



GCSE EXAMINERS' REPORTS

INFORMATION AND COMMUNICATION TECHNOLOGY

SUMMER 2010

Statistical Information

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 2010

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Chief Examiner: Mr. Warren Davies

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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
A*	59	56		71		91
A	52	50		63		82
B	45	44		55		73
C	39	38	48	47	50	65
D	33	32	41	34	45	49
E	27	26	34	27	40	41
F	21	21	27		35	
G	15	16	20		30	
Max. Mark	63	63	60	80	60	100

PAPER 1

Foundation Tier

General comment

- Changes to the style of questions made the paper more accessible.
- Candidates generally were entered into the correct tier.
- Centres are advised to look at the mark scheme and flag up to candidates unacceptable vague answers.
- Most candidates only gave one or two ticks were required to do so in tables instead of ticking all boxes.

Questions

- Q.1 (a) Very well answered.
- (b) An improvement. There were more detailed answers with less candidates losing marks for vague answers such as '*fonts*', '*bold*', *etc.*
- (c) The format of the question made it more accessible but many put '*worksheets*' as a feature of multimedia software.
- (d) Most candidates could name a use for a database in schools but the majority were not aware of a use of educational software despite the mark scheme being quite broad.
- Q.2 (a) It continues to surprise me how many Foundation Tier candidates do not know the difference between input and output devices. This year was no exception.
- (b) Well answered.
- (c) (i) Most candidates did not know the purpose of a check digit.
- (ii) Quite well answered but some candidates still give vague answers such as '*name of manufacturer*'.
- (d) Most candidates could give at least two services but *packing bags* is not an acceptable answer.
- Q.3 (a) The style of this question was to limit the impact of poor writing skills and to test their ICT knowledge. Many candidates were clearly guessing and mixed up answers.
- (b) Most candidates got part i but most did not get part ii. They did not give the idea of the backups being kept offsite, etc. The majority simply said backup the backup.
- Q.4 Candidates should be encouraged to use the proper terminology. *Arthritis* is too vague and phrases such as *square eyes*, *getting fat*, *bad posture*, etc, are not acceptable answers. In the prevention candidates should be encouraged to use the phrase '*adjustable*' chair to prevent backache not '*comfortable*' chair. Candidates need to give more precise responses not just phrases like '*good lighting*'.

- Q.5 (a) Not well done. The better candidates gave at least one method but weaker candidates gave search data.
- (b) (i) Many candidates gave the response '*no of weeks*' despite the question excluding this from the answer.
- (ii) Well answered.
- (iii) Very well answered.
- (c) Again candidates gave vague incorrect answers. Candidates should really be discouraged from such phrases as '*can do it from home*', *cheaper*, *faster*, *easier*, etc.
- Q.6 (a) Well answered.
- (b) Well answered.
- (c) Candidates clearly did not understand how a break-even spreadsheet works. This is surprising as it is a very common form of spreadsheet in coursework. Some gave the row no. or gave 18.
- (d) This was a testing question and was not well answered. Most candidates gave the answer in reverse F3-G3.
- (e) Quite well answered with most candidates gaining 1 mark.
- Q.7 (a) Not well answered.
- (b) Not well answered. It was clear that many candidates had very little understanding of sensors or control systems even at this basic level.
- (c) Very well answered.
- Q.8 (a) Well answered.
- (b) Well answered.
- (c) (i) Well answered with most candidates ensuring there was a process in their answer.
- (ii) Answers were vague e.g. '*don't have to go to bank*' was a typical wrong answer.
- Q.9 (a) Very well answered.
- (b) Again very well answered.
- (c) Many candidates understood the idea of the unique identifier.
- (d) Surprisingly many candidates only scored 1 mark on this question.
- (e) Following the trend in previous years candidates cannot not give the field the search criteria required in this search. This is despite the fact there is plenty of searching of databases in the coursework.

PAPER 1

Higher Tier

General Comment

- The trend in lack of use of appropriate technical terminology continues. Even on this Higher Tier candidates give vague and general answers.
- Many do not read the question and give answers to last years questions.
- Answers to advantages of anything done online were vague. This is an area of the specification Centres should stress and inform candidates about unacceptable vagueness in responses.

Questions

- Q.1 (a) Very well done.
- (b) (i) Most candidates could give one but not a second facility.
- (ii) Not well done. Many candidates gave software and only the better candidates gave hosting systems.
- (c) Many candidates could give uses for databases and OMR in schools but most did not understand distance learning.
- Q.2 (a) Very well done.
- (b) (i) Not well done. As on the Foundation Tier most candidates did not understand the purpose of the check digit but could give it as an answer to part b ii.
- (ii) Well done.
- (c) A demanding question on which only the better candidates gained 3 marks. Many gave services at the POS.
- Q.3 (a) Very well done.
- (b) (i) Not well done. Many giving backup the backup files.
- (ii) Very well done.
- Q.4 (a) Most candidates gave *search engine* but only the better candidates gave 2 correct answers.
- (b) Very well done.
- (c) Weaker candidates on this Tier could not answer this question. Most gained one or two marks but again only better candidates gained all three marks. Many did not give the idea of a range check but went instead for a description of the format 99/99/99.
- (d) Very well done.
- (e) Even on the Higher Tier candidates give vague answers such as '*do it from home*'. Candidates should be encouraged to give more precise answers.

