



General Certificate of Education

Design and Technology: Product Design 5551/6551

PD1T Materials and Components

Report on the Examination

2008 examination – January series

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General

Candidate responses were generally weaker than in previous years and the level of marks awarded reflects this. Questions 2 and 3 gave rise to the weakest scores, and both questions were fairly equal in popularity with candidates.

Scripts were generally well presented and legible with many candidates using notes and diagrams to explain points. In many cases this allowed them to access a higher mark than would have been the case with a written explanation alone.

Very few ignored the rubric and answered all four questions and there were equally few candidates who answered only two questions. It is requested that candidates indicate which questions they have attempted in the boxes on the front cover of their answer booklet, as this does assist the examiners.

As in previous examinations, many answers suffered from a lack of precise detail and a lack of understanding of basic textile terms and processes.

There was, however, good evidence of examination technique having been practised in some centres, with candidates using previous papers as part of their revision, and that comments from previous reports on the examination had been implemented.

There was some evidence that information and advice given at recent teachers' meetings has been implemented in some centres, with candidates attempting to link information about fibres and fabrics to the situations given in the paper.

Question 1

Responses to this question were very mixed. It was felt that the layout was a good one for candidates as they generally respond well to smaller part questions. However, some clearly took longer to read and attempt it, and this possibly had a bearing on how they answered the rest of the paper.

(a)(i) Candidates are coming to expect a question on basic weaves and many produced some very clear diagrams to show the basic plain weave. Despite this, few were able to accurately describe how a striped pattern might be achieved, thus losing two of the four marks available. This is obviously a topic which needs some further consideration.

(a)(ii) The properties of viscose were well documented and most candidates attempted to relate them to the scarf shown on the insert sheet.

(a)(iii) Most candidates achieved two marks and there were some excellent sketches to show the making of the fringed edge. Where a mark was lost, it was usually because there was a lack of clarity about the source of the yarns to be twisted.

(b)(i) Many candidates failed to recognise the pile weave construction from a basic textbook diagram.

(b)(ii) The structure of pile weave presented many problems despite the diagram. Few realised that it is a three yarn system and many tended to concentrate on the tufts being created by the sewing on of extra fabric.

(b)(iii) The use of overlocking to prevent fraying and tidy up raw edges was explained at length in the majority of responses, but few candidates considered other points such as the making of a visible/decorative finish. Even fewer attempted any sort of evaluation of the appropriateness of the method, thus marks for this section tended to be low.

(b)(iv) Responses frequently suggested a lack of any understanding of the differences between velvet ribbon as a ready made component and the cutting of strips from velvet fabric. Marks for this section were low.

(b)(v) Some very detailed information in many cases, leading to the award of high marks.

(b)(vi) Candidates had clearly looked carefully at the photograph on the insert sheet and many were able to give clear descriptions of the fringing to achieve full marks.

(c)(i) It was pleasing to note that weft knitting was well described with clear diagrams, allowing many to be credited with all three marks. A number lost a mark because they failed to explain that weft knit uses one continuous yarn.

(c)(ii) Only a small number of candidates knew about circular knitting and a number of unusual responses were seen.

(c)(iii) There was evidence of good knowledge of the properties of acrylic fibre and those who related it to its use for the scarf scored well. However, there were some confused and illogical accounts and many did not relate their knowledge to the end use.

(c)(iv) The making of the fringed edge for scarf C was not as well explained as those for Scarves A and B. Many appeared to think that the bunches of yarn had been sewn to the fabric, or that a knot held them in place. Where diagrams were used to aid the explanation, candidates tended to achieve full marks.

Question 2

This was a reasonably popular question but one which many candidates found difficult.

(a)(i) High marks were not gained by many candidates because they failed to understand that the experiment was about abrasion and its relationship to the fibre content and the fabric construction. Most understood that denim was stronger than corduroy but were unable to give enough detail regarding the differences in fabric construction. Twill weave and even pile weave were identified but not described in any detail, especially with regard to their relative durability.

(a)(ii) Some candidates stated that satin is either a type of silk fibre, or that the fabric is a blend of polyester and satin. Most understood snagging, perhaps from their own experiences, but explanations of how it happens were sometimes sketchy.

(a)(iii) Pilling was quite well described although some candidates were confused with pile fabrics and brushed surfaces. The roles of the weaker viscose and stronger polyester fibres were understood by very few candidates.

(b)(i) The quality of the response was not particularly good with many candidates adopting a fairly simplistic approach and making very obvious statements. Some candidates felt that the question was about the wear and tear of denim jeans and in many cases the accounts provided were very limited.

(b)(ii) The answers seen to this question were very basic with many candidates simply recommending that consumers follow instructions on care labels. Care of textiles is an important part of the subject content and tests candidates' understanding of fibre and fabric qualities in a realistic context.

Question 3

This was the least popular question which was surprising, given the environmental focus of the 2007 GCSE examination which many of the candidates for this examination would have sat.

(a) Many candidates' knowledge of the problems regarding the environmental impact of denim was obvious. Some scored good marks by giving a range of relevant and accurate examples, not just about pollution but also about issues relating to fashion, and many also made reference to positive aspects such as recycling and reusing.

(b) There were many inaccurate and confused accounts of Tencel and Lyocell; candidates either knew about these fibres or they were not known at all. Many wrote convincingly of the perceived damage to the environment from the manufacture and disposal of these fibres.

(c) Many candidates were aware of the negative effects of synthetic fibre production and, pleasingly, a number of candidates were able to include some positive points with regard to their durability and care. Candidates should take care not to brand all global manufacture as bad without realising that it is only in those countries without strict laws that misdemeanours take place.

(d) Many candidates were knowledgeable about the effects of laundering textiles on the environment, with many able to comment on the benefits of using a lower temperature for washing – perhaps recent media promotions had a bearing on this understanding. On the whole this part of the question was answered quite well, especially with regard to use of energy, but few considered the impact of detergents and other chemicals used in the various laundering processes.

Question 4

This was a very popular question offering opportunities for evaluative and descriptive style answers and producing a wide range of scores.

(a) Many candidates showed sound knowledge of the properties of both wool and polyamide, but when it came to analysing the reasons for the popularity of blends of the fibres, information was very generalised and often superficial.

Many were aware that a weakness in one fibre can be improved by the attributes of the other, but simple comparative words like weaker / stronger or explanation that a less absorbent fibre makes drying of the blend quicker would have helped some to easily gain a better mark.

(b) Whilst most candidates described linen as cool, few understood the reasons why this is the case, and the relationship between absorbency and cooling needed to be explained. Most did relate the use of linen to summer clothing and added some form of evaluation of its suitability, especially with regard to creasing.

(c)(i) Polyester fleece was described as warm and soft without any reference to it being knitted or brushed. Many candidates provided information needed for part (ii) here, which they then failed to give later in the answer.

(c)(ii) This section was generally not answered fully and many candidates would have earned more marks by referring more accurately to the suggested uses and discussing qualities other than warmth.

(d) The use of silk for a tie was carefully evaluated by many, especially with reference to the perceived luxury of the fibre along with its lustre. The soft drape and problems with staining were also given consideration. Marks tended to be lost because there were some confused and contradictory statements and some few ignored the contribution made by the herringbone weave.

Mark Ranges and Award of Grades

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