



General Certificate of Education

Design and Technology: Product Design (Textiles) TEXT 1

Report on the Examination

2009 examination – January series

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General Comments

This was the first examination of the new specification but the paper was generally not well answered and there were many very low scoring papers. There was evidence that many candidates had not had sufficient time to become familiar with the whole of the specification content and many responses lacked knowledge and understanding.

This was compounded in the presentation of immature and, at times, garbled responses to the questions.

Most scripts were well presented and legible but an increasing number of candidates have such poor handwriting that their answers are difficult to read. Additionally, the quality of written communication is deteriorating with many candidates unable to spell the most basic words or to construct a grammatically correct sentence.

There was a reasonably even spread of choices from the two optional questions with slightly more attempting Question 8, and only a small number attempting both questions.

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 specimen paper circulated to centres as part of the launch meetings for this specification.

The standard of responses on these questions testing basic knowledge and understanding was very poor.

Question 1

- (a) Many candidates confused 'thermoplastic' with heat setting 'smart' materials; others thought that the term means that a fabric is a good insulator. The majority of candidates scored zero for this part of the question.
- (b) The vast majority of candidates were able to score two marks here.

Question 2

Many candidates explained that the process of carding removes dirt and impurities from the fibres and some went on to explain that it aligns the fibres ready for spinning. A significant number thought that carding makes the fibres stronger and/or fluffier. Vague responses such as 'they are easier to spin' were not given credit.

Question 3

Clear references to dry fibres and friction earned marks for many candidates. The causes of static electricity in some fibres were generally well known.

Question 4

- (a) Candidates needed to refer to *weft* knitting in order to be credited with a mark.
- (b) Very few candidates knew the correct terms for the different rows of loops; the majority referred to them as warp and weft, indicating their inability to differentiate between woven and knitted fabrics. Weft knit is a basic fabric construction method and candidates should be advised to learn about the ways in which it differs from a woven fabric.

Question 5

- (a) Many confused explanations referred to the warp and weft of woven fabrics providing a clear indication that candidates do not understand the basic differences between knitted and woven fabrics. Many also thought that 'dyeing' will make a patterned fabric.
- (b) The majority of answers cited tie dye and batik as resist methods with a few references to discharge printing. A sizeable number did not understand the term 'resist' leading them to offer basic methods of printing and dyeing in their responses. Overall, this question was not well answered.

Question 6

There was generally good knowledge and understanding of the need to use a polyester thread with most offering 'strong' for one of the marks. A number of candidates struggled to give a second realistic reason.

Question 7

- (a) Few candidates recognised the *Woolmark*; a significant number thought that it refers to recycling.
- (b) Very few answers were awarded a mark as candidates did not explain that the symbol is a guarantee of *new* wool, not just 100% wool. Many candidates managed to score one mark for a reference to the symbol being a quality mark. An unbelievable number of responses suggested that the Woolmark indicates that a product has been recycled or is environmentally friendly, this presumably because they failed to understand the significance of the ® mark.

Section B

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

Question 8

- (a)(i) Although the majority of candidates have little knowledge of the properties of acrylic and polyester, many have a gift for creative writing. There was much confusion about the properties of the individual fibres including incorrect references to their absorbency and stretch qualities. It would appear that many candidates wrote about properties that they thought the fibres *should have*, rather than the ones that the fibres actually *do have*. Many responses clearly indicated the lack of understanding of the relationship between fibre content and fabric construction in determining suitability for a specific product. There were also many references to the elastane content and the fabric construction, neither of which were asked for in this part of the question. A number of candidates, who clearly had some understanding, lumped all the qualities together without differentiating between the contributions made by the individual fibres.
- (a)(ii) There was good understanding of the contribution made by the elastane fibre although some repeated points about stretch qualities were not awarded a second mark. Few registered the significance of *small* percentage, or gave any detail of the qualities of elastane beyond *its stretchy*.
- (b)(i) There were some good points made although many responses suffered from some confusion. The most common points were about the stretch and insulation qualities of knitted fabrics and many also referred to the ability of towelling to wick moisture away from the skin. A very small number of candidates linked the towelling structure to the fibre content and so were able to relate the shortcomings of the fibres to the fabric construction.
- (b)(ii) Almost all candidates failed to score a mark on this section of the question, as their answers were varied but not related to the fabric structure, and at times entertaining, but rarely correct.
- (c) There was good explanation of the meaning of the symbols, although some thought that the tumble dry symbol referred to dry cleaning and some failed to recognise the *do not bleach* triangle. There was a widespread lack of understanding that most of the advice is based the thermoplastic nature of the acrylic and polyamide fibres in the blend and not on some perceived notions that the fabric might shrink. Candidates would do well to learn about the nature of these fibres in relation to their use and care in order to secure success in answering future questions.

