



## **General Certificate of Secondary Education**

# **Design and Technology (Resistant Materials Technology) 3545 Full Course**

**Foundation Tier Written Paper  
3545/F**

## **Report on the Examination** *2007 examination - June series*

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*Dr Michael Cresswell Director General.*

## **Administration**

Most centres complied with AQA's instructions relating to the collation, packaging and dispatch of scripts. There were, however, a number of centres that in one or more ways contravened the regulations, which in turn resulted in difficulties for the examiners. The following examples highlight these difficulties:

- failure to sort scripts into the order candidates appear on the attendance list;
- candidate details either omitted or incorrectly recorded on the script;
- incorrectly submitting the insert of colour photographs with the script.

Fewer candidates contravened the regulations with regard to the use of correction fluid and the colour of ink employed to record their answers.

## **General**

The examiners reported that once again there was substantial evidence of the use of the Preparation Sheet by centres when preparing their candidates for the examination.

The use of the preparation sheet is intended to give the candidates 'ownership' of their paper. It allows them to produce real and valid responses to the examination questions based on work done in the weeks before the examination. It is anticipated and intended that teachers should have full involvement when preparing candidates for the examination by fully utilising the preparation sheet. Where centres had made good use of the preparation sheet their candidates invariably went on to produce high quality responses. However, centres and/or candidates who failed to take advantage of this preparation material generally found themselves disadvantaged.

The quality of sketching was found to be particularly good in most centres. The use of rendered, well-annotated, pictorial views is now the norm rather than the exception.

There was some evidence of candidates misinterpreting questions. Teachers should emphasise good examination techniques to their candidates. In particular the need to read and re read each question carefully before attempting it. They should also be taught to use any 'spare' time at the end of the examination to carefully go through both the questions and their answers.

The manufacturing/making question remains the least well answered question on the paper and centres are encouraged to prepare their candidates thoroughly for this type of question. In particular, correctly naming tools/equipment was an area of the specification in which candidates appeared to be quite weak.

## Question 1

The majority of candidates answered this question well. Many candidates gained full marks by producing four relevant specification requirements for a computer games storage system and subsequently went on to expand their answer and provide a suitable explanation for each. Candidates lost marks by repeating answers already given.

## Question 2

The majority of candidates answered this question well. It was clearly evident that candidates had obviously worked with the preparation sheet and subsequently proceeded to produce quality responses.

- **Variety of Ideas**

Many candidates were able to access high marks by showing three **different** ideas. There was less evidence this year of candidates demonstrating their creative ability by producing original designs. The majority of candidates chose to design boxes with shelving. They then went on to develop their idea by simply including drawers.

- **Quality of sketching**

The standard of sketching was generally good, but slightly below the standard of previous years. Many candidates made an attempt at producing a pictorial view of their idea. The majority of 2D line drawings were clear and in proportion. There was good use of colour/rendering techniques.

- **Quality of notes**

The quality of annotation varied considerably. Most candidates chose to provide simple notes to describe the features of their ideas. Weaker candidates simply labelled the parts of their design, whilst higher marks were awarded to candidates who provided detailed notes regarding the function of their designs.

## Question 3

- (a) This part of the question was not answered particularly well. A number of candidates failed to relate how ICT could be used when **designing** a computer games storage system and, incorrectly, gave answers relating to how ICT could be used when **making** a computer games storage system.
- (b) Conversely, a number of candidates failed to relate how ICT could be used when **making** a computer games storage system and, incorrectly, gave answers relating to how ICT could be used when **designing** a computer games storage system.

Teachers should emphasise good examination techniques to their candidates, in particular the need to read and re read each question carefully before attempting it.

### **Question 4**

- (a) Most candidates were able to name a suitable material from which to make their chosen stand for an MP3 player. Candidates should be made aware that there are more marks available for naming a *specific* material rather than simply naming a generic material. Most candidates went on to give a correct reason for choosing their material.

- (b) Candidates' performance in answering this question has improved over recent years.