- Q.5 (a) Very well answered.
- (b) Candidates on the Higher Tier made the same mistakes as those on Foundation. Only the better candidates gave the correct answer.
- (c) (i) This was intended to be a differentiator and it was. Very few candidates gained this mark.
- (ii) Although some could not name the type of cell referencing many good candidates recognised its function.
- (d) As on Foundation Tier many gave the answer in reverse.
- (e) Whenever candidates are asked to give advantages they tend to give features of a spreadsheet or give vague answers. Candidates should be encouraged to express their answers clearly.
- Q.6 This was quite well answered with most candidates gaining at least two or more marks.
- Q.7 Candidates on this Tier do have a better grasp of terminology but they still give incorrect answers such as '*comfortable chair*' instead of '*adjustable chair*'.
- Q.8 (a) Very well answered.
- (b) Very well answered.
- (c) Again well answered most candidates gained 2 or 3 marks.
- (d) Yet again many candidates could not answer this question.
- (e) (i) Many candidates could not describe the benefits of an automatic stock control system. Many simply re-worded the question and said it ordered stock automatically.
- (ii) Very badly answered with most candidates giving very general disadvantages of using computers rather than of automatic stock control systems.
- Q.9 Quite well done. The biggest mistake was for candidates to give uses which could already be done on an internal network and for which they did not need the Internet.
- Q.10 Very well done. Most identified the correct three answers but some candidates did mix them up.
- Q.11 (a) Most candidates gave the services available at an ATM and not the advantages.
- (b) (i) Very well answered but again candidates should be discouraged from using brand names.
- (ii) Most candidates gained at least 2 marks. The weaker ones mixed this up with how to get money from an ATM.
- (c) (i) Again all of the vague answers relating to anything done online were prevalent.
- (ii) Although this was better than part i answers should relate to banking not online activities in general.

PORTFOLIO

General Comments

- As last year most Centres showed a clear understanding of the marking criteria.
- Many more Centres are attempting work in the advanced sections particularly with respect to validation techniques, recording macros and graphics enhancement and processing before electronic combination with DTP.

Administration

Some Centres did not realise the requirements for selecting the sample had changed this year. Centres should contact their examinations officers for details of the new guidance. Some Centres did not download the official WJEC forms from the web site and did not provide the appropriate documentation. Centres should ensure that both teachers and candidates sign the declaration sheets.

Points regarding assessment

Many of these points were made last year but misunderstandings do still occur so it is worth repeating some sections.

Directory structures

A screenshot of all the files in a directory does not show understanding of directory structures. A candidate may lose 3 marks here, one for each task, which brings the centre close to being out of tolerance.

Information Handling:

Enter data

Some centres were giving three marks when there was no keyfield. There must be a keyfield for 1 mark in 'enter data' and the other 2 marks are for variety of data (*at least 3 other data types*). Candidates should have entered the data to get these marks.

Data Structure forms

This is generally well done now. A screenshot of an Access table in design view **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

This is still one area of misunderstanding. The specification states there must be reasons for sorts, graphs and searches and some centres need to check that teacher led tasks contain reasons and not just instructions on what to search or sort. Some centres give marks for reasons which simply describe the process and not why they required that data. A common mistake was as follows:

Test	Purpose	Criteria	Reason
Simple search	To search for all the vegetarians	Vegetarian= Yes	I wanted to know how many vegetarians there are Or To pick out all the vegetarians.
			WHY? did they want this information is the reason that should be explained.

Without reasons marks cannot be awarded as they do not meet the criteria as set out in the specification.

Advanced processes

This is generally clear with more centres taking note of the advice given last year.

Spreadsheet Modelling

Most Centres were accurate in their assessment of their work but there are still some areas of confusion.

Use of a formula

There must be evidence a formula was used e.g. a printout in formula view.

What if? Investigations

These need reasons or a context. They cannot be done in isolation e.g. 'I am changing the coursework mark'. Candidates should discuss why they are changing the coursework mark and analyse the results of the change in data not just say the 'mark went up'.

A 'what if' type investigation investigates the potential outcome if data or formulas **are changed**. They are not construction. Some Centres still do things such as "What if I add a Sum to total up the cells", and state the result as "It gives me the total". The latter is construction not an investigation. Another example seen is, "What if I add an extra row?", but then no **predictive or investigated purpose** is given.

There must be an investigative purpose for a 'what if' type investigation. This must be clearly stated in a test plan or in a report. There must be some form of annotation on the printouts to say what the printout is showing. If the 'what if' involves a change of formula then there must be **before and after** evidence of the spreadsheet in formula view to show changes in the formulas.

