

Mark Scheme Summer 2008

IGCSE

IGCSE ICT (4385)

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Principal Examiner Report - Summer 2008
Foundation Tier

Paper 1F

General Comments

As for last year candidates were giving fuller answers to the questions set, there was also an improvement to the level of response from candidates.

Candidates' ability to respond was again strongly related to the syllabus coverage by the centre in question.

Report on Candidates' Responses

Q. 1 (b)(c) (d)- good introductory question with most candidates gaining full marks at all levels of ability. Less able candidates failed to supply a suitable function for the device in question

Q2 (a) candidates mostly suggested the use of OCR few mentioned the preferred method of OMR. (b) Few candidates could give a reason for entering the mark twice on the sheet (c) good answers from the majority of candidates. Most responses were for quicker data entry and less errors.

Q3 (a) Well answered by the majority of candidates. Some lost marks by stating the network topology that could be used. In (b) the better candidates gained two out of the available three marks. Answers were mostly linked to 'the sharing of resources' and 'easier to update records' Where centres had covered this topic well candidates gave better answers such as 'centralised record keeping' and 'allows multiple access to data' In (c) most candidates were able to recognise the correct topology required for the feature given

Q4 In (a) the majority of candidates could give the correct definition of a virus. In (b) candidates mostly recognised the fact that the virus was contained in the download but lost a mark by not realising it was only released when the game was run. In c (i) candidates were fully aware of the use of antivirus software. In c(ii) however few gained the two marks available here. The better candidates realised the antivirus software should always be active but few went on to say it should be kept up to date; or gave the alternative acceptable answer that the game site should not be revisited.

Q5 (a) The majority of candidates did well here and could fully explain the purpose of the customer ID In (b) poor responses were given by the majority of candidates. Few realised it was a form of data validation. Good responses were given in (c) by the majority of candidates. The uses of encryption, firewalls and passwords had been well covered by most centres

Q6 (a) Poor responses were given by most candidates. Only some of the better candidates managed to gain some marks from the data flow diagram supplied. The concept of a counter being used seemed to confuse some candidates; whilst others failed to understand the scenario given. In (b) the majority of candidates were able to design a suitable screen capture form. In (c) few candidates could give suitable examples of 'Typical', 'extreme' or 'valid' data in the context of the question set

Q7 Poor responses given by the majority of candidates. Candidates at foundation level appeared not to be fully conversant with the tasks carried out by a computer operating system

Q8 (a) Few candidates realised that the technology of the current system might be out of date. Most answers given were related to the fact that the system might be running too slowly. In (b) again few candidates could give suitable methods used by the analyst for problem identification. In (c) the better candidates gained one of the available two marks for information contained in a users guide. Most answers were related to the loading of software. In (d) very few candidates gained any marks for information contained in a technical guide. In (e) the better candidates gave suitable answers and gained two marks for explaining why parallel running of the two systems were required

Q9 a (i)(ii) Few candidates could state what the Transaction File or the Master File were. Most thought the master file was the 'main file'. No marks were awarded for this answer as it does not indicate that it is the most up to date, complete file in the system. In (b) few candidates could show where the backup file was placed or the direction of data flow to this device. In (c) few candidates could explain an automatic stock control process

Q10 (a) Most candidates gained two marks here for stating the items of equipment needed for internet connection In (b) few candidates understood the benefit of on-line trading for the company. Some of the better candidates managed to gain a mark by stating 24-7 trading was possible. Other factors like lower staffing costs or lower premises costs were not mentioned by foundation candidates. In (c) the better candidates gained the two available marks here. In (d) no candidates were able to suggest methods the shop owner could use to prevent fraudulent use of credit cards on his website. In (e) many candidates gained the three available marks for website navigation features.

Q11 (a) Foundation candidates were not able to give suitable reasons for using data logging. Many tried to answers the question by giving examples of tracking stolen vehicles. In (b) the better candidates could give a suitable answer for storing the time in the computer. Many candidates lost marks by just repeating the stem of the question. In c(i)(ii) few candidate gave a suitable package for producing charts and graphs or could suggest a second suitable feature that could be used to illustrate data trends. In d(i) most candidates could give a suitable sensor. In d(ii) however few candidates realised the time was obtained from the computer system. Many wanted to introduce elaborate systems that involved stop watches linked to the computer in some way

Q12 Few candidates attempted the algorithm

**Principal Examiner's Report - Summer 2008
Higher Tier**

Paper 2H

General Comments

The overall qualifying responses of candidates were on par with last year's responses. Again candidates that had been prepared well by centres gained good marks

Some centres still allowed candidates to use extension sheets. Many candidates also wrote answers outside the designated areas on the answer sheets. Candidates should be encouraged to produce concise, accurate and less wordy answers that fit the allocated answer space,.

Report on Candidates' Responses

Q. 1 Reasonable answers were given by most candidates and most gained three of the available six marks. Examples were often vague and not always appropriate to the task given. Some candidates confused the operating system with the 'boot process' and 'bios' functions associated with the mother board

Q2 (a) Most candidates gained one of the available two marks. Generally related to changes in computer technology. Weaker candidates often gave simplistic answers along the lines of, it needs updating because it is out of date. This type of rewording of the question is not worth any marks.

