

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	
TOTAL	



General Certificate of Secondary Education
June 2012

Design and Technology: 45701 Textiles Technology

Unit 1 Written Paper

Thursday 21 June 2012 1.30 pm to 3.30 pm

For this paper you must have:

- a black pen, a pencil, a ruler, an eraser, a pencil sharpener and coloured pencils.

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.
- 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 answer 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 120.
- The questions in Section A relate to the context referred to in the Preliminary Material that was previously issued.
- You are reminded of the need for good English and clear presentation in your answers. Quality of Written Communication will be assessed in Question 6 (b).



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45701

Section A

You should answer this question.

Question 1 is about design ideas for a textile product.

You should spend about 35 minutes on this question.

Design Brief

You are going to design a textile product inspired by the rainforest.

The textile product must:

- be based on the theme of the rainforest
- include a range of fabrics and components
- include modern materials.

Here is a mood board based on the theme of the rainforest.



1 (a) (i) List **two** different reasons for creating a mood board.

An example is given below.

A designer creates a mood board to inspire a pattern.

1

.....

2

.....

(2 marks)

1 (a) (ii) Look at the mood board on page 2.

Design a repeat pattern based on these images.

Do not use colour.

Marks will be given for the following:

- use of images in this mood board (2 marks)
- creativity and originality of pattern (2 marks)
- quality of drawing. (2 marks)

Question 1 continues on the next page

Turn over ►



1 (b) (i) Now you need to sketch your initial design ideas for your textile product.

Do not use colour.

Using the design brief on page 2, sketch and label **two** different textile products.

6 marks will be given for each design idea.

- Creativity and originality of idea based on the rainforest (2 marks)
- Quality of notes and sketches (2 marks)
- Use of a range of fabrics and components, including modern materials. (2 marks)

You will be asked to develop **one** of your design ideas in part (c).

Design idea **A**



Design idea **B**

1 (b) (ii) Explain how fabrics can reflect the rainforest theme.

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

(2 marks)

Question 1 continues on the next page

Turn over ►



1 (c) Choose **one** of your design ideas for development.

Tick the box to show the idea you have chosen to develop.

Design idea **A**

Design idea **B**

Use sketches, labelling and notes to present a final design in colour for your textile product.

Use this page and the next page to show your textile product in a presentation drawing.

Marks will be given for:

- use of rainforest theme *(2 marks)*
- use of a range of fabrics and components including modern materials *(3 marks)*
- creativity and quality of the design *(4 marks)*
- effective use of colour in the design *(2 marks)*
- presentation of final idea. *(2 marks)*



A large empty rectangular box for writing answers.

Turn over for the next question

35

Turn over ►



Section B



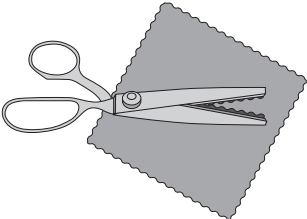
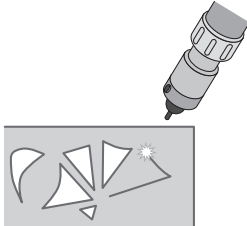

You should answer **all** questions in this section.

Question 2 is about tools and equipment.

You should spend about 15 minutes on this question.

2 The images in the chart below show tools and equipment for cutting fabric.

2 (a) (i) Fill in the table by completing the empty boxes. An example has been done for you.

	Tool or equipment	Reason for using this tool or equipment
	<i>Small sharp scissors</i>	<i>To cut detailed work accurately by hand.</i>
		
		
		
		

(8 marks)



2 (a) (ii) Name the machine that both cuts and stitches over the edge of fabric to neaten it.

.....
(1 mark)

2 (b) (i) Give the term that describes looking at the possible dangers in the workplace.

.....
(1 mark)

2 (b) (ii) State **one** danger when cutting fabric.

.....
(1 mark)

2 (b) (iii) List **three** different ways of keeping textile workers safe from dangers in the workplace.

1

.....

2

.....

3

.....

(3 marks)

14

Turn over for the next question

Turn over ►



Question 3 is about modern and smart materials.

You should spend about 10 minutes on this question.

3 (a) (i) Study the police uniform in the photograph below.

Using a pen, link the text boxes to the police uniform to label the clothing.



Reflective tape

Fluorescent nylon

Polyester / cotton non-iron fabric

Stain resistant fabric with heat set crease

(4 marks)



3 (a) (ii) Give **one** advantage of using these fabrics in the police uniform.

Reflective tape

.....
.....

Fluorescent nylon

.....
.....

Polyester / cotton non-iron fabric

.....
.....

Stain resistant fabric with heat set crease

.....
.....

(4 marks)

3 (b) Name and describe **one** modern fabric different from those listed above.

