Level 3 Technical Level

IT: CYBER SECURITY
IT: NETWORKING
IT: PROGRAMMING
IT: USER SUPPORT

Unit 1 Fundamental principles of computing
Y/507/6424
Report on the Examination

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General Comments

As noted in a previous Report on the Examination the whole of the Unit should be taught, including topics contained in the Unit Introduction.

Centres are advised to remind their learners that examination technique is important as well as acquiring the knowledge of the Unit Content. Some learners exhibited poor examination technique by not attempting to answer Multiple Choice Questions. Some also appeared to stop their answers when the answer lines had been filled instead of using the continuation answer space provided at the back of the Question Paper.

Section A

Question 7

Whilst many learners were able to answer this question correctly there remained a large number who confused main memory with secondary storage. Some learners gave physical characteristics of main memory (volatile, temporary storage, fast) without describing its functions.

Some learners described its role within the fetch execute cycle, and sufficiently described its function to allow for maximum marks to be awarded.

Many learners were unable to state that main memory communicates with the CPU through a bus. Other learners used various acceptable names and descriptions of a bus.

Question 8

This question asked learners to reflect on the user experience when using two contrasting interfaces. Few learners gained maximum marks, with the majority of learners only achieving 3 or less marks.

Many learners were unable to describe a Command Line Interface. Of those who described the characteristics of both interfaces, a large number did not then describe how these characteristics might affect the user's experience of using a system.

Question 9

The question asks learners to state what actions occur. It is expected, therefore, that action words would be included in the responses.

Many learners seemed to have read the question as 'when searching for a website' rather than 'when accessing a website' using a web browser. This resulted in a large number of learners describing the output phase as a list of search results, which was not deemed acceptable.

Many of the descriptions given for the Input, Process or Output phases of the cycle were too vague to be awarded marks. For example, the response 'type in a URL' gives no idea of where this is entered whereas 'type a URL in the address bar' or 'type a URL in the search box' does give a clear indication of what is being done.

Marks were awarded for the Process part of the cycle where there was a clear indication that the learner understood that a request was being transmitted, or a connection with a server was being made, or for similar ideas of communication being initiated.

There were a large number of good responses for the second part of the question and many suggestions were made as to how the input and output phases of the cycle could be adapted for a visually impaired person. This demonstrated a good understanding of the types of hardware and software available for people with specific needs.

Some learners confused input and output phases, suggesting voice output for both.

Question 10

The first part of the question asks learners to think about what type of question might provide useful information when helping a client select a computer system.

Most learners provided good questions and reasons for those questions but a large minority posed questions that assumed a system had already been chosen, such as ‘does this computer have enough storage for you’ instead of posing a question such as ‘how much storage space do you think you might need’ which might be useful for determining secondary storage capacity.

The responses provided by some learners put questions in a context that was not related to the scenario given in the stem of the question. This made it more difficult and in some cases impossible to award them marks.

The second part of the question was well answered with many learners gaining more than half of the marks available. Better learners gave clear comparisons in the context of anticipated used in the shop and then suggested which would be the most appropriate choice. Weaker learners generally described the characteristics of the various systems, without comparing them or suggesting which might be most appropriate.

The third part of the question was, again, generally well answered with various suggestions for authentication, antivirus software, data encryption and so on.

The fourth part of the question was not well answered. Centres are reminded that learners should be taught that relevant legislation exists which covers not only data protection but also environmental directives. The disposal of electronic waste is covered by various pieces of legislation, but even if learners are not clear on what the correct methods of disposal are it was surprising how many did not appear to be aware that data contained on the system’s storage medium must be permanently erased before disposal.

Question 11

Any answer that had the idea of graphics was awarded a mark. However, many learners appeared unable to provide a correct answer and many of these made suggestion such as text, Microsoft Excel, Graphical Interface and so on.

Question 12

A mark was awarded if the learner correctly interpreted that the alarm would sound if any one of the three sensors was activated. However, no marks were awarded where the student suggested

that the alarm would sound if all sensors needed to be activated or if there was an indication that only one sensor would trigger the alarm.

Question 13

Better learners gave a clear description of the Power Supply Unit. It was clear, from the responses given, that some centres had taught their learners what a PSU does and some had not. Some learners did not respond at all and some gave very vague answers about the PSU supplying power because without power the computer would not work.

Question 14

This question was generally answered well, with most learners being able to give reasons for installing an expansion card and the better learners giving specific examples.

Question 15

This question was not answered well by the majority of learners, though some learners gave answers attracting maximum marks for all parts. It is reiterated that all areas of the Specification will appear in the Question Paper over a period of years.

The Specification is specific about what the contents of a software inventory are and it was disappointing in responding to the first part of the question that a large number of learners failed to specify more than one or two items of its likely content.

The second part of the question was equally badly answered with few learners being able to describe other tasks that systems management software might be used for.

The third part produced better responses with many learners gaining the mark.

The fourth part of the question was, again, better answered with most learners gaining at least one or two marks for stating the advantages and the better learners being able to provide a discussion concerning the implications for the organisation of tailoring software.

Question 16

Some good responses were given to the first part, with better learners being able to apply their knowledge of the characteristics of computer systems, gained through studying this unit, to the context of ‘citizen science’.

A large number of learners provided no response or responses that were not creditworthy.

The second part of the question was well answered with many learners being able to describe the characteristics affecting the quality of information in the context given in the stem.

Use of statistics

Statistics used in this report may be taken from incomplete processing data. However, this data still gives a true account on how learners have performed for each question.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the Results Statistics page of the AQA Website.

Converting Marks into UMS marks *(delete if appropriate)*

Convert raw marks into Uniform Mark Scale (UMS) marks by using the link below.
UMS conversion calculator