

Please write clearly in block capitals.

Centre number 

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Candidate number 

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# GCSE DESIGN AND TECHNOLOGY: TEXTILES TECHNOLOGY

Unit 1 Written Paper

Tuesday 23 May 2017

Morning

Time allowed: 2 hours

## Materials

For this paper you must have:

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

## Instructions

- Use black ink or black ball-point pen. Use pencil and coloured pencils only for drawing.
- Answer **all** questions.
- Fill in the boxes at the top of this page.
- 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.
- You are reminded of the need for good English and clear presentation in your answers. Quality of Written Communication will be assessed in Question 4 (b).

For Examiner's Use	
Question	Mark
1	
2	
3	
4	
5	
<b>TOTAL</b>	



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ANSWER IN THE SPACES PROVIDED**



**Section A**

Answer **all** questions in the spaces provided.

**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 theme of India.

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



Turn over ►



- 1 (a)** The mood board on page 3 is an example of research that can inspire design ideas.  
Give **two** other types of research that can inspire design ideas.

**[2 marks]**

1 \_\_\_\_\_

\_\_\_\_\_

2 \_\_\_\_\_

\_\_\_\_\_

- 1 (b)** Look at the mood board on page 3.

Complete the table below to show how the mood board can provide ideas for **three different** components for a textile product.

An example is given in the table below:

**[6 marks]**

Inspiration from the mood board	Idea for component design
Black tower shape	Black decorative zip pull in shape of tower



**1 (c)** Use a pencil to sketch and label **two** different initial design ideas for a textile product based on the design brief.

Do not use colour.

The textile product must:

- be based on the theme of India
- include a range of fabrics and components.

There are 6 marks for **each** design idea.

Marks will be given for:

- creativity and originality of idea based on the theme
- use of a range of fabrics and components
- quality of notes and sketches.

**[2 marks]**

**[2 marks]**

**[2 marks]**

Design Idea A

Design Idea B

**Turn over ►**



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

Design Idea A

☐

Design Idea B

☐

**1 (d)**

Use sketches, labelling and notes to present a final design in colour for your textile product. Include a component from **Question 1(b)**.

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

Marks will be given for:

- creativity and quality of design [4 marks]
- use of fabrics and components including a component from **Question 1(b)**. [4 marks]
- decorative techniques inspired by the theme [3 marks]
- effective use of colour [2 marks]
- presentation of final idea including different views of textile product. [2 marks]



Turn over for the next question



**Section B**

Answer **all** questions in the spaces provided.

**2**

Question 2 is about modern fabrics and quality assurance.

You should spend about 10 minutes on this question.

Look at the firefighter's clothing in the photograph below.





- 2 (a)** List **three** design features and explain how these make the clothing fit for purpose.

An example is given in the table below.

**[6 marks]**

Design Feature	Explanation
Fabric: light brown coloured fabric	To identify the fire fighter as part of the team

- 2 (b) (i)** It is important that the uniform is safe to wear when fighting fires.

Name a suitable fabric for the firefighter's clothing.

**[1 mark]**

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- 2 (b) (ii)** Give **three** ways to test that the fabric is fit for purpose.

**[3 marks]**

1 \_\_\_\_\_

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2 \_\_\_\_\_

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3 \_\_\_\_\_

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- 2 (c)** Explain what is meant by the term Quality Assurance.

**[2 marks]**

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**3 (a)**

Question 3 is about fabric and fibres.

You should spend about 30 minutes on this question.

In the photograph below, the child is wearing a long sleeved T-shirt and dungarees.



List **three** points for the T-shirt fabric specification and explain why they are important.

An example is given in the table below.

**[6 marks]**

Fabric specification The fabric must:	Explanation
Be lightweight	So that the child is not weighted down by heavy clothing



3 (b) (i) Draw a line to link **each** text box to the correct fabric construction diagram box.