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

(2 marks)

10

Turn over for the next question

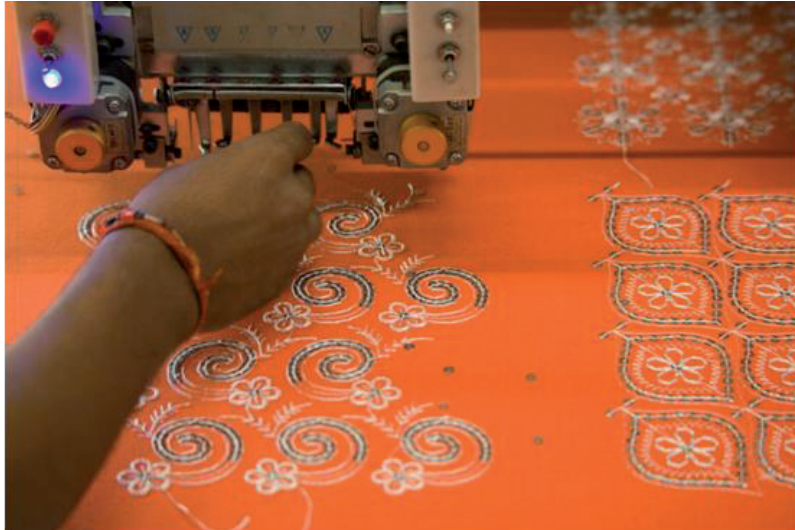
Turn over ►



Question 4 is about production methods and manufacturing techniques.

You should spend about 15 minutes on this question.

- 4 The photograph below shows computerised embroidery in a textile factory.



- 4 (a) (i) List and explain **three** different advantages of using computer-aided manufacturing to embroider fabric.

An example has been given.

Advantage	Explanation
<i>Designs can be altered quickly</i>	<i>The computer guides placement of stitches on fabric and instructions can be changed quickly.</i>

(6 marks)



4 (a) (ii) The correct thread is needed for machine embroidery.

List **two** important points about the choice of thread.

1

2

(2 marks)

4 (a) (iii) The fabric and thread must be ready to use during manufacturing.

Explain the term *Just-in-time* stock control.

.....

.....

.....

.....

(2 marks)

4 (b) (i) Running stitch is a hand embroidery stitch.

Name **two** other different hand embroidery stitches.

1

2

(2 marks)

Question 4 continues on the next page

Turn over ►



4 (b) (ii) Choose **one** of the embroidery stitches you have given in question **4 (b) (i)**.

Use notes and diagrams to explain how to sew your chosen stitch.

Marks will be given for:

- step-by-step instructions *(2 marks)*
- quality of notes and diagrams *(2 marks)*
- equipment needed. *(1 mark)*

Name of hand embroidery stitch



Question 5 is about textile product development and the use of electronic and modern components.

You should spend about 10 minutes on this question.

5 Study the photograph of the toy below.



5 (a) (i) Name a fabric that could be used to make this toy.

.....
.....

(1 mark)

5 (a) (ii) Explain why the fabric named in part **(i)** is suitable for the toy.

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

(2 marks)

Question 5 continues on the next page

Turn over ►



5 (b) The toy needs development.

List and explain **three** different ways to use electronic components to make this toy more exciting.

Fill in the table below. An example has been given.

Electronic component	Explanation
<i>A movement device is put in the toy.</i>	<i>The toy dog can move eg wag its tail for fun.</i>

(6 marks)

5 (c) A wide range of other modern components is available to product designers.

Name and describe **one** modern component that can be added to fashionable clothing to make it more decorative or useful.

.....

.....

.....

.....

.....

.....

.....

(3 marks)



Question 6 is about trend forecasts and the use of recycled materials in textile products.

You should spend about 15 minutes on this question.

6 (a) (i) Explain the term *trend forecast* in the textile industry.

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

6 (a) (ii) Give **three** different pieces of research that are used to produce trend forecasts.

1
.....
2
.....
3
.....
(3 marks)

6 (a) (iii) Explain how designers use the information from trend forecasts.

.....
.....
.....
.....
.....
.....
(3 marks)

Question 6 continues on the next page

Turn over ►



Question 7 is about product design.

You should spend about 20 minutes on this question.

7 (a) Study the Fairtrade organic cotton baby vest in the photograph below.



7 (a) (i) Explain what is meant by Fairtrade cotton.

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

7 (a) (ii) Explain what is meant by organic cotton.

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

7 (a) (iii) Explain why some parents might prefer to buy organic cotton products.

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

Question 7 continues on the next page

Turn over ►



7 (b) (i) Circle the **two** symbols that could be on the baby vest label.



(2 marks)

7 (b) (ii) List **four** different pieces of information that could be on the baby vest label.

- 1
- 2
- 3
- 4

(4 marks)

7 (c) (i) State the most suitable method of fabric construction for the baby vest.

.....
(1 mark)

7 (c) (ii) Give **three** reasons why this is the most suitable method of fabric construction for the baby vest.

- 1
-
- 2
-
- 3
-

(3 marks)

END OF QUESTIONS

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