

General Certificate of Education  
January 2003  
Advanced Subsidiary Examination



**DESIGN & TECHNOLOGY: PRODUCT DESIGN  
(TEXTILES)**

**PD1T**

**Unit 1 Materials and Components**

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.

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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*:
- Describe the various techniques used to enhance their appearance. (6 marks)
  - Explain **four** qualities which will be needed in the fabrics used. (4 × 3 marks)
  - 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 × 4 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. (2 × 4 marks)
- (ii) Evaluate the durability of the two fabrics named above. (6 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 × 3 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 × 3 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 × 4 marks)

**END OF QUESTIONS**