages or presentation should be awarded marks.

The basic requirements of the specification are as follows.

In outline candidates are required to:

TEMPLATE

- Create an original master page or master slide with navigation features. They should not use a library of templates.
- Enter text fit for purpose on each slide or web page (to a max of 6)
Some Centres gave marks when there was no suitable text on the page only pictures.

GRAPHICS

- Create **two discrete original** images, one simple and the other using at least three layers. The simple image **cannot** form part of the complex one.
- Illustrate the techniques used to create each range of software tools.
Sometimes it was clear what tools they used (shapes/fill/text) but other times moderators could not support the centre marks. It would be useful if pupils annotated their images to say what they used some unusual tools they should provide construction evidence e.g. lighting effects, removal of backgrounds etc.
- Consider compression choices for both. This is not just saving the file. It is not showing a folder with different saved formats of their image. There must be a discussion of the merits of at least two compression techniques and a justification of their chosen technique.

- Most of this is well done but a few Centres incorrectly double counted one feature especially with regard to images. I repeat the following from last year's report. *'Some candidates only produce one image built up from a simple one. This is still one image and therefore should not be awarded two marks.'*

ANIMATION

An animation or animated movie is not using still photographs to make an animation. An animated movie is not dropping the whole PowerPoint presentation into a movie package. It must be separate and have a distinct purpose.

- Create a detailed storyboard for a first original animation with timings.
This is not an implemented system and there should be no screenshots of their animation. They should add timings/frame rate for the second mark.
- Create **the first** original animation and provide evidence of features used to create it. Consider timings and frame rate.
- Create **a second different** animated banner.
Two different animations are required.

Some centres created an animated banner combining graphics, text and counted this as both their main animation and their banner; this is not acceptable. An animation which is a banner cannot be counted both as an animated banner and an original animation. Animations need clear evidence of features used and this is up to the candidate to provide. Many moderators struggled to see use of features for which the centre had awarded marks.

ADVANCED FEATURES

Complex animations require complex movement not just a car moving straight across six frames.

Many centres misunderstood the backdrop mark in basic features to that in advanced features.

- In the basic features there is a background which does not move.
- In the advanced features the **background moves as well as the animation** in front of it.
- Complex layering means there are animations on top of animations not still backgrounds on top of still backgrounds.
- Complex looping means individual items in an animation have a different looping cycle and not just the basic looping of replaying the whole animation in a loop.

SOUND

- Use and manipulate sound files. They can do two extra basic edits for the extra basic marks or do one basic edit and consider the compression of their sound file.
- Use other advanced features can be used to enhance the sound and are generally well evidenced.

EVALUATION

Teacher comments would be useful in describing where they awarded the marks. Most centres seem to be more realistic in their assessment. However critical review and a discussion of hosting is still poor. Many evaluations are still just a running commentary of what they did or what then used.

Evaluations should be a critical analysis of the good points and weak points in their solutions. They should suggest concrete future developments, not just say add more pictures, add a video, add another animation etc.

Again, some candidates were given full marks when some of the main sections were not covered e.g. how to publish/host their presentation or website to the web. They tend to talk only about compression.

For full marks, **all** of the following sections have to be covered:

Evaluation of solution: (website or presentation/ images/ sound /animations movies data)

- description of the suitability and effectiveness of the features analysed
- evaluation of tools and techniques used
- justification of choice of image, movies, sound and animation optimisation

Critical analysis and problem solving:

- suggestions for improvement
- review of feedback given and received
- comments on modifications made

Publication:

- consideration of download/upload times and file size (compression/optimisation)
- consideration of output to the web (hosting)

Summary evaluation:

- evaluation of effectiveness of final solution (fit for purpose?)
- evaluation of working practice (research/ organisation /safe working).

Summary of key points

Contained within comments on individual questions/section (as above)



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