AQA

General Certificate of Secondary Education

Information and Communication Technology 3522

Specification B

3522/H   Higher Tier

Report on the Examination

2008 examination – June series

The written papers - Higher Tier (3522/H)

General

Most candidates attempted most of the questions on the paper. There were some excellent answers showing a good breadth and depth of knowledge at this level.

When answering the questions on the written papers, a few candidates gave the answers 'quicker', 'cheaper', 'easier', 'neater', 'more powerful', 'makes fewer mistakes', 'it could breakdown', etc. without further qualification, and credit was not given for these simplistic answers. More successful candidates explained, what is 'quicker', why it is 'quicker', what are the consequences because 'it could breakdown', etc. in relation to the context of the question. In addition, one word answers were not usually awarded a mark when a description or explanation was required. Similarly, no marks were given for repeating the question without elaboration, and vague, repetitive or inaccurate answers. Better answers related well to the context of the question, were detailed and accurate, used appropriate technical language, and had illustrative examples. It was not uncommon for candidates to be awarded marks because they had given a good example, where marks could not be given for a weak explanation or a vague description. Diagrams were sometimes poorly labelled and not well drawn.

Many candidates demonstrated a good standard of literacy and many answers were clear and well structured. However, some candidates expressed themselves very poorly. Such candidates often answered multiple choice and short answer questions with greater success and would have had better opportunities to fully demonstrate their knowledge and understanding if they had been entered for the foundation tier. It is likely that inappropriately entered candidates obtain lower grades as questions on the Higher tier paper are less accessible to them than questions on the Foundation tier paper, perhaps causing them to be awarded significantly fewer marks. Centres are urged to enter for the Foundation tier candidates who do not express themselves clearly in written English.

The marking of the Higher paper was computer based (e-marking). Whole written scripts are scanned and saved in electronic form, and each clip (subsection of a question) is marked separately. Each clip is marked in one of three categories: auto, general and expert. Auto marking is particularly appropriate for multiple choice questions; general marking for short answer questions and diagrams requiring a straight forward response; and expert marking for more complex and extended answers. Particular care is taken to ensure supplementary sheets are marked in association with the answers on the script. At the end of the marking period an audit of the e-marking process is carried out to ensure its accuracy. As a result of the e-marking process, item level analysis of candidates' responses is practical. The comments on specific questions are grounded in the judgement of the Principal Examiner; however, these are underpinned by reliable and accurate statistics.

Some candidates did not use black ink to write their answers and as a result these could be difficult to read.

Comments on specific questions:

Question 1

Most candidates answered most questions well, showing at least a partial understanding. However, in 1b some candidates could not describe the alignment of the logo at A as indented. Some candidates successfully described how to indent the entire paragraph; however, very few used the increase indent button, preferring to use other methods, such as, highlighting the paragraph then pressing the TAB key. Some candidates indented only the first line of the paragraph. In 1c, many candidates suggested highlighting the paragraph but beyond this some were too vague to be awarded marks. Similarly, most candidates were awarded a mark in each of 1ei and ii but beyond this some answers lacked sufficient detail to be awarded a mark. Answers to 1eiii were almost always awarded at least one mark but again often lacked sufficient detail to be awarded full marks.

Question 2

Most candidates answered most questions well. Some candidates confused memory and backing storage in 2c. In 2d, some confused the functions of a modem and a router. In 2e, some candidates were awarded full marks but many candidates could not clearly describe two ways to increase the speed of Internet access. In 2gi, most candidates knew that RAM and a hard disk both store data. A few candidates made incorrect statements such as: both are memory. In 2gii, many candidates indicated that RAM is volatile whereas a hard disk is non-volatile and a small number observed that the capacity of a hard disk is normally greater than RAM. Some answers confused a hard disk with the processor box.

