



GENERAL CERTIFICATE OF SECONDARY EDUCATION  
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# EXAMINERS' REPORTS

## INFORMATION AND COMMUNICATION TECHNOLOGY

SUMMER 2008

## **Statistical Information**

### **GCSE**

The Examiners' 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. As well as the marks achieved by individual candidates, the following information can be obtained from these printouts:

*For each component:* the maximum mark, aggregation factor, mean mark and standard deviation of marks obtained by *all* candidates entered for the examination.

*For the subject or option:* the total entry and the lowest mark needed for the award of each grade.

### ***Annual Statistical Report***

Other information on a centre basis is provided when results are issued. The annual *Statistical Report* (issued in the second half of the Autumn Term) gives overall outcomes of all examinations administered by WJEC.

# INFORMATION & COMMUNICATION TECHNOLOGY

## General Certificate of Secondary Education 2008

*Chair of Examiners:* Dr. Gwynne Jones  
*Chief Examiner:* Mr. Warren Davies  
*Principal Examiner:* Mrs. Noreen Kay

### Statistical Information

As noted on the previous page, details of statistical outcomes for this year's examinations may be found in other documents provided for centres, but for convenience the lowest mark for each grade at *component* level is presented below.

### Component Grade Points

Grade	Portfolio	Project	Paper 1 Foundation	Paper 1 Higher	Paper 2 Foundation	Paper 2 Higher
<b>A*</b>	<b>59</b>	<b>56</b>		<b>70</b>		<b>89</b>
<b>A</b>	<b>52</b>	<b>50</b>		<b>63</b>		<b>81</b>
<b>B</b>	<b>45</b>	<b>44</b>		<b>56</b>		<b>73</b>
<b>C</b>	<b>39</b>	<b>38</b>	<b>48</b>	<b>49</b>	<b>47</b>	<b>65</b>
<b>D</b>	<b>33</b>	<b>32</b>	<b>41</b>	<b>34</b>	<b>41</b>	<b>49</b>
<b>E</b>	<b>27</b>	<b>26</b>	<b>36</b>	<b>26</b>	<b>36</b>	<b>41</b>
<b>F</b>	<b>21</b>	<b>21</b>	<b>31</b>		<b>31</b>	
<b>G</b>	<b>15</b>	<b>16</b>	<b>26</b>		<b>26</b>	
<b>Max. Mark</b>	<b>63</b>	<b>63</b>	<b>60</b>	<b>80</b>	<b>60</b>	<b>100</b>

**GCSE Short Course  
2008  
Chief Examiners Report**

**Examination Papers**

**Paper 1 Foundation Tier**

***General comment***

Again it is evident that candidates are not trained in writing examination answers. In order to gain a grade C candidates are expected to evaluate and be able to use a reasonable amount of technical language not just '*easier*' and '*faster*'.

Candidates were entered into the correct tier and the paper seemed very accessible to most candidates. However very few candidates gained marks in the top band which would indicate that some less able candidates were entered for the Higher Tier. Most candidates attempted all questions.

**Questions**

- Q.1 (a) Very well answered.
- (b) This format proved very successful with candidates avoiding common mistakes.
- (c) Quite well answered. However candidates gave similar wrong answers as highlighted in many previous reports and at INSET e.g. 'fonts', Note they also said 'border' but to gain the mark they had to indicate in some way that the border had been changed.
- (d) Well answered.
- (e) A standard question which again was not well answered by the weaker candidates. They gave types of documents not software; they used brand names or simply left it blank.
- Q.2 (a) Surprisingly candidates found this question difficult and many could not differentiate between input and output devices.
- (b) Again most candidates gained one mark but very few gained two marks.
- (c) Only the better candidates gained two marks with many ticking '*price*'.
- (d) Very well answered.
- (e) This was less well answered than in the past. A straightforward standard question should not have been difficult but answers were vague and poorly expressed.
- Q.3 (a) Many candidates did not know which were fields and counted the number of cells. Only the more able answered this correctly.
- (b) Well answered.

