

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
3	
4	
5	
6	
7	
8	
9	
TOTAL	



General Certificate of Education
Advanced Subsidiary Examination
January 2012

Design and Technology: TEXT1 Product Design (Textiles)

Unit 1 Materials, Components and Application

Tuesday 17 January 2012 9.30 am to 11.30 am

For this paper you must have:

- normal writing and drawing instruments.

Time allowed

- 2 hours

Instructions

- Use black ink or black ball-point pen.
- Use pencil 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, **either** Question 7 **or** Question 8.
- Answer Section C.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 80.
- 20 marks are allocated to each of Sections A and B and 40 marks to Section C.
- 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.
- You are advised to spend approximately 30 minutes on Section A, 30 minutes on Section B and one hour on Section C.



J A N 1 2 T E X T 0 1

M/Jan12/TEXT1

TEXT1

There are no questions printed on this page

**DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED**



Section A

Answer **all** questions in this section.

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

Viscose Tactel® Silk Linen Tencel® Ramie

Natural cellulose	Natural protein	Regenerated	Synthetic

(6 marks)

6

- 2 (a)** Explain what is meant by *light fastness* in relation to textile products.

.....

.....

.....

(2 marks)

- 2 (b)** Give **one** example of a textile product where light fastness will be especially important.

.....

(1 mark)

3

- 3** Wool is a *staple fibre* with a *crimp*.

- 3 (a)** What is meant by *staple fibre*?

.....

(1 mark)

- 3 (b)** What is meant by *crimp*?

.....

(1 mark)

Turn over ▶



3 (c) What special qualities does the crimp give to the woollen fibre?

.....
.....
.....
.....

(2 marks)

4

4 What effect will a *Proban*® finish have on a fabric?

.....

(1 mark)

1

5 How does *copyright* help designers of textile products?

.....
.....
.....

(2 marks)

2

6 Briefly describe **two** different ways in which a designer might show ideas for the colour of a textile product when putting together a presentation board.

.....
.....
.....
.....
.....
.....
.....
.....
.....

(4 marks)

4



Section B

Answer **either** Question 7 **or** Question 8.

7 Many textile products are thrown away because they are not durable enough for their intended purpose.

The table below shows the results obtained when different products were subjected to wear over a period of time.

Product	Observation
Weft knitted socks made from a blend containing 60% cotton and 40% polyamide	The socks wore away at the heel, leaving a thin net-like mesh of polyamide fibre.
Polyester satin table covering	The fabric was quickly snagged but did not wear into a hole.
Seat covers made from woven acrylic yarn	The surface of the fabric was spoiled by pilling .
Cotton velvet trousers	Bald patches appeared before a hole developed.

7 (a) Explain the reasons why the socks wore away at the heel, leaving a thin net-like mesh of polyamide fibre.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(4 marks)

Turn over ▶



7 (b) Polyester is a very strong fibre yet the satin fabric was quickly spoiled.
Analyse the reasons for this.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(3 marks)

7 (c) The acrylic seat covers were spoiled by *pilling*.
Explain what is meant by *pilling* and why it occurred in this fabric.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(3 marks)



7 (d) Explain the reasons why bald patches appeared before a hole developed in the cotton velvet trousers.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(4 marks)

Question 7 continues on the next page

Turn over ▶



Turn over for the next question

**DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED**

Turn over ▶



.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(10 marks)

8 (b) Explain the differences between ribbon and bias binding.
Give an example of where each might be used.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(6 marks)

Turn over ▶



8 (c) Explain what is meant by an *underlining* and the reasons why it is sometimes used in the manufacture of a textile product.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(4 marks)

20



Turn over for the next question

**DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED**

Turn over ▶



Section C

Answer this question.

- 9 The photograph below shows a shirt made from a woven checked cotton fabric.

Photograph 1 Front view of shirt



**Photograph 2
Close-up to show pocket and sleeve**



9 (a) The fabric is constructed using a plain weave.

Explain how the checked pattern is achieved on the fabric. You may use a diagram.

Where colour is used in any diagrams, you should label which colours have been used.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Question 9 continues on the next page

(5 marks)

Turn over ▶



9 (b) The fabric has a brushed finish.

Evaluate the use of the brushed finish on the shirt fabric.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(4 marks)



9 (c) Explain what the manufacturer will need to consider when planning the fabric lay plan for a batch of these shirts in order to ensure a high quality appearance in the end product.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(4 marks)

Question 9 continues on the next page

Turn over ▶



9 (d) Identify **three** different places where interfacing would be needed on the shirt.
Explain why interfacing is used in the places that you have identified.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(4 marks)

9 (e) Topstitching has been used on various parts of the shirt.
Explain the reasons for this.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(3 marks)



9 (f) (i) Computer-aided manufacture (CAM) may be used in the **construction** of shirts.

Explain how **two** specific parts of the shirt might have been made using computer controlled machinery in modern factories.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(4 marks)

Question 9 continues on the next page

Turn over ▶



.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(8 marks)

Question 9 continues on the next page

Turn over ▶



9 (g) Cotton fabrics can have a negative impact on the environment.

Analyse the environmental issues involved in the production and care of cotton fabrics.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....



.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(8 marks)

40

END OF QUESTIONS



There are no questions printed on this page

**DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED**

