



**General Certificate of Secondary Education
June 2012**

ICT

45201

(Specification 4520)

Unit 1: Systems and Applications in ICT

Report on the Examination

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General

Both the Full Course and the Short Course question papers were again marked online this June and this has now become a well-established process. This has been part of a general AQA strategy to increase the use of e-marking in order to improve the efficiency and accuracy of marking.

As questions are marked online, it is easy to collect a range of statistics on each part of each question as well as those relating to the whole paper. Many of these statistics are used by AQA to produce the Enhanced Results Analysis that is available to all schools/colleges and it should be read in conjunction with this Report. Some of the statistics from the June 2012 exam have been included in this Report.

Once again, students at a small number of schools/colleges sat this exam on-screen, using an electronic version of the paper.

Overall, the standard of performance of students sitting the written paper was good as indicated by the mean of the paper being just over 71 marks. It is, however, again worth emphasising that, in this specification, there are elements of theory that are difficult to teach through practical lessons and controlled assessment tasks alone. These are often best taught either by separate theory lessons or as starters or plenaries in practical lessons.

This paper is not tiered, but the statistics do indicate that most of the paper appeared accessible to the majority of students (this year, 97% of students scored 40 marks or more). In addition, it appeared that overall, fewer students left questions unattempted, which is pleasing at this stage of this relatively new specification.

Section A

Question 1

On the whole, question 1 was well answered by students. It is worth pointing out that, in questions like 1(a) where the instruction is to 'tick **three** boxes', it is worthwhile for students to tick three boxes. This may seem obvious, but around one per cent of students only ticked one or two boxes in their answer.

In part 1(e) almost all (97%) students gained one mark for saying that the data could become corrupt/lost. However, only around half (56%) of the students went on to explain that this would allow the data/system to be rebuilt.

Question 2

Most parts of question 2 were also well answered, but less than half (47.8%) of students were able to give one reason why 'phishing e-mails are usually sent'. Examiners reported that the most common wrong answer given by students was that they are 'used to advertise the company'.

Question 3

In part 3(a) many students produced good data capture forms with suitable fields and enough space to fill in their details. Age was the most common field given by students that did not gain marks. In addition, some students did not leave enough space to fill in some details. A common example of this was the e-mail address where some students drew only around 10 boxes which would be inappropriate for almost all e-mail addresses.

In part 3(b) a common correct answer was to use online forms which was often suggested by students as an alternative method of data capture in their Unit 3 controlled assessments.

Question 4

All parts of this question were well answered by most students; however, a surprising number thought that 'modelling' was a common feature of presentation software.

Question 5

In the first two parts of this question, students were asked about the system life cycle, many parts of which they had had practical experience of in Unit 2.

Most parts of 5(a) were not answered correctly by many students.

In part 5(a)(i), only 39% of students gave the correct answer D (Feasibility study).

In part 5(a)(ii), only 36% of students gave the correct answer A (Analysis).

In part 5(a)(iii), 62% gave the correct answer B (Design).

Part 5(b) was not well answered considering that 'test plans' were an essential part of Unit 2. Only around a third of students were able to gain full marks for each part of this question and some students simply repeated answers from the list in part (a).

Questions 6 and 7

Most parts of these questions were answered well by the majority of students.

Question 8

In part 8(c) there were some excellent answers, but many students did not fully describe what would happen at each of the output stages. For example, some students for 'Output stage A' simply wrote that the temperature was too hot. Although this gained some credit they then failed to go on and describe what output might be needed in order to reduce the temperature.

Question 9

Although all parts of 9(a) were very well answered, very few students (17%) were able to give the correct meaning of the Internet protocol POP.

Question 10

In part 10(b)(ii) few students (26%) were able to 'name one other common user interface' and some students resorted to giving answers from the table in part (a).

Section B

Question 11

Much of this question was well answered, however 11(c)(ii) was not well answered by most students (only 26% were correct). This was disappointing as many students will have used the ROUND function in their modelling in Unit 3 and this function follows a similar format to other functions.

Part 11(d) was the first of the extended answer questions which were all marked using a 'levels of response' rather than a 'points' mark scheme. To gain high marks students needed to describe features of the spreadsheet such as modelling/what if scenarios that would not be features of a database.

Question 12

Again, much of this question was well answered by many students. Students found part 12(c) which asked students to 'give advice to employees about responsible behaviour online', the most accessible of the five mark extended answer questions.

Question 13

Overall, question 13(d) was not well answered and the 'advantages and disadvantages for the hospital of using proprietary software, rather than open source software' were not well known or understood by most students. In fact, less than half of the students (45%) managed to score any marks for this part of question 13. Many answers were very often simply either a repeat of the question or gave a vague statement such 'it would be very good for the hospital'. However, there were a few excellent answers (6% of students gained 4 or 5 marks).

Section C

Both essay questions were tackled quite well by most of the students and the mean of these questions was similar (Question 14 – 6.54 and Question 15 – 6.21). Question 14 was by far the more popular of the two essay questions.

As with all of the extended answer questions, the essays were marked using a 'levels of response' rather than a 'points' mark scheme.

Question 14

Over 80% of students attempted this essay question and, as stated earlier, overall it was quite well answered. A wide range of sensible ‘communication and entertainment technologies’ were discussed and the impact they have on society. To gain high marks students needed to:

1. **discuss the impact** – this means looking in some detail at possible positive and negative points for an issue and the impact these have
2. write about **communications and entertainment technology** – at least one of each needed to be considered. Some students deviated from these and started to describe the use of robots to make cars without any real link to the question
3. use good English, to organise information clearly and to use specialist vocabulary where appropriate.

See the published mark scheme for more detail on how this question was marked.

Statistical data and information on grade boundary ranges www.aqa.org.uk/over/stat.html

UMS conversion calculator www.aqa.org.uk/umsconversion