- (c) Only the more able answered this correctly. This type of question is standard and one could expect candidates to have been trained to answer them correctly but very few showed evidence of this. Candidates could not identify the field or the search criteria revealing a lack of understanding of their coursework.
- (d) This was considered to be a harder question than the previous one but candidates did very well.
- (e) Very well answered.
- Q.4 (a) Very well answered.
- (b) Well answered by most candidates.
- (c) Many candidates did try to answer this question but only the more able gave a correct formula. The commonest mistake was to include income in costs.
- (d) Most candidates identified one feature but very few identified two.
- (e) Very well answered.
- (f) Candidates struggled to answer this type of evaluation question on this Tier and resorted to vague phrases such as '*can do sums for you.*' This acted as a good differentiator for the C grade candidate.
- Q.5 (a) Well answered.
- (b) Well answered.
- Q.6 (a) Well answered using this format.
- (b) Very well answered.
- Q.7 (a) (i) Well answered but weaker candidates found it difficult to express themselves clearly.
- (a) (ii) Very poorly answered with most candidates giving '*Credit card no.*' This acted as a good differentiator for the C grade candidate.
- (b) Very well answered.
- (c) Well answered with candidates remembering to put in a process e.g. top up a mobile phone, get a balance, etc.
- Q.8 (a) This was a standard question which candidates in the past have done well on but few candidates could give a definition of a network this year.
- (b) (i) Surprisingly weaker candidates could not give a definition of email.
- (b) (ii) Not that well answered with many candidates gave very vague answers such as '*info on school.*'
- (c) Most candidates either got two marks or no marks because they misread the question.

- (d) Very well answered.
- Q.9 (a) Any question on GUI's acts as a differentiator and this was no exception. Most candidates did not understand the features of GUIs.
- (b) Well answered.
- (c) Most candidates answered this and most did well but vague answers such as '*carry it around*' received no marks.
- (d) Well answered but a common wrong answer was '*electrocution*'.
- (e) Well answered but vague answers such as '*talk to strangers*' did not imply danger.

## Paper 1 Higher Tier

### General comment

There was evidence of weaker candidates being entered for the Higher Tier. These candidates would have performed better on the Foundation Tier, however, most candidates attempted all questions.

### Questions

- Q.1 (a) Very well answered but candidates had to indicate there was some change to the border.
- (b) Generally well answered but some candidates give brand names. Weaker candidates tended to give vague answers such as store a list of goods to be sold in a spreadsheet. Spreadsheet answers require some idea of calculation or outputs from calculations.
- Q.2. (a) (b) Very well answered by better candidates but weaker ones could only guess.
- (a) Very well answered.
- (b) Not well answered. This is not an uncommon question but it is clear that some Centres do not prepare candidates in sufficient depth.
- (c) This question is not well answered despite trying a layout which would hopefully lead them to the answer and avoid the common mistakes of previous years. Given that candidates do so well on Information Handling coursework it is difficult to understand why they cannot apply their knowledge in questions such as this. Fundamental mistakes such as not identifying the correct field are common. They do not understand logical operators and make mistakes copying the search criteria.
- Q.3 (d) Quite well answered but no more so than on the Foundation Tier.
- (e) (i) Not well answered. Most candidates failed to identify the mistake.
- (e) (ii) This type of extended answer will be a feature of future examinations. However even the better candidates had difficulty in applying the advantages to the scenario set. Weaker candidates resorted to vague generalities such as '*faster*'.