Stage 1 - there was evidence of candidates producing templates and/or giving details of the marking out procedure they would use to make their stand for the MP3 player.

Stage 2 - this stage highlighted the candidates' lack of knowledge of basic cutting/shaping processes.

Stage 3 - an increasing number of candidates displayed a good understanding of joining and/or bending techniques.

Stage 4 - answered well by most candidates. Knowledge of finishing techniques was good.

An increasing number of candidates are electing to make their chosen stand for the MP3 player by CAD/CAM methods. The quality of answer given is also improving.

### **Question 5**

The majority of candidates were able to name all four items of personal safety equipment. A number of candidates placed the personal safety equipment into the wrong cell and lost marks. Candidates were generally able to give a suitable process where they would use the personal safety equipment, together with a hazard that the personal safety equipment prevented. Candidates lost marks when they simply named a tool rather than a process where the personal safety equipment would be used.

### **Question 6**

There was an improvement in the performance of the candidates on the materials question this year. However, once again, candidates should be made aware that there are more marks available for electing to name a *specific* rather than a generic material.

- (a) Remote control holder A  
Most candidates correctly identified that this was made from 'wood', with many going on to name a suitable specific material such as 'beech', 'pine' or 'oak'. Reference to its 'appearance' was generally given as correct reason for choosing this material.

Remote control holder B  
Most candidates correctly identified that this was made from 'plastic'. Many chose *acrylic* which gained them an extra mark. Reference to it being 'clear' was generally given as correct reason for choosing this material.

Remote control holder C

Most candidates correctly identified that this was made of 'metal'. Many chose a specific type of metal which gained them an extra mark. 'Steel' and 'aluminium' were the most popular correct specific materials chosen. Reference to 'strength' was generally given as correct reason for choosing this material.

(b) **Remote control holder A**

Most candidates gave a suitable specific finish which could be applied to Remote control holder A. 'Varnish' was the most popular correct specific finish chosen.

**Remote control holder C**

Many candidates correctly chose 'polish' or 'lacquer' as a correct method of finishing Remote control holder C.

The finishes must relate to the chosen material for the candidate to be awarded a mark.

### **Question 7**

All candidates were able to gain some marks on this question. The weakest candidates gained two marks by simply placing the 'start' and 'finish' terminators in the correct position. Many candidates went on to get the first four boxes correct, displaying some knowledge of the use of flow diagrams. Only a few candidates went on to gain full marks by correctly indicating where the flow and feedback arrows should be placed.

### **Question 8**

The majority of candidates were able to match the correct file with the relevant shape. Very few candidates were able to name the files. This highlights the candidates' lack of knowledge of tool terminology.

### **Question 9**

- (a) Most candidates were able to gain marks on this question. Candidates correctly identified 'the keyless chuck', 'the use of a battery', 'the one handle design' and 'the ergonomically designed handle' as improved features of drill A over drill B. Marks were lost during the candidates' explanation. Teachers and candidates are reminded that when the question is awarded 2 marks that a more detailed description is required.
- (b) Most candidates were able to give a disadvantage of using Drill A over Drill B. The most popular disadvantage suggested by the candidates was that the battery would eventually run out.

### **Question 10**

- (a) (i) This was a well answered question with the majority of candidates correctly naming three methods of carrying out market research. Use of the Internet, carrying out surveys, getting the public to complete questionnaires and looking in books and magazines were the most popular correct responses.

- (a) (ii) Most candidates gained one of the two marks on offer by correctly explaining why it is important to carry out market research. They related it to designing a product which reflected the requirements of the consumer.
- (b) (i) This was a very well answered question with the majority of candidates correctly naming three methods of advertising a product. Use of television adverts, internet 'pop ups' and posters were amongst the many correct answers given.
- (b) (ii) Most candidates gained one of the two marks on offer by correctly explaining why it is important to advertise a product. They related it to raising public awareness of the product thus increasing sales.

### ***Mark Ranges and Award of Grades***

Please see the following link:

<http://www.aqa.org.uk/over/stat.html>