

General Certificate of Education (A-level) Applied June 2012

Applied Information and Communication Technology

IT05

(Specification 8751/8753/8756/8757/8759)

Unit 5: Fundamentals of Programming

Report on the Examination

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IT05 – Fundamentals of Programming

General Comments

This unit assesses the candidate's grasp of the fundamental practices and principles that are the foundation of good computer programming. As such and bearing in mind the difficulty of finding real clients, most Centres set scenarios for their candidates to undertake. On the whole these scenarios did provide candidates with a reasonable amount of information with which to work out a software specification and produce a programmed solution. Some were very effective in providing candidates with a challenging task that allowed them to access the full range of marks available. Centres are advised to consult their Portfolio Adviser if they need guidance on the suitability of a particular scenario.

Some very good examples of programs were produced that demonstrated a good understanding of the principles and practice of programming such as those who created a booking system and used Access as the back end database and Visual Basic to create a user interface this allowed the candidates to clearly show the data types and modular programming in both the design and implementation, as well as the use of iteration and selection and the data structures used. This allowed these candidates to gain higher marks than those who had used only Access as this made it difficult to show the use of iteration and selection and the use of a modular program structure.

Few candidates gained full marks on AO1, Row 4 where for 1 mark candidates must use both selection and iteration structures and for 2 or more marks, candidates must use "complex selection and repetition structures". Examples of these are structures such as nested IF, CASE, or any other selection structure nested inside a repetition structure, or vice versa. For 3 marks "complex conditions" might use Boolean operators AND, OR, NOT, or combinations of relational operators.

When providing a listing of program code, candidates should be encouraged to copy the code into a word-processing application, as most programming environments only allow the printing of plain text files. This often means that indentation is not clear and the lack of margins on pages of code often leads to the portfolio binding obscuring the code. For 2 or more marks on AO3, Row 6, candidates must properly indent and comment on their code.

Mark Ranges and Award of Grades

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