- Q.4 (a) 4 (b) Well answered but even on this Tier some candidates got them mixed up.
- (c) The better candidates did get two marks but weaker candidates still ticked price.
- (d) (i) Well answered. Most candidates remembered to give a process.
- (d) (ii) Most candidates could get one mark but better candidates did get all three marks on this question.
- Q.5 (a) Very well answered.
- (b) Very well answered.
- (c) Quite well answered but even on this Tier many candidates only got one correct response.
- (d) There were better responses from candidates on this Tier with most getting at least one mark. The better candidates used clear technical language.
- Q.6 (a) Very well answered.
- (b) Well answered but poor literacy skills and vague answers lost candidates marks, e.g. *'can see everything'* or an unqualified *'cheaper'*.
- (c) Very well answered.
- Q.7 (a) Most candidates attempted a definition but they forgot to mention it was a *'program'* or *'software'*,
- (b) Some candidates repeated *'can do what ifs'* in the definition (which was condoned), then repeated it as an advantage, but it could only be accepted once. Only the better candidates realised the question asked for at least one disadvantage as well.
- Q.8 (a) Very well answered.
- (b) Very well answered.
- (c) (i) Well answered.
- (c) (ii) Not well answered. Candidates did not know about data encoded in the magnetic strip.

- (d) This acted as a very good differentiator. Weaker candidates gave shallow or very general answers and did not relate them to jobs in the bank.
- Q.9 (a) Quite well answered but even on this Tier there were some poor responses to this standard question.
- (b) i and 9 (b) ii The answers on this Tier were more specific and detailed.
- (c) Only the better candidates read the question carefully and gave rules for creating passwords not general usage of passwords.
- Q.10 (a) Although this was better answered than the Foundation Tier it is surprising how many Higher Tier candidates do not understand the features of a GUI.
- (b) Well answered.
- (c) Well answered.
- (d) Candidates could give one 'danger' but fell into the trap of giving crimes which were asked for in the next question. Many repeated the preventative measure rather than giving a different one.
- Q.11 (a) Well answered.
- (b) Many candidates only gained two marks because they did not give extended answers. They tended to repeat examples of the same thing e.g. two occurrences of accidental destruction and the same preventative measure. The better candidates clearly showed their breadth of knowledge.

## **Coursework Portfolio**

### **General Comments**

There was a wide variety of work presented for moderation. In addition to some very impressive portfolios there were also some very weak ones.

With many more candidates doing Short Course there seemed to be a lot of teacher led tasks with little scope for more able candidates to show differentiation. There was evidence that teachers tend to mark the task rather than the evidence of candidates work and made the assumption that the candidate has provided evidence of the work undertaken when no evidence exists. This can lead to a varied moderation pattern that could lead to scaling of centre marks. It would be a good development to see more able pupils undertake some individual work in future.

There was some evidence that Centres have been able to use the ICT short course to transfer candidates from Entry Level, as a safety net for candidates dropping out of the full course and from the ICT AS level.

The specific problems relating to the portfolio are unchanged and the points made last year are still very relevant today. The particular problem areas are as follows:

#### *Directory structures*

A screenshot of all the files in a directory does **not** show understanding of directory structures.

## Information Handling:

### *Data capture forms.*

A screenshot of table view in Access is not a data capture form.

It must match the stated purpose.

It is still worth noting that under the design section one mark could be given for the design of a data capture form. Where there is evidence of an electronic on screen data entry form. The idea being that data is transferred from the data capture form and entered into the database by a user friendly interface: - the on screen data entry form. *An additional mark* could be awarded under the advanced processing criteria if this on screen data entry form has been created by the candidate.

### *Data Structure forms*

Although this is considerably improved with most Centres adopting a table approach there are still a few Centres where candidates still just take a screen shot of an Access table in design view. *This is not acceptable as a data structure form* because it does not explain the formats used for all data types.

### *Reasons for searches, graphs and sorts.*

**Despite emphasizing this section every year it still remains the most problematic area of the coursework** especially in teacher led tasks as the task shows no reasons for the graphs, searches and sorts undertaken.

As stated last year the specification says there must be reasons for sorts, graphs and searches and some Centres are not giving enough guidance to candidates as to an acceptable reason. **A common mistake was as follows:**

Test	Purpose	Criteria	Reason
Simple search	To search for all the males	Gender = Male	I wanted to know how many males there are

They did not explain **WHY** they wanted to know how many males there were in the database and this was just a way of simply describing the process. Candidates must explain the reasons why they did a sort, search or graph, not just explain what they did. Candidates should be encouraged to provide different and realistic sorts and searches with clear reasons why they are required.

