



General Certificate of Education

Design and Technology: Product Design (5551/6551)

Unit 6 (Textiles) PD6T

Mark Scheme

2005 examination - June series

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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Design and Technology: Product Design

Textiles (PD6T)

Quality of Written Communication

The following marks are allocated to the quality of the candidate's written communication. Make a separate assessment of the candidate's overall ability as demonstrated across the paper using the criteria given below.

<i>Performance Criteria</i>	Marks
The candidate will express complex ideas extremely clearly and fluently. Sentences and paragraphs will follow on from one another smoothly and logically. Arguments will be consistently relevant and well structured. There will be few, if any, errors of grammar, punctuation and spelling.	4
The candidate will express moderately complex ideas clearly and reasonably fluently, through well-linked sentences and paragraphs. Arguments will be generally relevant and well structured. There may be occasional errors of grammar, punctuation and spelling.	3
The candidate will express straightforward ideas clearly, if not always fluently. Sentences and paragraphs may not always be well connected. Arguments may sometimes stray from the point or be weakly presented. There may be some errors of grammar, punctuation and spelling, but not such as to suggest a weakness in these areas.	2
The candidate will express simple ideas clearly, but may be imprecise and awkward in dealing with complex or subtle concepts. Arguments may be of doubtful relevance or obscurely presented. Errors in grammar, punctuation and spelling may be noticeable and intrusive, suggesting weaknesses in these areas.	1

NB This mark scheme is intended as a guide to the type of answer expected but is not intended to be exhaustive or prescriptive. If candidates offer other answers which are equally valid **they must be given full credit.**

Many responses at this level are assessed according to the **quality** of the work rather than the number of points included. The following level descriptors are intended to be a guide when assessing the quality of a candidate's response.

(low mark range)
The candidate has a basic but possibly confused grasp of the issues. Few correct examples are given to illustrate points made. This candidate does not have a clear idea of what s/he is writing about.
(mid mark range)
The candidate has some knowledge but there will be less clarity of understanding. Some correct examples given to illustrate points made. This candidate knows what s/he is writing about but is confused in part.
(high mark range)
The candidate has a thorough understanding of the issues and has provided relevant examples to support the knowledge shown. This candidate knows what s/he is writing about and provides clear evidence of understanding.

SECTION A

Question 1

Four different patterned effects have been clearly explained, possibilities include examples: fibre, yarn formation, fabric structure, woven and knitted structures are clearly explained (combinations of warp and weft interlacing, cut effects, pile and raised effects, novelty yarn effects, warp and weft knitted effects, jacquard and Dobby effects, non-wovens). Craft methods of constructive fabrics would also be accepted e.g. patchwork, crotche, lace, net, macramé, tufted methods for creating structures e.g. carpets would be accepted.

Marks awarded as follows:

Limited and simplistic explanation given, not all effects may be constructed.

Few applications are given.

Answers lack depth of response.

(1-2 marks)

A more thorough explanation is given of the construction of fabrics but answers lack detail.

Applications are relevant.

(3-4 marks)

An in-depth answer with detailed and accurate explanations given.

Key and relevant explanations are given.

(5-6 marks) (4 x 6 marks)

Total 24 marks

Question 2

Reference is made to fibres and fabrics particularly developed as a direct imitation of nature. Components and constructed products could also be included in answers given – more examples of these.

Answers could include some of the following:

Biomimetics – Understanding how nature reacts to certain environments and stimulation, natural use of folds and pleats replicated by the use of thermoplastics, the Fastskin fabric and fastskin swimsuit developed by Speedo to replicate sharkskin to enhance speed and movement through the water, Stomatex fabric which mimics the stomata on the surface of a leaf, Super-Microft polyester fabric. Chameleon – like dyes and inks that colour change due to environmental stimulation. Phosphorescent textiles which glow in the dark and mimic fireflies and jellyfish for example.

Tencel and regenerated cellulose fibres to reproduce artificial silk.

Differentiation is through quality of answer.

Marks awarded as follows:

Limited response with little detail regarding reference to textile developments imitating nature and few examples given. (1-2 marks)

Candidate illustrates a reasonable understanding of textile developments developed as a result of imitating nature, but answers lack depth. (3-5 marks)

Detailed description given of each textile development which clearly illustrates imitation of nature. (6-8 marks) (3 x 8 marks)

Total 24 marks

SECTION B

Question 3

Candidates are to select **two** iconic design products from the choice of printed textiles, accessories, furnishings, fashion separates. Products selected must be acceptable icons of design. Detailed descriptions of products are expected along with justification of their iconic status and a reflection of the style of the times.

Sketches could be included.