Question 9

- (a)(i) Explanations were varied as candidates either knew how the checked pattern had been achieved or made incorrect and confused guesses. There were many descriptions of the twill weave – which was not asked for - and vague references to ‘different coloured threads’. The method used to construct striped and checked fabrics is basic textile knowledge and candidates should be prepared for this type of question. The highest scoring responses usually came from those who presented an accurate and fully labelled diagram, showing how the different colour blocks had been achieved in both the warp and weft directions.

- (a)(ii) Many candidates referred to the throw as a scarf and structured their explanations accordingly. The warmth of wool was the most obvious reason for its suitability, but few were able to go beyond this basic property. Candidates are convinced that all woollen fabrics are knitted, and that wool is an easy-care fibre, leading to some very poor responses. Whilst answers tended to emphasise the positive qualities of wool, there were few who considered the drawbacks and thus there was little critical evaluation.
- (b)(i) The term 'fleece' is always interpreted as 'wool' by a number of candidates. Very few were able to provide an accurate description of this fabric beyond the fact that it is soft.
- (b)(ii) The principle of trapped air acting as an insulator was well understood by many candidates. Some thought that the thickness of a fabric would make it thermally insulating whilst others compounded the error they had made in part (i) by continuing to refer to woollen fabric.
- (c) Explanations tended to be descriptive of the effects rather than the fabric construction method. There were references to Throw X as a knitted fabric, some thought that both the warp and weft yarns had been twisted together, and a number thought that glue or chemicals had been used to achieve the fringed effect. Explanations about the edge of Throw Y, although lacking detail, were generally more accurate.

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 specimen paper circulated to centres as part of the launch meetings for this specification.

Question 10

- (a) There were many clear descriptions of the twill weave, especially where a diagram had been drawn. Many lost marks because they did not clearly indicate the warp and weft, and nor did they show accurate detail about the pattern of interlacing – a number drew a plain weave.
- (b) Some clear and accurate descriptions related to the fact that indigo sits on the fabric surface and is easily removed by friction. Many offered garbled information about the bleeding of dark colours during washing.
- (c) Answers were very descriptive of the components rather than justification for their use, and some candidates clearly thought that seams, pockets and rows of stitching are components. Few acknowledged the choice of the components in relation to the jeans/casual style of the trousers.
- (d) Removal of one or more pockets and the turnups, together with a reduction in the number of components used were favoured methods of reducing manufacturing costs of the trousers. Most candidates made a sound attempt to explain how costs would be reduced but a lack of specific information such as saving fabric, components; manufacturing time and specialised labour meant that few failed to achieve full marks. Those who suggested such drastic modifications that the style was completely changed were not given credit.

- (e) Although most candidates were able to identify an appropriate quality control check, few were able to explain the consequences of inaccurate manufacture, and this was often limited to generalised issues such as *the trousers won't sell*. There were also many inappropriate reasons relating to the dangers associated with children swallowing zips, buttons and threads. When answering this type of question, candidates should be advised to avoid recommending that manufacture is 'done properly' as these statements lack detail or evidence of specific knowledge.
- (f) This part of the question was very poorly answered which was disappointing given the topic has appeared very regularly on past AS and GCSE papers, and the regular media coverage of global issues. Many candidates wrote in general terms about the issues, offering little detail or depth of knowledge, and often concentrating on one issue at the expense of a broader coverage. Points raised were often repeated and some candidates referred to the current financial crisis as a positive reason why fashion trousers should be sold cheaply. Consumer issues, relating to the use of the trousers, were given scant coverage beyond their disposal into landfill sites.
- (g) Explanations were generalised and vague, and many candidates thought that JIT is high speed manufacture, being able to take a long time over the making of products or the making and selling of the latest fashions. Many understood that a JIT system reduces the need for storage but failed to explain further benefits. There were numerous references to 'CAD and CAM' with no explanation of their role in a JIT system. When responding to this type of question, candidates need to be able to give specific and accurate detail, and to consider a number of different benefits. Answers tended to be very one-sided with little reference to the ways in which the retailer might benefit.