



**General Certificate of Secondary Education
June 2011**

**Design and Technology: 45701
Textiles**

(Specification 4570)

Unit 1: Written Paper

Report on the Examination

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General

Candidates responded with interest to the 2011 Written Paper for Textiles Technology. The single tier paper is designed to engage all candidates and it was very pleasing to see that lower ability candidates had attempted most of the questions through to the very end of the paper and that higher ability candidates took the opportunity to demonstrate their subject knowledge and gave informative detailed responses to the set questions.

In Section A and B, some candidates demonstrated an impressive subject knowledge and were able to recall and communicate this knowledge and understanding consistently well throughout the paper. Centres are reminded that success for candidates is dependent on teaching the whole of the subject content to include textiles materials and components, design and market influences and production methods and manufacturing techniques.

In preparation for the examination candidates should be directed to give full and detailed answers to all questions, even those for only one or two marks. This year, it was pleasing to see that candidates were generally able to give fuller responses and in particular there was more detail written when completing empty boxes in charts. This was an improvement on last year's responses. Please note that candidates should be encouraged to read the first part of each question with care, as this should guide the candidate's thinking with further prompts provided by photos or diagrams.

The majority of candidates responded with enthusiasm to the research context stated on the Pre-release Material for Section A. Some candidates demonstrated design flair and originality, making excellent reference to the specified theme. The most successful candidates were well prepared for Section A and this was evident in their inclusion of decorative textile techniques, appropriate sustainable materials and design ideas that were clearly influenced by Art Deco. However, a substantial number of candidates lost the opportunity to gain marks because they described design ideas for bags with no regard at all to sustainability. This was disappointing, considering the wide range of new ideas about sourcing sustainable materials and working with environmental and ethical issues in mind, to develop sustainable products. It was the opportunity for candidates to show an awareness of new developments in technology and current social issues that influence product design.

Question 1

- 1(a)** This was answered well and most candidates achieved full marks. Popular answers included reference to decorative techniques and sustainable materials.
- 1(b)i** Initial design ideas were generally good with lots of detail. Some candidates spent too long on this question though and completed fully coloured final ideas, possibly at the expense of the quality seen in the subsequent answer to 1(c). Those gaining full marks had shown originality, design flair and creativity, and closely followed the design brief, including use of some sustainable fabrics, components and techniques in two different bag designs.
- 1(b)ii** Most candidates gave valid reasons based on the appeal of their design to the target market.
- 1(c)** Candidates at every level of ability made very careful drawings to show their bag design from a variety of different viewpoints. This demonstrated their understanding of fitness for purpose and knowledge of textile materials and components. Candidates gaining the highest marks also described innovative design ideas for bags inspired by the shapes, colours and styles of Art Deco and had a clear understanding of what would appeal to art gallery visitors.

At those centres where candidates had prepared well for this question, some very impressive subject knowledge was evident in the use of sustainable materials. Many centres had encouraged candidates to clearly label their design ideas to include an appropriate and knowledgeable range of sustainable fabrics and components, including recycled, reclaimed, vintage, biodegradable, ethical and specially developed modern sustainable fabrics with organic cotton the most frequent fabric used. Candidates who failed to include any type of sustainable fabric or components and showed no evidence of knowing about sustainability in textile product design and manufacture lost 20% of the available marks as listed in the breakdown of marks on the paper for this question. Those gaining full marks had shown a thoughtful and imaginative use of materials that related to the theme. The design context gave opportunity for showing in depth subject knowledge and creativity and some candidates rose to the demands of the paper for the design question, although a substantial number of less imaginative standard bag designs similar to those already sold commercially were also seen. Use of colour was generally relevant to the theme, and those achieving the highest marks were inspired by researched Art Deco images. Presentation was very good but candidates who failed to annotate to explain choice of materials and details of techniques lost the opportunity to gain marks.

- 1(d)** Some candidates failed to consider how mass manufacture would influence design decisions, instead they referred to ideas about how to make their original design more complex, smaller or cheaper to produce.

Question 2

- 2(a)** Many candidates were able to give points for the specific fabric specification successfully. A common error was to state that the fabric should be very absorbent rather than to indicate that the fabric should wick moisture away from the body.
- 2(a)ii** Some candidates were able to give clear and detailed information about cotton fibres and relate their answer to the clothing for the athlete.
- 2(b)i** Although some candidates reportedly found it difficult to identify the non-woven needle punched/bonded/felted fabric construction B, many candidates who gained marks for this question were able to label all 3 methods. It was surprising to see that a large number of candidates could not identify woven or knitted fabric from the basic diagrams A and C.

