

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										



General Certificate of Education  
Advanced Subsidiary Examination  
June 2009

# Design and Technology: Product Design (Textiles)

**TEXT1**

**Unit 1 Materials, Components and Application**

**Tuesday 19 May 2009 9.00 am to 11.00 am**

**For this paper you must have:**

- normal writing and drawing instruments
- Insert Sheet.

**Time allowed**

- 2 hours

**Instructions**

- Use black ink or black ball-point pen.
- Use pencil and coloured pencils only for drawing.
- Fill in the boxes at the top of this page.
- Answer **all** questions in Section A.
- Answer **one** question from Section B.
- Answer Section C.
- You must answer the questions in the spaces provided. Answers written in margins or on blank pages will not be marked.
- Do all rough work in this book. Cross through any work you do not want to be marked.

**Information**

- The maximum mark for this paper is 80.
- There are 20 marks for each of Sections A and B and 40 marks for Section C.
- The marks for questions are shown in brackets.
- You will be marked on your ability to
  - use good English,
  - organise information clearly
  - use specialist vocabulary where appropriate.

**Advice**

- Illustrate your answers with sketches and/or diagrams wherever you feel it is appropriate.

Examiner's Initials	
Question	Mark
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
<b>TOTAL</b>	



## SECTION A

Answer **all** questions in this section.

- 1 Place **each** of the fibres listed below in the correct box in the table.  
You should use each fibre only once.

viscose                  linen                  Tactel®                  elastane                  silk

Natural cellulose	Natural protein	Regenerated	Synthetic

(5 marks)

5

- 2 List **two** properties of non-woven fabrics.

1 .....

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2 .....

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(2 marks)

2

- 3 Fibres must be twisted together to make yarns before they can be made into fabrics.  
Give **two** reasons why the twisting is important.

1 .....

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2 .....

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(2 marks)

2



4 (a) Explain the difference between the *selvedge* and *raw edge* of a woven fabric.

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(2 marks)

4 (b) What is meant by the *straight grain* of a woven fabric?

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(1 mark)

3

5 (a) Explain the term *directional pile* as applied to fabric.

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(2 marks)

5 (b) Name **two** fabrics which have a directional pile.

1.....  
2.....

(2 marks)

4

Turn over ▶



6 What is meant by *colour fastness* of fabrics?

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(2 marks)

2

7 What is meant by *smart fabric*?

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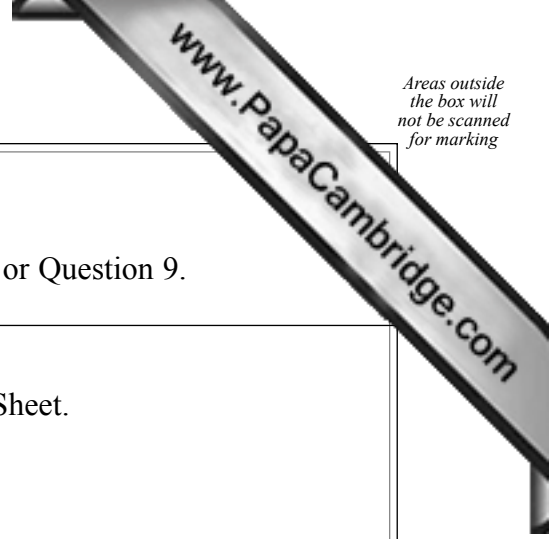
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(2 marks)

2





### SECTION B

Answer **one** question in this section, either Question 8 or Question 9.

**8** Study the photograph of the bag (**Figure 1**) shown on the Insert Sheet.

**8** (a) The bag is made from a plain weave cotton fabric.  
Critically evaluate the use of this fabric for the bag.

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(5 marks)

Turn over ▶



8 (b) (i) The bag has a polyester lining.  
Evaluate the use of polyester for this lining fabric.

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(4 marks)

8 (b) (ii) Explain the reasons for lining a bag.