Examples may include Lucienne Day space influenced textiles from the 1951 Great Exhibition, quilted bags by Chanel, Dior bridle bags, Rene Mackintosh screens from the Glasgow school late Art Nouveau, the mini skirt – 1960s, wedge shoes by Salvatore Ferragamo – 1940s, sandals by Manolo Blahnik, show hat by Schiaparelli – 1930 Surrealism, Nike trainer, 1950s Capri pants, Doctor Marten boots, Chanel knitted separates, Armani jackets – 1980s, 1950s swing skirts, Gucci loafers, Bridget Riley Op Art prints – 1960s.

Limited response with little detail about selected product, vague reference to iconic status.

(1-4 marks)

Reasonable description of chosen product, some detail given, but there is some lack of detail or explanation of iconic status.

(5-8 marks)

A detailed description of an icon of product design products from selected list, clear explanation of iconic status and an explanation of the time they were created.

(9-12 marks) (2 x 12 marks)

Total 24 marks

Question 4

- (a) The marketing function provides a very important role for the design, or buyer and merchandiser when planning product ranges. The marketing mix can include the following: the product (product range and options), the retail selling price, product promotion (labelling, advertising, in store display), place (where the product is to be sold, the location and the accessibility of choice of sizes, colours etc.), people (all the people involved in the buying and selling of the product, from customer to sales staff), process (the customers experience of the retail outlet, personal shopping, experience of shopping via a website, different scales of stores from small boutique to large department stores), physical evidence (the store layout, home shopping image, point of sale, product brand image). The customer (geographics, demographics, fashion attitudes, lifestyles), fashion seasons or product for specific occasions, or a particular function.

Limited response with little detail or reference to any or very limited marketing functions. (1-4 marks)

A reasonable number of marketing functions referred to but a lack of detail, or detailed reference to only a few marketing functions. (5-9 marks)

A detailed description of a number of marketing functions and clear explanations given, candidate illustrates a very good understanding of the importance of the marketing function. (10-16 marks) (16 marks)

- (b) Constraints for retailers could include issues to do with moral, ethical and environmental, season of the year, time scale, production capacity, price, quality, availability of materials and components, retail location for example.

Limited response with vague references and little detail included. (1-2 marks)

A reasonable explanation and some constraints identified, but may focus on only one or two constraints. (3-5 marks)

A detailed explanation given of a number of constraints which may affect buying decisions. (6-8 marks) (8 marks)

Total 24 marks

SECTION C

Question 5

Candidates will be expected to make reference to a wide range of production facilities which incorporate new technology, CAD/CAM equipment (CAM cutting equipment, fabric spreading machines, pattern layout software for example), the use of a wide range of computer operated systems, or production controlled systems, EDI, EPOS information.

Reference to production systems is also required, they could include reference to flexible production systems that allow for quick product change over, and scales and volume flexibility, section systems, UPS systems, quick response cells, use of JIT production.

Limited description of both production facilities and systems, or focus will be only on one area. Only a few examples are described. (1-7 marks)

Reasonable description given but lacks enough depth or explanation in answer, also focus may only be on several production facilities and manufacturing systems. (8-15 marks)

Candidate illustrates a very good understanding of a range of production facilities which could be made available to manufacturers and also reflects a good understanding of a wide range of manufacturing systems which allow for flexibility and fast change over. (16-24 marks) (24 marks)

Total 24 marks

Question 6

- (a) Clear explanations expected of the three different methods of dyeing yarn (stock, top dyeing, hanks for example) and/or fabric (piece dyeing, winch, beam dyeing, vat, resist dyeing for example).

Limited explanations given, there may be some inaccuracies. (1-2 marks)

Clear, accurate and detailed explanation given. (3-4 marks) (3 x 4 marks)

- (b) An explanation of the importance of environmental concerns is expected. Reference to recycling of water and other liquids used, meeting health & safety requirements in the use and disposal of chemicals, to use where possible natural sources, encouraging natural dyes and shades, to limit the use of bleach and other dangerous chemicals.

Limited response with little explanation given. (1-2 marks)

A reasonable explanation of the environmental issues relating to a dye house. (3-4 marks)

A detailed and thorough understanding of a number of environmental issues and good practice when dyeing fabrics. (5-6 marks) (6 marks)

- (c) A clear explanation of colour fastness is given (colour fast to sunlight and to washing against agreed national testing standards) and an explanation of the importance of this for the consumer is given. Labelling advice could include advice to wash dark colours separately, dry away from direct sunlight, wash using gentle soap flakes and at a low temperature.

Limited response given. (1-2 marks)

Some reference to colourfastness, the consumer and labelling but a lack of detail, or a more detailed answer but focus is only on one part of the question. (3-4 marks)

A detailed explanation of colourfastness is given, why this is important to the consumer and thorough advice for labelling is given. (5-6 marks) (6 marks)

Total 24 marks