[5 marks]

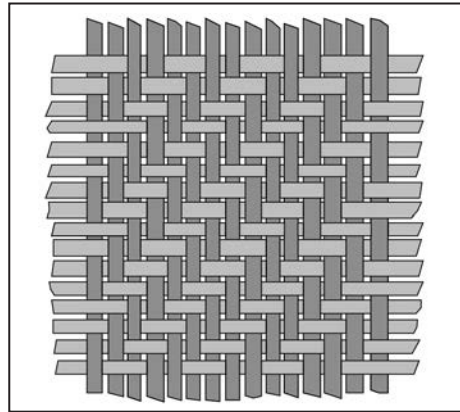
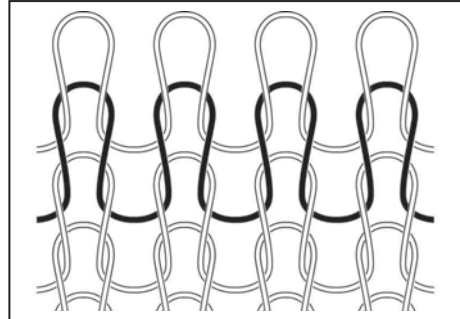
Hardwearing fabric

Stretchy fabric

Woven fabric

Twill

Knitted fabric



Question 3 continues on the next page

Turn over ►



**3 (b) (ii)** Sketch and label a fabric construction diagram for a non-woven fabric.

**[2 marks]**

Non-woven fabric construction

**3 (c)** The fibre content for the dungarees fabric is 96% cotton and 4% elastane.  
List **three** advantages of combining these fibres.

**[3 marks]**

Advantage 1 \_\_\_\_\_

\_\_\_\_\_

Advantage 2 \_\_\_\_\_

\_\_\_\_\_

Advantage 3 \_\_\_\_\_

\_\_\_\_\_



**3 (d)**

The clothing labels include the following symbols.

Explain the meaning of these **two** symbols.**[2 x 2 marks]**

Fairtrade

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100% Organic Cotton

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**3 (e) (i)**

The T-Shirt and dungarees are plain.

Give **three** different techniques to add colour and pattern to plain fabric.**[3 marks]**

1 

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2 

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3 

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**Question 3 continues on the next page****Turn over ►**

**3 (e) (ii)** Use notes and diagrams to explain **one** technique to add colour and pattern to fabric.

Marks will be awarded as follows:

- name of technique [1 mark]
- equipment needed [1 mark]
- step-by-step instructions [2 marks]
- quality of notes and sketches. [2 marks]

Name of Technique .....



Look at the clothing in the photograph below.



Why is this a suitable fabric choice?

[illegible]

4 (a) (ii) Polyester can be made into microfibres.

Give **two** advantages of using microfibres in textile products.

**[2 marks]**

1 \_\_\_\_\_

\_\_\_\_\_

2 \_\_\_\_\_

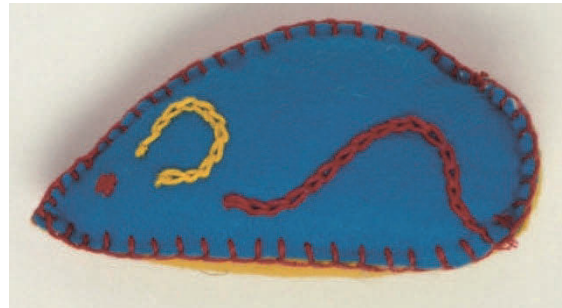
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4 (b) Look at the design, decorative techniques and fabric choice of the toy mice in the photographs below.

**Toy A**



**Toy B**



Compare and contrast the **two** toys and explain how components and electronic devices can be added to toys to make them more entertaining.

You will be assessed on Quality of Written Communication (QWC) in this question.

**[8 marks]**

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- 4 (c)** The fabric for Toy A is microencapsulated with an antibacterial chemical.

Explain what is meant by microencapsulation and explain why it is used in different textile products.

Give examples in your answer.

**[5 marks]**

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**Turn over for the next Question**

**Turn over ►**



**5 (a)**

Question 5 is about industrial processes and health and safety.