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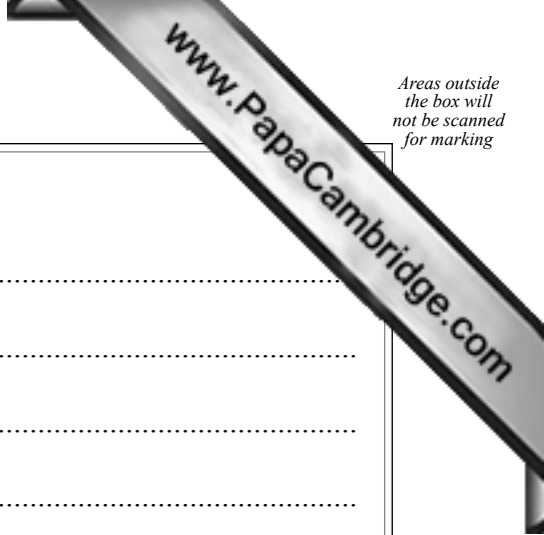
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(4 marks)





8 (c) Explain the use of top stitching on the edges of the bag.

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(2 marks)

8 (d) Justify the use of components in this bag.

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(5 marks)



Do **not** answer this question if you have answered Question 8.

9 Study the photographs of the jacket (**Figures 2 and 3**) shown on the Insert Sheet.

9 (a) The outer fabric is made from polyester in a plain weave structure. Evaluate the suitability of this fabric for the jacket.

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(5 marks)





9 (b) The label shown below is attached to the jacket.



Explain what it tells the consumer in relation to this jacket.

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(3 marks)

9 (c) Explain the reasons for lining the jacket.

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(4 marks)

9 (d) Explain the use of piping on parts of the jacket.

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(2 marks)

Turn over ▶



9 (e) The pocket flaps are fastened with poppers.

9 (e) (i) Suggest **one** other component which could be used to fasten the flaps.

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9 (e) (ii) Compare the use of poppers to fasten the flaps with the component you selected in part (e)(i).

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..... (3 marks)

9 (f) The seams of the jacket have been top-stitched.  
Give **two** reasons for this.

1.....  
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2.....  
..... (2 marks)

20



**SECTION C**

You must answer this question.

**10** Study the photographs of the rag doll (**Figures 4 and 5**) and the swing ticket attached to the doll (**Figure 6**) shown on the Insert Sheet.  
Refer to them when answering the questions about this textile product.

**10 (a)** Analyse the ways in which the designer of the doll has targeted the consumer market for which it is intended.

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*(4 marks)*

**Question 10 continues on the next page**

**Turn over ▶**



**10** (b) The doll is filled with polyester fibre.  
Explain why this has been selected for the filling.

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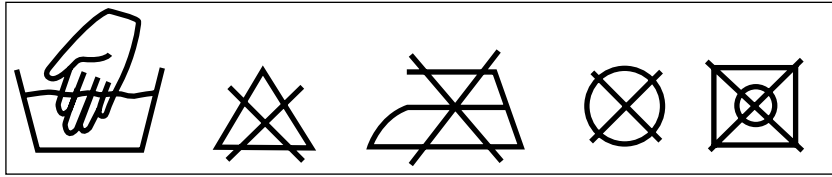
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*(4 marks)*



10 (c) The body of the doll is made from a brushed polyester fabric and the doll's hair is made from wool. The care label shown below is attached to the doll. Explain the reasons for this advice.

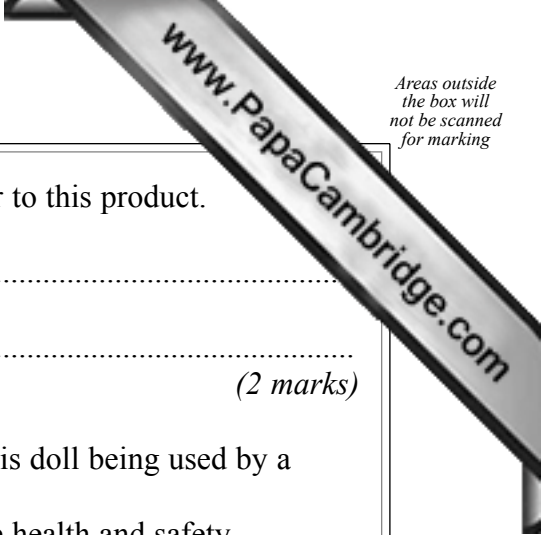


Dotted lines for writing the answer.