Candidates are losing marks by not showing understanding of logical operators because they do not write out their search criteria correctly. This became particularly evident on the higher tier examination paper when candidates were required to write in the logical operator they seemed unable to do so.

#### *Advanced processes*

Some Centres give marks for advanced features where there is no obvious evidence. There must be clear indication of why marks were awarded for advanced features.

## Spreadsheet Modeling

The standard of modeling work continues to improve. There remain however two problem areas.

### *What if? investigations*

**There must be an investigative purpose for a 'what if.** Some Centres still simply add extra columns and rows to their original spreadsheet with no investigative or predictive purpose. Such developments should clearly be part of the original design. Although there can be some predictive investigations which do add extra rows and columns, there must be clear reasons for the investigation and not a simple construction of the spreadsheet.

There must be **before and after** evidence of the spreadsheet in formula view to show the changes in formulas.

### *Design of a spreadsheet*

Although there is a significant improvement in this area some of the comments from last year are still relevant. There must be evidence of **individual design of their own spreadsheet** for at least three of the four design marks. **The candidates must produce the design, not the teacher.** Some of the portfolios are identical teacher led tasks and yet the Centre gives them full marks for the design with comment such as '*the pupil did this well with a neat presentation*'. These marks are not for neat presentation or for completion of the task. The design cannot be inherent. There must be evidence of the design process.

There are still some Centres who set the standard 'Disco Cost' or Marks Spreadsheet exercise given out at previous INSET and then claim the candidates designed it.

It is worth re-stating the marking scheme for this section. In the design section one mark only is given for formatting the spreadsheet e.g. putting on a grid shading, bold, etc. This can be on a teacher set exercise such as the "Disco Cost' or Marks Spreadsheet'. **The other three marks can only be awarded for original designs done by candidates.** A second mark is for the candidate's initial design on a grid showing label and data. Usually this is hand drawn. A third mark is for including the design of formulas. The fourth mark is for an explanation of the purpose of these formulas

## Communicating Information:

Most Centres continue to produce work of a very high standard in this section and generally apply the marking scheme accurately.

As last year there are only three main areas of concern:

- Some Centres included documents that had no stated purpose. Centres should ensure candidates state the purpose of the documents or presentations as required by the specification.
- Centres should clearly indicate where they have awarded marks for advanced features.
- It was in the design section that Centres tended to be generous. There must be evidence of design either on paper or a detailed report or a combination of both. This cannot be inherent.

Detailed annotation that includes font styles and sizes, margins, origin of picture files, etc, is needed for three marks. Details of sound and/or animation effects should be included if used.

## GCSE INFORMATION AND COMMUNICATION TECHNOLOGY

### MODERATION OF PROJECTS

JUNE 2008

#### Administration

#### Receipt of projects

Most projects submitted for moderation arrived on time and included the required documentation. Worryingly a handful arrived some eight weeks late with no explanation. Centres should inform WJEC as soon as possible if the deadline cannot be met. Annotation of the ICT3 forms by supervisors is important as it assists the moderation process. Standardisation within some centres was not carried out which made moderation very difficult i.e. one moderator required scaling while the others did not.

#### Broadsheets

Broadsheets supplied by WJEC are the only ones to be used. Forms created by centres are not to be used.

#### Projects

The standard of projects submitted over the years has improved year on year. One of the reasons for this welcome development is the feedback via examiner's reports. Another is the exemplar projects given out and discussed at INSET. Again this year many interesting projects were tackled by candidates. A number of different topics were attempted by candidates within centres. One disappointing aspect is that some centres give identical 'problems with the current system' no matter what topic is chosen by candidates. Centres should advise students that solutions are specific to the problem they have identified. Guidance should be given to candidates to ensure that the problem identified and analysed is demanding enough. Perhaps more importantly with the 'more able' candidates to ensure they are not over ambitious and that the problem can be solved to a reasonable standard in the given time scale. Candidates should be reminded to include all sections outlined in WJEC's specification.