Question 3

Most candidates answered most questions well. In 3a, some candidates confused the content of a spreadsheet cell with the format applied to it. In 3b, many candidates could not express the formula as sum(D4:D8) and were not awarded full marks. Almost all candidates understood the relationships in the spreadsheet and knew that cell D10 should be the sum of the cells above it. However, many candidates could not write down a formula that would work. In 3cii, few candidates explained clearly and concisely why the values in the cells identified in 3ci should change when the price of a generator is edited. Some candidates incorrectly referred to equations rather than formulae. In 3f, most candidates were awarded at least one mark but some answers were too vague to be awarded a mark. For example: it is hard to follow or understand, without explanation. Many candidates noted that Quantity Sold is not measured in currency so the vertical scale is inappropriate, and many candidates noticed that there are labels missing. Very few candidates noted that the graph had no title.

Question 4

Most candidates answered some questions well. In 4a, many candidates could not identify the appropriate technical language. In 4b, some candidates incorrectly

believed that Age should be included in a record rather than Date of Birth. In 4d, some candidates were unable to distinguish between ascending and descending order. In 4ei, many candidates described two methods of input but did not use specific technical terminology, such as, OCR and OMR. A few candidates inappropriately suggested voice recognition. In 4eii, some candidates were awarded full marks; however, questionnaires were sometimes roughly drawn with many candidates showing little awareness of the need for a design that will facilitate data capture.

Question 5

Most candidates answered some questions well. A few candidates confused sensors and actuators in 5d. In 5e, few candidates were able to write an adequate description of feedback in this context. Most candidates seemed unaware of the cyclical nature of feedback, and a few candidates described meanings of feedback that are not associated with computer control. In 5f, almost all candidates identified at least one advantage or disadvantage; however, few were awarded full marks. Some answers were not sufficiently in context and related to the garden centre. Some candidates knew that initial capital outlay would be higher but operating costs would be lower, and a very few candidates knew that when control technology is used then without staff it becomes difficult to cope with unexpected events, such as broken windows. Most candidates achieved a mark in 5g but answers did not often show a good awareness of the automatic nature of the checks that can be carried out by computers. Some candidates suggested a form of failure detection that was independent of the computer control system which missed the point of the question.

Question 6

Most candidates answered some questions well. Answers to 6a often showed a lack of understanding of verification and confusion with validation. Very few candidates answered correctly and some candidates stated that the purpose of verification is to ensure data is accurate or correct and this is too vague to be awarded a mark. In contrast, answers to 6b often demonstrated a good understanding of the use of a range check for validation. In 6c, many candidates were awarded full marks although many made arithmetical errors in the initial calculation. In 6dii, almost all candidates correctly stated that the technician should check that the cable between the processor and monitor is present and connected properly, or that the power cables to the processor and the monitor should be checked, or that the monitor should be checked to make sure it is turned on.

Question 7

Many candidates answered most questions well. 7a was well done by most. A very few candidates found the more complex programming required for 7b more difficult.

In 7c, most candidates' understood the consequences of incorrect programming. In 7f, most candidates made a good attempt at the question; however, few answers were clearly expressed. Some answers were unconvincing, or did not indicate whether an advantage or a disadvantage was being described, or who it was an advantage or disadvantage for. Some answers showed a lack of understanding of the working environment.

Question 8

A few candidates answered most questions well. Most candidates answered 8ai correctly, but in 8aii answers tended to be vague or missed the point, and few candidates were awarded a mark. In 8bii, very few candidates gave answers which indicated that they had a good understanding of the concept of sustainability of ICT systems. In 8c, a few candidates discussed the advantages and disadvantages of using computers and where answers were relevant these were awarded marks. Candidates who discussed the advantages and disadvantages of refusing to use computers tended to be awarded higher marks. In 8d, most candidates made some good points although a full understanding of the impact of ICTs in developing countries was rarely evident.

Mark Ranges and Award of Results

Grade Boundaries and Cumulative Percentage Grades are available on the Results Statistics page of the AQA Website.