General Certificate of Education January 2003 Advanced Subsidiary Examination

DESIGN & TECHNOLOGY: PRODUCT DESIGN (TEXTILES) Unit 1 Materials and Components

PD1T



Thursday 9 January 2003 Morning Session

In addition to this paper you will require:

- an unlined answer book (7024) which is provided separately;
- normal writing and drawing instruments.

Time allowed: 1 hour 30 minutes

Instructions

- Use blue or black ink or ball-point pen. Pencil and coloured pencils should only be used for drawing.
- Write the information required on the front of your answer book. The *Examining Body* for this paper is AQA. The *Paper Reference* is PD1T.
- Answer Question 1 and any **two** of Questions 2 to 4.

Information

- The maximum mark for this paper is 100.
- 40 marks are allocated to Question 1, 28 to each of Questions 2 to 4, and 4 marks overall for quality of written communication.
- Mark allocations are shown in brackets.
- This paper carries 30 per cent of the total marks for AS and 15 per cent for A Level.
- You are reminded of the need for good English and clear presentation. The quality of your written communication will be assessed across all questions.

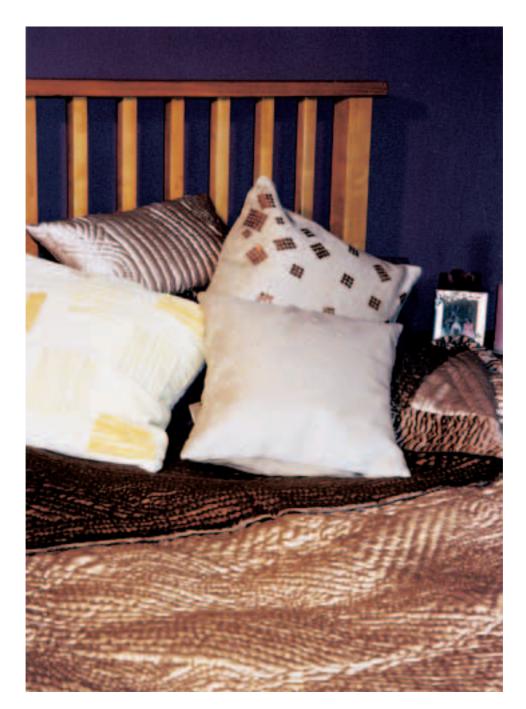
Advice

• Your answers should be illustrated with sketches and/or diagrams wherever you feel it is appropriate.

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Answer Question 1 and any two of Questions 2 to 4.

- 1 Study the photograph below.
 - (a) With reference to the quilted *bedspread*, explain how fabrics have been used in order to achieve the properties this product needs to have. (8 marks)
 - (b) With reference to the *cushions*:
 - (i) Describe the various techniques used to enhance their appearance. (6 marks)
 - (ii) Explain **four** qualities which will be needed in the fabrics used. $(4 \times 3 \text{ marks})$
 - (iii) Name one specific fabric which could be used for one of the cushions. (2 marks)



(c) The fabrics used for the bedspread and cushions can be difficult to work with.

Outline the problems which might arise when manufacturing:

- (i) the bedspread; (6 marks)
- (ii) the cushions. (6 marks)
- 2 Fibre blends are used extensively for fashion and furnishing fabrics.
 - (a) Giving examples, explain the reasons why fibres are blended. (10 marks)

(b) (i) Describe the properties of wool and nylon and explain why they are often blended together. (10 marks)

(ii) Give, with reasons, **two** applications for a wool/nylon blend fabric. $(2 \times 4 \text{ marks})$

3 Pile fabrics are used for a variety of fashion and furnishing products.

(a) (i) Name and describe **two** different pile fabrics including reference to typical fibre content.

(ii) Evaluate the durability of the two fabrics named above. (6 marks)

 $(2 \times 4 \text{ marks})$

- (iii) Suggest a product which could be made from **each** fabric you have named in (i) and give your reasons for its suitability. $(2 \times 3 \text{ marks})$
- (b) Explain the care that a manufacturer will need to take when *using* pile fabrics in order to ensure high quality products. (8 marks)

4 Non-woven fabrics have quite different properties compared to those produced by knitting or weaving.

- (a) Describe **one** method of producing non-woven fabrics. (10 marks)
- (b) (i) Describe two modern non-woven fabrics produced for *specialised* use. $(2 \times 3 \text{ marks})$
 - (ii) In what ways are non-wovens superior to knitted and woven fabrics in these applications? *(4 marks)*

(c) The manufacture and use of non-woven fabrics has an effect on the environment.

Give **two** advantages and **two** disadvantages for the environment. $(2 \times 4 \text{ marks})$

END OF QUESTIONS