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## **General Certificate of Education**

# **Design and Technology: Product Design (Textiles) 1561**

TEXT1 Materials, Components and Application

## **Report on the Examination**

*2009 examination – June series*

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Set and published by the Assessment and Qualifications Alliance.

## General

This was the first full examination of the new specification and candidates responded quite well on the whole, with more detailed and accurate responses than those seen in the January paper. Most scripts were well presented and legible but an increasing number of candidates have such poor handwriting that their answers are difficult to read. Sketches and diagrams often showed extra information which was given credit as appropriate.

Of the two optional questions, Question 8 was by far the more popular although both questions produced responses at a similar level.

## Section A

This is a compulsory section of the paper and candidates are required to answer a number of short questions testing basic knowledge of textile materials and processes. The format for this section is very similar to the January paper and the specimen paper circulated to centres as part of the launch meetings for this specification.

This section of the paper produced a mixed standard of responses, although these were much improved on the January paper.

### Question 1

Only 30% of the candidates were able to score full marks on this question. Many placed Tactel® as a regenerated rather than a synthetic fibre.

### Question 2

The most popular response referred to the fact that non-woven fabrics do not fray. Many are under the mistaken impression that these fabrics are strong and/or good insulators, presumably from having made felt in coursework activities. Approximately 25% of candidates did not score any mark on this question.

### Question 3

Generally well answered with clear references to the need to hold the fibres together and to make a strong yarn. Many candidates were able to give one correct answer but about 60% were unable to give a second reason.

### Question 4

- (a) This question, on basic fabric terms, was answered well by the majority of candidates, although almost 20% did not score any mark here despite this question having appeared on a previous paper.
- (b) Many confused and vague references to 'lines in a pattern' and the arrangement of fibres in a fabric resulted in low scores for this question.

### Question 5

- (a) Although there were many accurate descriptions of the pile fabric appearing to be different colours when viewed in certain directions, there were few references to the raised surface of a pile fabric. Only 20% of responses were awarded two marks.
- (b) Candidates either knew the names of typical fabrics with a directional pile or made inaccurate guesses. Velvet was universally popular whilst denim was a common incorrect response.

### Question 6

Some well explained and accurate explanations along with the highly amusing and bizarre ones. 33% of answers did not score any marks here.

### Question 7

Many candidates were able to give appropriate examples but not a definition of what is meant by a smart fabric.

## Section B

Candidates are required to answer one of the two questions in this section.

### Question 8

- (a) Responses were mixed and the question produced a good spread of marks. Some candidates showed detailed knowledge and understanding of the cotton content, and more candidates than in previous examinations related to the plain weave construction, and to the use of the bag. Many knowledgeable candidates clearly understood how the fabric properties but failed to make a critical evaluation of its suitability for a bag. When responding to this type of question, candidates should be aware that they need to consider fabric structure as well as fibre content, and that *critically evaluate* requires them to discuss the drawbacks as well as the positive points about the fabric. A number of candidates do not appear to have a clear understanding of the properties of this most basic of textile materials, as evidenced by the fact that about 20% of those answering this question scored one or less of the five marks available for this part.
- (b) (i) A lack of clear understanding of the properties of polyester, and failure to evaluate its use as a lining fabric meant that candidates did less well on this question. There is much confusion about polyester's lack of absorbency and its resilience; future candidates would do well to thoroughly learn and understand the properties and use of fabrics made from synthetic fibres.
- (b) (ii) There were some well considered explanations as candidates had thought about the product and made relevant points. Reasons for lining a product has been a regular topic on AS papers in the past and detailed explanations are expected for high marks.

- (c) Good knowledge of topstitching and the reasons why it is used led to many high answers.
- (d) Some very detailed and well considered explanations meant that over 50% of answers were awarded four or five marks. Good answers related the components to the colours and materials of the bag as well as the use. Weaker responses were very descriptive of the components and a number are still erroneously referring to *pockets* as *components*.

