



General Certificate in Secondary Education

**Design & Technology
(Electronic Products) 3541/3551
Full or Short Course**

Full Course (3541) Higher Tier

Report on the Examination

2007 examination - June series

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Dr Michael Cresswell Director General.

General

Centres are to be congratulated on their preparation of candidates for the examination with most adapting well to the restriction on the use of colour in the design questions. The majority of candidates also completed their answers within the space provided making the task of marking more straightforward.

Full Course (3541) Higher Tier

Question 1

Overall this question was well attempted with most candidates scoring highly.

Question 2

- (a) It was encouraging to see so many good responses, with most students scoring well. However, the quality of drawing was actually disappointing with many not using a ruler, drawing in proportion or showing clear connections.
- (b) The responses were disappointing with a significant number of candidates describing the output as though it was an astable circuit.

Question 3

- (a) The calculation was reasonably well attempted although getting the units correct still presented a major challenge for many candidates.
- (b) Was well answered.
- (c) Whilst many candidates were aware of the need to change the values of the resistor and/or capacitor, there was some confusion over the need to double the value of either the resistors or the capacitor.
- (d) The need for a variable resistor was recognised but generally an inaccuracy other where it needed to be placed.

Question 4

- (a) Contained many vague responses, quite often not relating to the system diagram shown in the question.
- (b) Was extremely well answered.

Question 5

- (a) Most candidates scored well, naming specific materials for each part.
- (b) Most candidates scored well.
- (c) Showed a wide range of responses. The best answers were clearly drawn to show the required information and detail of construction, along with appropriate annotation. Candidates need to think carefully about the location of detail such as LEDs, switches, etc. and to place them in a practical position. For example a wood base box cannot have these components on the edge of the top.
- (d) Many candidates just evaluated their design with absolutely no reference to any form of commercial production or to the likely impact of producing it in batches of 100.

Question 6

Candidates overall made very encouraging responses to this question, with the flow chart approach been the most popular. The better responses showed candidates to have thought about the layout of their answer rather than rushing into putting their ideas on the paper.

It is important that candidates do not just rewrite the instructions but use appropriate programming commands. This was shown by many candidates who correctly described the condition of the outputs as high/low or on/off but failed to do the same for the input, where they used a description of the wand and track touching instead of checking whether high or low.

Question 7

A well answered question with responses covering the full range of marks. A number of candidates spent time describing the processes rather than comparing them.

Question 8

Overall this was well attempted although a significant number of candidates had limited access to all the marks, by limited or no consideration of the impact of communication at work. The best answers were written clearly and concisely in a lot less than the space provided.

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