2(b)ii and 2(b)iii

These linked questions proved to be difficult for many candidates to answer; the impact of fabric choice for use in this product type was better answered by higher ability candidates. This was true for 2(c)i and 2(c)ii, with Goretex being a popular choice of fabric to name and describe. Some candidates were still considering fabric suitable for an athlete and listed Lycra which was incorrect; others named fabrics which were not new, such as nylon.

Question 3

3(a)i and 3(a)ii

Most candidates were able to give an appropriate method of printing and describe the process in detail. Some candidates gave a different colouring technique such as tie dye and the mark scheme was adjusted to award some marks for 3(a)ii in these instances to take the information given in notes and diagrams into consideration and award some marks as appropriate.

3(b) This question tested candidates' subject knowledge of how computer technology could help in the textile industry when designing, colouring and decorating fabric. Most candidates had structured their answers on the three given areas; those who were able to clearly describe in a logical and ordered way an understanding of the benefits, gained high marks. A few candidates gave further specific examples of how computers could help but some of these were related to other areas such as research or cutting fabric and moved away from the set question and did not gain marks for this part of their answer. Also, some candidates referred to classroom practice rather than that of the textile industry. Quality of written communication was assessed and those who spent a few minutes planning their answer and ensured information was clearly and coherently organised using specialist vocabulary where appropriate, gained high marks.

Question 4

4(a)i and 4(a)ii

Many candidates had little understanding of what a working drawing is and referred to design ideas and manufacturing specifications in very general terms.

4(b)i Candidates were knowledgeable about production flow charts. The flow chart was filled in correctly by the majority of candidates and many valid points were listed for 4(b)iii.

4(c) Most candidates gained one or two marks for this question, showing an understanding of sub-assembly.

4(d) Some candidates did not understand the term seam neatening – this question was often answered with *ironing or undo and sew again*. Those that prepared for the exam by practising answers using past papers benefitted here.

Question 5

5(a) Candidates responded well to this question and answered in full to explain the advantage/disadvantage of certain fastening components. Many candidates gained full marks.

5(b) Although there were some correct answers for this question, some candidates did not read the question properly and repeated the fastening components from the previous question, or did not know what the term 'components' meant .

5(c)i and 5(c)ii

These linked questions proved to be difficult for many candidates to answer; some candidates however, responded with an excellent range of varied examples of electronic components in textile products and showed in depth subject knowledge about new technology and product design. These questions were better answered by higher ability candidates. A few candidates forgot that this question was about components and wrote about computerised sewing machines. For 5(c)ii some candidates wrote about how expensive some textile products are rather than the value added to the products by inclusion of electronic components.

Question 6

- 6(a)i** Candidates gained full marks with ease and discussed the issues at length with strong opinions given.
- 6(a)ii** This question was more difficult to answer and it was a shame to see that a few candidates had referred to fake fur in answer to 6(a)i but had not been able to answer this question correctly to gain a mark.
- 6(b)i** Popular answers referred to the thickness of the fabric and the fur that insulates against cold. Many candidates recognised that most of the body was covered by the clothing, in particular by the hood.
- 6(b)ii** Candidates who wrote in detail gained the highest marks. Most candidates were able to easily identify inspiration to be gained from examining the clothing in the photo.

Question 7

- 7(a)** The majority of candidates were able to correctly identify the specific reasons relating to 'hearing' and 'inhaling'. They knew it was to protect the ears/stop deafness or to prevent inhaling toxic fumes/dust.
- 7(b)** Most candidates stated that possible dangers/hazards were looked at but not all mentioned the control/prevention aspect of risk assessment.
- 7(c)i** Lower ability candidates referred to one issue repeatedly. Most described electric shock, hair caught, fingers/limbs sewn/cut, deafness with noise and damaging lungs due to inhaling dust.
- 7(c)ii** On the whole most candidates achieved full marks but many still think you sew wearing gloves.
This health & safety question was generally very well answered by all candidates and meant that even lower ability candidates successfully reached the end of the paper. Higher ability candidates related their answers to industrial practice rather than to classroom safety rules.

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