Graph

As indicated in the specification, all graphs must be supported by reasons for, or the purpose of, the graph.

Design of a spreadsheet

Candidates cannot be awarded 4 marks for design if the spreadsheet is a teacher led task, i.e. copying from a worksheet. If the design is all the same candidates can only be given a maximum of 1 out of the 4 marks for formatting the spreadsheet.

Design cannot be inherent. There must be evidence of individual design for at least 3 of the 4 design marks. The candidates must produce an individual, original design of their own spreadsheet. In the design section **1 mark only** is given for formatting the spreadsheet e.g. putting on a grid shading, bold, etc.

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 the formulas** in their original design.

Communicating Information:

Candidates are producing some very good work.

The areas of concern in previous reports are still the same.

- 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.
- Again 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. It cannot be inherent.

PAPER 2
Foundation Tier

General Comments

This year the majority of candidates found the examination more accessible. Many candidates could define RAM and ROM. A few candidates demonstrated good examination technique.

Comments on individual questions

- Q.1 Well answered.
- Q.2 (a) Many answered both sections correctly.
(b) Quite well answered.
(c) Many candidates gave hard disk as the answer.
- Q.3 Well answered
- Q.4 (a) (i) Few gave star as the correct answer.
(b) Quite well answered, sharing a printer was a common answer.
(c) Most candidates suggested passwords as a way of preventing unauthorised access to information on a network.
(d) Well answered.
- Q.5 (a) Well answered.
(b) Well answered.
- Q.6 (a) Poorly answered, the mark was awarded for software or program.
(b) Poorly answered.
(c) Most candidates suggested Batch Processing correctly.
(d) Poorly answered.
- Q.7 (a) Well answered.
(b) Well answered.
(c) Many candidates gave ID as the correct answer.
(d) Part (ii) was poorly answered.
- Q.8 (a) The majority of candidates mentioned 'no holidays' and 'work 24/7'
(b) Quite well answered.
- Q.9 Poorly answered. Most candidates found this question difficult.
- Q.10 As in previous years this question was not well answered.
- Q.11 Part (a) was well answered.

PAPER 2

Higher Tier

General Comments

There was evidence this year that candidates had been incorrectly entered for this tier. Most candidates found the paper more demanding than last year.

Comments on individual questions

- Q.1 (a) Poorly answered.
- (b) It was obvious from the answers seen that some centres had not covered this topic.
- (c) Most candidates gave a feature of ROM/RAM rather than a use. Most candidates made reference to temporary/volatile etc storage.
- (d) Well answered.
- Q.2 Many candidates scored high marks for this question.
- Q.3 (a) Not many candidates gained full marks for this question.
- (b) Not many candidates could suggest other types of interface.
- Q.4 (a) Poorly answered on the whole, many candidates confused it with the Computer Medical Records.
- (b) Poorly answered.
- Q.5 (a) As in previous years this question was not well answered.
- (b) Some candidates knew that they could view/see personal data.
- (c) Quite well answered.
- Q.6 (a) Most candidates gained at least one for this question by mentioning interviews.
- (b) Most candidates found this question difficult.
- (c) Well answered.
- Q.7 Much better answers than in previous years.
- Q.8 (a) Many candidates lost marks by including in their answer the idea of a booking system.
- (b) Poorly answered considering the time taken at INSET to cover the topic.
- (c) Well answered.

- Q.9 Well answered.
- Q.10 The majority of candidates gained high marks for this question.
- Q.11 Very well answered.
- Q.12 Very well answered.
- Q.13 Some answers covered three pages of text showing in depth knowledge of the subject which in some cases was well above GCSE standard.

PROJECTS

General Comments

Receipt of projects

Projects were generally received on time and included the required documentation. There were genuine reasons for late arrivals and centres should inform WJEC as soon as possible if the deadline cannot be met. Internal standardisation of supervisors in some centres was unsatisfactory; this caused major problems when it came to scaling.

Mark sheets

Mark sheets supplied by WJEC are the only ones to be used. Forms created by centres are not to be used (some centres still persist with this practice).

Projects

The majority of centres marked the projects fairly. Candidates should be reminded to include all sections outlined in the specification. Marks are lost if a section is not included. Centres should advise students that solutions are specific to the problem they have identified. Some solutions were very 'general'. The standard of projects submitted was, on the whole, on a par with previous years, with many excellent projects seen.

Background

This section was described in one or two sentences by some candidates, yet they were awarded full marks. (Please refer to project guidance booklet given out at INSET).

Analysis

Again this year interviews and questionnaires were used but did not always provide useful information. 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.

Development

A number of printouts were not labelled and **with no test plan present** moderation became very difficult. Again this year examples of data flow (mail merge) was invariably seen in most projects.

Evaluation

The standard again varied from centre to centre. Candidates were very reluctant to discuss future developments.



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