(b) Again well answered with most candidates gaining the two available marks.

(c) Poorly answered with few candidates gaining one of the available two marks. Candidates were not conversant with the contents of a 'User Guide'

(d) As in (c) few scored marks here. Candidates were not conversant with the contents of a 'Technical Guide'

(e) Candidates, in general scored well here. The concept of parallel running was fully understood

Q3 (a)(i)(ii) Many candidates were aware of the function of the 'Transaction file' and the 'Master file', but a large number simply described the diagram. E.g. saying that the transaction file was used to store transactions and update the stock file, or that the master file was the file that was updated by the stock control process.

(b) In most cases the backup file was correctly placed on the system diagram

(c) Lots of wordy answers given here to describe the process. Only the better candidates could describe the full stock control process and relate it to the automatic reorder of stock. Many candidates thought the system alerted the manger by some physical method so he could then place an order for new stock

Q4 (a) Most candidates gained the full two marks for this response

(b) Most gained two out of the three available marks usually related to a 24-7 service or a wider market to trade in

(c) Again most scored well here gaining the two marks available

(d) Poorly answered by many candidates misinterpreting the question and gave answers related to use of firewalls etc. Security for the web site and not fraud on the part of the customer

(e) Good responses given by many candidates who were aware of web site navigation features. Weaker candidates tended to give answers related to general web site features, rather than navigational features.

Q5 (a) Good answers by most candidates. Mostly related to accuracy of results and the need to pay people to monitor the situation. There were however too many answers stating that the data logging equipment would be faster.

(b) Some candidates missed the intention of the question here and gave answers related to the theft of vehicles and the police knowing the time the vehicle passed the spot

(c)(i) Almost all candidates answered this correctly. In (ii) few could give a suitable feature that their chosen software could use to interpret the data obtained

(d)(i) Again almost all candidates could give a suitable sensor. In (ii) few candidates seemed to be aware of the fact that the computer system provided the time. Many tried to link stop watches to the computer and record the time in that fashion

Q6 Most candidates scored four of the available five marks for the algorithm

Q7 (a) Most candidates could name three devices that could be used in a sales application. Only the better candidates could fully explain how they would be used and the processes involved

(b) Most candidates realised the data was captured by a pc but few could explain how it was transferred to head office. Many wanted to send the figures by e-mail. This misses the 'As it happens' phrase in the question

Q8 (a) (i) Few candidates provided a suitable solution here. Most reproduced the information in the question without any annotation to explain the process. In (ii) the majority of candidates could gain one of the available two marks for explaining the process of capturing the marks.

(b) Well answered by the majority of candidates. Most were aware of suitable verification checks. Some confused their answers by giving validation checks

Q9 There were mixed level of response to this question. Most candidates could gain three of the available six marks for showing the correct number of pcs a hub and a printer. Few candidates were able to show the need for wireless receivers in each pc

Q10 Far too many candidates answered this question in terms of viruses, despite being told in the stem that a virus was not involved.

(a) Those that scored here mainly obtained one mark for realising there was a malware problem. Few candidates went on to expand the answer to say how the pc became affected in this way

(b) Generally good responses mostly linked to adware problems

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Q11(a) Good answers given with many candidates gaining full marks

(b) Again well answered Most candidates could name a suitable Validation check. Only the better candidates could link that check to the credit limit field and the context of the question

Q12 (a) good responses by candidates many gaining full marks for the flow chart

(b) Poorly answered by most candidates. Most two mark answers were related to input, validate and sort which were not presented as an algorithm. Those that gained more than three marks usually provided a diagram and gained marks for a loop function. Many candidates tried creating long lists of IF statements.

Principal Examiners Report - Summer 2008 Paper 3 - Set Tasks & Projects

Set Tasks.

A detailed report on the individual tasks will be included in the examiner's report for the November examination. The following advice deals with presentation of the work and are applicable to both the 2006 and future papers. Following the advice may enable some centres to reduce their workload and improve their candidates' marks.

- The Set Tasks do not need to be bound. They are best presented as loose leaf in an A4 plastic pocket or document wallet. Markers need to be able to compare pages, e.g. Design and final product. This is much easier with loose pages. If staples or other fastening methods are used, care should be taken not to obscure or damage the work.
- The Set Tasks and Projects should be submitted as two separate bundles of work. They are unlikely to be allocated to the same marker. There were several instances where centres mixed the 3A and 3B work or where a 3A project was swapped with a 3B Set Tasks. Putting a candidate's work into a single binding must be avoided as the Set Tasks will have to be removed and this may result in the work being damaged.
- All pieces of work should be clearly labelled with the candidate's name, number and task identification. The task identification becomes essential if a candidate does not complete all of the tasks as it can sometimes be hard to work out which task the candidate thought they were doing.
- Extra work must not be submitted. There are marks for sticking to the required number of pages. There are no marks for anything which has not been specifically asked for in the tasks.
- Anything that the candidate thinks is worth a mark should be annotated, explained and presented in task order. Markers do their best to find everything which is worthy of a mark but some candidates have the ability to present their work in the most obscure and muddled way possible.
- All of the tasks have a design element. The correct sequence of events is design it first, make it afterwards. Doing things in reverse order often results in lower marks.