(5 marks)

Turn over ▶





Areas outside the box will not be scanned for marking

**10 (d)** Name **two** techniques which have been used to apply colour to this product.

- 1.....
- 2.....

*(2 marks)*

**10 (e)** Discuss the health and safety issues that might arise from this doll being used by a small child.  
Explain how the consumer can be confident that appropriate health and safety considerations have been taken into account by the manufacturer.

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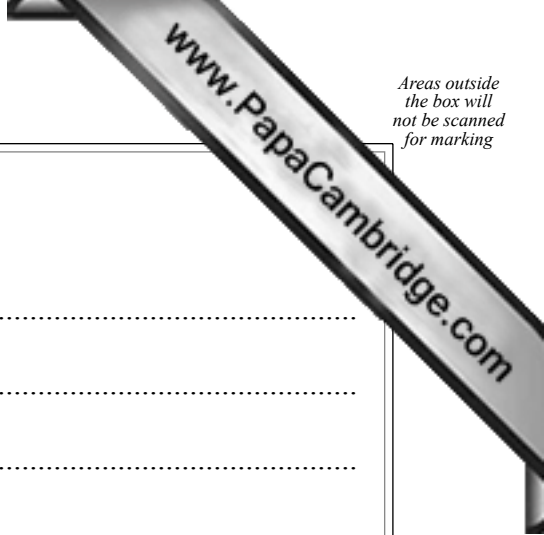
Dotted lines for writing.

(9 marks)

**Turn over for the next question**

**Turn over ▶**





Areas outside the box will not be scanned for marking

10 (f) The doll design is copyrighted. Why is this important?

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*(2 marks)*

10 (g) Explain how this basic design could be modified into a rag doll which would appeal to older children. You may use diagrams on the opposite page if you wish.

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**Draw your diagrams in the space below**

A large empty rectangular box for drawing diagrams.

**Question 10 continues on the next page**

*(8 marks)*

**Turn over ▶**



**10 (h)** Textile products are often made using Computer Aided Manufacture (CAM). Discuss the benefits of using CAM to manufacture textile products.

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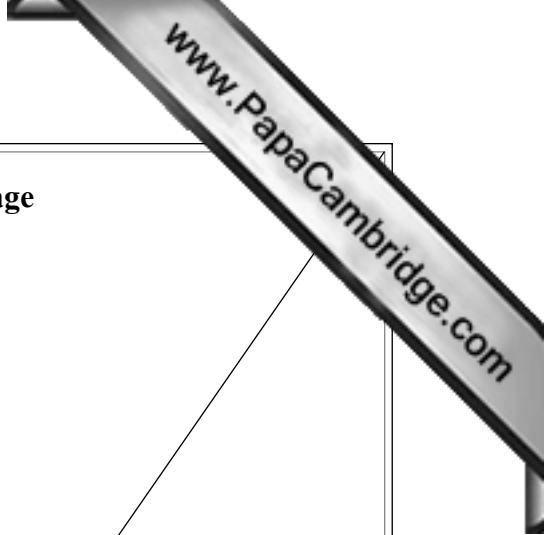
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*(6 marks)*

**END OF QUESTIONS**

<b>40</b>

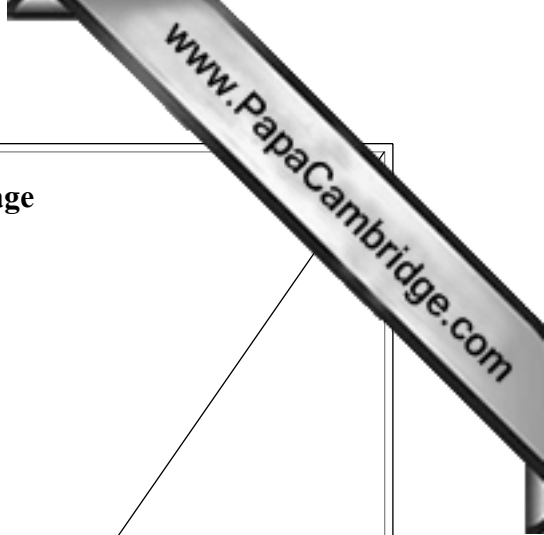




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ANSWER IN THE SPACES PROVIDED**





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ANSWER IN THE SPACES PROVIDED**