### Question 9

- (a) Reasonably well answered although not in as much detail as the equivalent 8(a) question. As with similar questions about synthetic fibres, there is little accurate knowledge and real understanding. Polyester is a commonly used fibre in modern fabrics and candidates should be aware of its properties and uses, and be prepared to write in some detail about them.
- (b) 40% of candidates answering this question scored no marks, as few appeared to be familiar with this increasingly common modern fabric finish. Many made a guess and achieved one mark but there were few good answers.
- (c) Candidates had obviously used past papers to revise the uses of lining in fashion products and there were some detailed and well considered points.
- (d) Candidates were knowledgeable and many scored well on this part. There was, however, some confusion as a significant number thought that piping prevents fraying of fabric edges.
- (e) (i) Those who thought carefully about the function and way in which the flap would be used offered appropriate alternative fastenings. Zips were not considered to be an acceptable fastening and were not given credit.
- (e) (ii) Credit was given for considered comparison between poppers and the alternative fastener selected by the candidate, even when the alternative named in part (i) was inappropriate. Generally candidates scored well here although there were many vague descriptions rather than effective comparisons.
- (f) As with the topstitching in question 8, candidates scored well

## Section C

This is a compulsory section of the paper and candidates are required to provide longer, more structured responses to a variety of questions which were based on the design and manufacture of a specific product. The format for this section is very similar to the January 2009 paper and the specimen paper circulated to centres as part of the launch meetings for this specification.

Product analysis is a popular coursework activity and candidates who are practised in analysing a wide variety of different textile products are better equipped to answer this type of question on the written paper.

### Question 10

- (a) The needs of the target market were carefully analysed resulting in some high scores for this part of the question. Colour and pattern of the fabrics, size and facial features of the doll and health and safety issues were the most common points raised. There was some lack of clarity about who the labelling would be targeted at as, according to some, there are a number of precocious toddlers who would go to choose and buy a toy for themselves.
- (b) Although there was knowledge of polyester fibre filling, many did not relate it specifically to the doll, leading to some very generalised points, eg *it's water resistant so good if it rains*.
- (c) It was expected that candidates would make connections between the fabrics used for the doll and the need for the advised care. Most candidates made a sound attempt to explain the meaning of the symbols, although there was confusion with those for dry cleaning and tumble drying, and many did not appear to know the bleaching symbol. Few were able to relate these with any understanding to the doll. This area of the specification is tested regularly and, whilst there is awareness of the fact that wool can shrink if washed inappropriately, candidates need to develop understanding of how care advice relates to the thermoplastic nature of synthetic fibres.
- (d) The majority of candidates answered this question well.
- (e) This part of the question was poorly answered as there was little discussion of the potential health and safety issues and the legal requirements placed on manufacturers, and many resorted to copying out the information given on the product labels. The main area of concern was the danger of choking, and there were few who considered issues such as flammability and strangulation. Candidates should be aware that where a large number of marks are allocated to a question, some in-depth discussion of issues is expected.
- (f) Surprisingly, this was not very well answered with only just over 50% of candidates earning two marks here. Many were confused between the legality of copyright and the manufacture and sale of fake products.
- (g) Just under a third of candidates managed to achieve more than 50% of the marks for this part of the question. Suggestions were fairly basic and related mainly to changes in the style of hair and clothing. There were a few original ideas such as including a voice box, using smart materials to allow facial features to change and making different

collectable dolls. Since the original product was described as a first rag doll aimed at children of 12+ months, it might have been a logical step to develop a toy for a slightly older child, yet many of the recommendations appeared to be aimed at teenagers. Although drawings were not necessary they were on the whole very weak.

- (h) Responses were disappointing as few went beyond the most basic points about CAM enabling manufacture to be more efficient and accurate. A significant number did not appear to have read the question and concentrated on the benefits of CAD. Examples were usually restricted to pattern layouts and cutting of fabric. This is an important part of the specification and candidates would be well advised to find out and learn about specific ways in which automated manufacturing processes are used in the textiles industry. When responding to this type of question, candidates need to be able to give specific and accurate detail, including appropriate examples, and to consider a number of different benefits.

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