



General Certificate of Education

**Design and Technology:
Product Design (Textiles)
5551**

PD1T Materials and Components

Report on the Examination

2007 examination – June series

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General

The quality of work was mixed, but generally of a much weaker standard than that seen in the January examination, with fewer candidates achieving the high marks seen in the recent past, and a higher proportion of candidates at the lower end of the mark range. Many candidates wrote very confused accounts with contradicting statements and tended to describe rather than evaluate or analyse.

The majority of candidates followed the instructions to answer only two questions from questions 2, 3 and 4 with very few attempting all three questions. Candidates appeared to have apportioned their time equally to the questions and there was little evidence of poor time management. Question 3 was the least popular with only a small minority of candidates opting to attempt it.

The majority of scripts were well presented with legible handwriting although the way in which some candidates present their answers causes problems for markers. Many candidates squashed their responses to different questions together in the answer booklet; it helps if candidates rule off at the end of each question and leave a line before starting the next. It is helpful if candidates indicate that they have continued with a response elsewhere in the script if they decide to return to a question later in the examination, and that they indicate to which question and sub-section the response belongs. Where additional sheets have been used they should be fastened to the main answer booklet, but not so tightly that it is difficult to turn the pages.

Quality of written communication was generally satisfactory but there were many superficial and confused answers which did not give detailed and/or relevant information. There was some real evidence that many centres had used past papers for revision, leading candidates to present more considered responses.

Candidates should be advised to look at the mark allocation for each sub-section of each question and to write appropriately, ie not giving a half page of reasons for a question allocated only one mark. However, they do need to be reminded to give a wide range of examples when asked to do so in order to show knowledge and understanding relevant to the situation.

Question 1

The format of the question was similar to that used on recent papers and produced a reasonable spread of marks, although many were disappointingly low.

(a) This section was dealt with in a much clearer way by many who were able to make comparisons rather than just describing the picture shown on the insert sheet. The labelling of the items in the picture may have helped the weaker candidates as scores were generally better than on similar questions in the past.

There were, however, many responses that simply described the fabrics rather than explained how they had been used. Comparisons were not made and many missed the most obvious points about the colour contrasts and variety of tone, focusing instead on the general feeling of the room.

- (b) A very poor response with very few full mark answers. Candidates clearly had little knowledge or understanding of how fibres are blended and, despite the clue in the question, did not refer to the need to cut the filament fibres into staple form. Some made a pleasing attempt to describe core spinning, but few gave the correct name for the method.
- (c) (i) This question was generally answered well with most candidates gaining at least half of the available marks. Good knowledge of the properties of silk was related to its use for the throw, rather than other more general uses which has been a problem in the past. Many candidates included some evaluation of the suitability of silk for the throw which is a welcome improvement.
- (ii) Well answered with many candidates gaining full marks. There were some good diagrams which aided the explanation; centres should encourage the use of diagrams as they often pick up marks where a confused explanation is unsuccessful. A number of candidates were unclear about how insulation actually works and there were some strange answers from a number of candidates.
- (d) (i) Many very basic answers relating to the variations in colour or texture but few explained the pile structure.
- (ii) Responses suggested that some candidates used experience of working with velvet fabric and satin fabrics to good effect in the examination. However, most accounts contained a lot of repetition about the direction of the pile. There were many references to the fact that the pile should not be flattened, but few mentioned needle-boards or other methods of pressing to protect the pile. Whilst information about pressing was generally sound, there was a lack of knowledge about handling and sewing these fabrics. Many discussed health and safety practices in industry which was not what the question was about.
- (e) This question was answered well.
- (f) (i) Descriptions of voile were mainly limited to its transparency with few references to the plainweave construction.
- (ii) There were some good answers, particularly with reference to voile being lightweight, transparent, and not good for blocking out light, keeping in heat or keeping a room private. Many found the evaluation in this part of the question quite difficult, presenting answers that were descriptive rather than giving a true balance of points relating to the polyester fibre content and the voile construction. A number of candidates made the error of insisting that the fabric was a blend of polyester and voile.

Question 2

This was a popular question which produced a good spread of marks.

- (a) (i) Some very good responses including a detailed and well labelled diagram which were an improvement on previous questions about weave constructions. A failure to annotate the diagram to indicate the warp and weft cost two marks.

- (ii) Knowledge of the construction of a striped fabric was surprisingly very weak with many simply referring to coloured threads with no explanation of how they were actually coloured and combined to produce a striped effect. Some thought the stripe had been printed on to the fabric.
- (iii) Many candidates knew that bleach was the likely cause of the effect but very few mentioned enzymes and some candidates tried to suggest the faded appearance was created by tie-dye or general wear and tear.
- (b) This part of the question was often answered very briefly and very few candidates answered in sufficient detail to earn four marks per section. Few included a balance of points and there was a lack of detailed knowledge, with most responses concentrating on either the fibre or fabric construction. Many presented the information in a very confused manner.
- (c) This question produced the most disappointing answers on the paper. The efforts mostly lacked imagination and many played safe with simple pockets on jeans - some trying different angles of cut - but outside of these few showed any flair.

Question 3

This was least popular question and was not well answered.

- (a)(i) Candidates were knowledgeable about the properties of Gore-tex as a breathable fabric for outdoor applications, but few mentioned that it is the micro porous membrane laminated to the outer fabric, and often an inner one too, that makes the system workable. Those who used a diagram found it much easier to explain.
There was some confusion with neoprene.
- (ii) The main feature of polar fleece as an insulator was well documented but other useful properties were overlooked. Many described it as a brushed fabric made from recycled plastic bottles but few knew it is knitted.
- (iii) Although Tactel was often confused with Tencel, many knew about micro-fibres. Not many candidates related it to polyamide fibre. Candidates are advised to look at the Tactel website.
- (b)(i) The definition of a smart textile was generally good with only a few candidates describing technical textiles.
- (ii) This question was not answered well. A high percentage of candidates offered Lycra and Kevlar as examples of smart fabrics but the majority of those awarded marks referred to micro-encapsulated and thermo chromic fibres. Examples, when given, were good and varied, but some gave only end uses and were not too clear about how the fabric worked.

Question 4

This was a popular question which was answered reasonably well.

- (a) Surprisingly, a number of candidates did not know how a selvedge is produced, nor how it differs from a raw edge. Good diagrams helped some candidates earn marks.
- (b) As always, a question on knitted fabrics resulted in many confused answers. Many gave the properties of knitted fabrics but did not describe the construction. Diagrams are the easiest way to answer this type of question but those who use them often fail to provide sufficient annotation to earn full marks.
- (c) Those with experience of making felt were able to write clearly about the interlocking scales on woollen fibres. Many candidates confused bonding with laminating, producing some very confused explanations.
- (d) This was answered very well with some high marks awarded. There were many sound answers but some candidates gave too many examples of the use of linings and interfacings at the expense of describing the differences between them.
- (e) Some very mixed responses but again, some gave too many examples of use rather than explaining the basic differences between ribbon and bias binding.

Mark Ranges and Award of Grades

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