#### Areas of project which give cause for concern

#### Section A

##### *Background*

This was covered very briefly, the most useful information came from candidates with a personal interest in the topic chosen. In order to set the scene, candidates should include **why** they have chosen the topic, **where** is the location of the topic, **what** is the topic about.

## *Analysis*

This varied from one page to many pages. Interviews and questionnaires were used but did not always provide useful information. Some candidates presented data flow diagrams. Many looked at standard problems and listed the general problems of a manual system such as storage, lost documents etc without looking at the specific requirements of the system studied. Supervisors often commented on a thorough analysis being carried out when there was little documentary evidence presented. A few centres began with the problem and solution already decided and tried to fit the analysis to this. Data identified at this stage should appear in sections B, C and D.

### **Section C**

Again this year the most disappointing aspect of the project was the database. Frequently a project contained only about ten records and four fields. This limited the candidate to make only a couple of meaningless searches and sorts. A number of printouts were not labelled and with no test plan present moderation became very difficult.

### **Section D**

Only a few projects did not include some form of evaluation. The standard again varied from centre to centre. Candidates were very reluctant to discuss future developments.

## **PAPER 2**

### **Foundation Tier**

#### **General Comments**

This year the majority of candidates found the examination more accessible. Many candidates could not define RAM, ROM and LAN which was very disappointing. It was evident that a number of centres had not covered the applications to a great depth.

#### **Comments on individual questions**

- Q.1 Well answered
- Q.2 Sections (c) and (d) proved difficult to some candidates.
- Q.3 Poorly answered on the whole considering the number of times it has appeared on previous occasions.
- Q.4 Poorly answered. Most answers were a variation on the security theme.
- Q.5 Poorly answered. It was evident that some centres had not covered this topic to any depth.
- Q.6 Well answered.
- Q.7 (a) Designing buildings and bridges were popular answers.  
(b) Well answered.  
(c) Poorly answered, although on some occasions answers such as 2d to 3d were seen.
- Q.8 (a) This question proved too difficult for the majority of candidates.  
(b) Quite well answered.  
(c) This question proved too difficult for the majority of candidates.
- Q.9 Well answered.
- Q.10. Poorly answered. Most candidates found this question difficult.
- Q.11 (a) Poorly answered. Most candidates found this question difficult.  
(b) date of birth with a popular answer.  
(c) more secure and quicker to sort or search were popular answers.

## PAPER 2

### Higher Tier

#### General Comments

Most candidates found the paper less accessible than last year yet a few demonstrated a high level of knowledge for the use of IT in attempting the examination paper.

#### Comments on individual questions

- Q.1 (a) (i) Most candidates gave mainframe answers.  
(ii) Most candidates made reference to hand held computers.
- Q.2 Many candidates scored high marks for this question.
- Q.3 (a), (b) It was obvious from the answers seen that some centres had not covered this topic
- Q.4 (a) Monitor and printers were common answers  
(b) Poorly answered not many could give an use for ROM and RAM  
(c) Well answered. Although some confused DVD with Hard Disk.
- Q.5 (a), (b) It was obvious from the answers seen that some centres had not covered this topic.
- Q.6 (a) The majority of candidates could not explain the terms field, record and fiel.  
(b) Most candidates found this question difficult.  
(c) Much better answers than in previous years.
- Q.7 Poorly answered.
- Q.8 (a) Very well answered.  
(b) Quite well answered.  
(c), (d) Very well answered.
- Q.9 (a) Many could not name two different types of *application software*.  
(b) Well answered.

- (c) Not many candidates could give three functions of an *operating system*.
  - (d) Well answered.
  - (e) Some confusion by candidates over real time.
- Q.10 (a) Poorly answered considering they undertook this activity in their project.
- (b) Poorly answered.
- Q.11 Poorly answered. It was evident that some centres had not covered this topic to any depth.
- Q.13 Some outstanding answers seen here. Some answers covered three pages of text showing the depth of knowledge of the subject and in some cases way above GCSE standard.





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