You should spend about 25 minutes on this question.

The designer in the photograph below is making a paper pattern to use as a template when cutting out fabric pieces.



Give **three** types of information included on each pattern piece.

An example is given below:

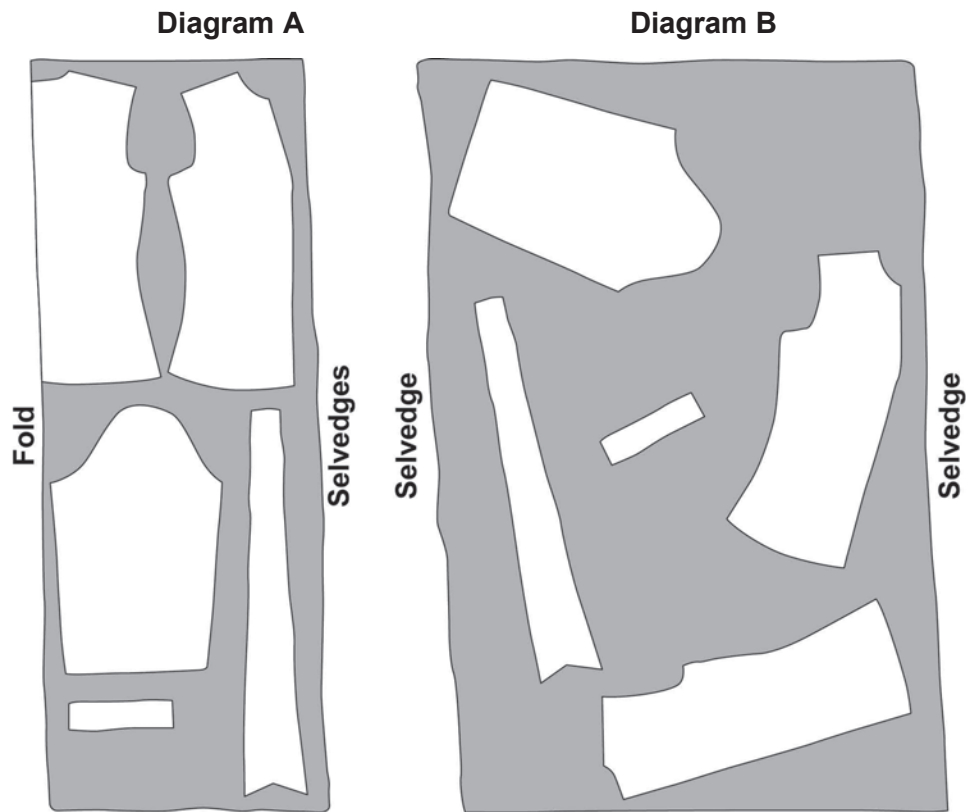
Size

**[3 marks]**

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_



- 5 (b) (i) Look at diagrams A and B. They show the pattern pieces placed on fabric.



What is the name of this type of diagram?

[1 mark]

- 5 (b) (ii) Tick the box to show which diagram is the best method of placing the pattern pieces.

[1 mark]

Diagram A

☐

Diagram B

☐

Question 5 continues on the next page

Turn over ►



**5 (b) (iii)** Explain your answer to **Question 5(b)(ii)**.

**[4 marks]**

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**5 (c)** Give the advantages of using computers to design pattern pieces and arrange them on fabric.

**[5 marks]**

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- 5 (d)** The designer in the photograph below is cutting out fabric pieces.



Circle the method of production shown in the photograph.

**[1 mark]**

Mass

One-off

Batch

- 5 (e)** Give the advantages of using computers to control the cutting out of large volumes of fabric pieces.

**[5 marks]**

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**Turn over ►**



- 5 (f) (i) The cutting tool being used in the photograph below is a powered cutting knife.



State **two** dangers of using the cutting tool as shown in the photograph above.

[2 marks]

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_

- 5 (f) (ii) Give **two** safety measures that should be in place to protect the worker in the photograph above.

[2 marks]

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_

END OF QUESTIONS



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