Projects.

Most of the work was presented in a satisfactory manner, but the following guidelines may enable some centres to improve their candidates' marks.

- Each project should have a cover sheet, clearly labelled with a minimum of the candidate's name, candidate's number and the centre number. A completed version of the IGCSE ICT coursework cover sheet would be suitable for this purpose. The sheet may be downloaded from:
http://www.edexcelinternational.org/VirtualContent/82378/ICT_coursework_cover_sheet.pdf
- Projects should be securely bound. Spiral binding or secure stapling will usually suffice. A single treasury tag or length of string is not really sufficient as pages can easily be detached when the project is handled.
- Projects should have a contents page and matching page numbers. These

could be written in by hand when the project is finished. It is not compulsory but it is always useful to know where candidates think they have put the different sections of their project.

- Projects should be presented in a logical order, preferably Identify, Analyse, Design, Implement and Evaluate.

It was obvious that a number of candidates were submitting GCE O Level style projects. There is no prohibition on this but candidates must be made aware of the differences in the specification between O Level and IGCSE. Much of the work in an O Level project is superfluous to the IGCSE requirements and therefore gains no marks. e.g. most of the systems analysis. On the other hand, the IGCSE requires much better evidence of the design and production process. An O Level project would require a substantial rewrite to gain the same degree of credit in the IGCSE. In particular, evidence of making and using advanced features of the software is essential for scoring extension marks.

It was also obvious that a number of centres had provided their candidates with a project template. This is not prohibited and the IGCSE Coursework Guide for Students could be regarded as being such a template. The guide may be downloaded from: http://www.edexcel-international.org/VirtualContent/83088/ICT_guide.pdf

Problems with templates arise in two ways:

- Firstly, if the template is incomplete. This results in candidates being unable to access some parts of the mark scheme because the template that they are following does not include the relevant sections of the project.
- Secondly, if the template contains too much detail. Section and subsection headings, with some guidance as to the appropriate content, will usually be acceptable. But, once centres start to give suggested wording or diagrams, markers are likely to refer the projects to be investigated for possible collusion.

Identify.

Most candidates were able to identify a suitable problem, but it was clear that many of them had reverse engineered the whole project by making the application first and then arranging the other sections to fit what they had done. This nearly always results in the candidates losing marks by having weak identify, analyse and design sections.

Many candidates failed to fully identify their user. Higher band marks require identification by name, not just by the company or organisation.

User requirements or objectives were often generic and untestable. Providing that a system can find a record in 30 seconds, or that less staff are needed is very difficult to do.

Consideration of alternatives was often weak. Simply contrasting a computer based with a manual system is unlikely to gain much credit. Candidates should look at alternative computer methods and give good reasons why one method would be preferable.

Analyse.

Access to higher band marks in this section is via the words 'fully explained'.

Candidates should be reminded that the markers do not know them, do not know their users, have not seen the applications running and only have the written accounts to look at.

In particular, alternative outputs were rarely explored and when this was done, the alternatives proposed were often of the type, 'screen versus printout'. Alternative

screen layouts, report formats or other variations on one type of output were rarely considered.

There were some good attempts at data flow diagrams, but descriptions of the collection and manipulation of the raw data were usually incomplete. Where candidates identify multiple raw data types or sources, they should try to include all of them in their write up.

Examples of raw data were very rare, word processed mock-ups are not very convincing.

Security and backup were mentioned more frequently than in previous years but were rarely well explained.

Design.

Candidates should go through the process of making initial designs, showing them to their user, getting some useful feedback, making the final designs. Candidates who actually did that were in a distinct minority.

Far too many candidates simply reported user comment. This is a middle band marking point, with a little more effort, a signed letter or other evidence from the user would have given a higher band mark.

As with Analyse, candidates should be reminded that the markers only have the written account to look at. If the design is missing, so are the marks. Furthermore, if there is little or no design, the marks for Implement will be low, since they depend on a design being followed.

Testing was another weak area. Many candidates simply listed a set of validations. The test plan may well include such validations but it must also specifically test the objectives or user requirements given in the Identify section.

Implement.

This section should be considered in three parts.

Firstly, candidates should not just present a finished product with no information about how it was made. Higher band marks are not accessible without clear evidence of a production process.

Secondly, they should clearly demonstrate that the design has been followed and the objectives met. This will be difficult if there was no design or only vague objectives.

Thirdly, the test plan needs to be followed and evidence given for the result of each test. Simply claiming that it worked is not worthy of marks.

Evaluate.

The evaluations were generally weak. A lot of candidates did refer back to their original objectives and claimed to have met them but very few gave any evidence to back their assertions. A few page references would have sufficed in most cases.

Most candidates did not produce evidence of user feedback. Many had unsigned letters or reported comments but this is not enough to access the higher band marks.

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