



Oxford Cambridge and RSA

Tuesday 23 May 2017 – Morning

GCSE DESIGN AND TECHNOLOGY
Textiles Technology

A575/01 Sustainability and Technical Aspects of Designing and Making



Candidates answer on the Question Paper.

OCR supplied materials:

None

Other materials required:

None

Duration: 1 hour 30 minutes



Candidate forename					Candidate surname				
--------------------	--	--	--	--	-------------------	--	--	--	--

Centre number						Candidate number			
---------------	--	--	--	--	--	------------------	--	--	--

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.
- Answer **all** the questions in Section A **and** Section B.
- Do **not** write in the barcodes.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this paper is **80**.
- Your quality of written communication is assessed in the questions marked with an asterisk (*).
- This document consists of **16** pages. Any blank pages are indicated.

SECTION A

Answer **all** the questions.

You are advised to spend about 40 minutes on this section.

On questions 1–5 circle your answer.

1 Photochromic ink changes colour with:

- (a)** Light
- (b)** Heat
- (c)** Water
- (d)** Power

[1]

2 Batch production is about producing:

- (a)** Large quantities of garments
- (b)** Fixed quantities of garments
- (c)** Continuous quantities of garments
- (d)** Individual one-off garments

[1]

3 Which of the following is **not** a source of sustainable raw materials?

- (a)** Silk cocoon
- (b)** Cotton plantation
- (c)** Coal mine
- (d)** Flock of sheep

[1]

4 Built-in obsolescence refers to when a product:

- (a)** Fails after a certain time period
- (b)** Needs repairing
- (c)** Is passed to a charity shop
- (d)** Needs to be recycled

[1]

5 The measures taken by a company to reduce its carbon footprint are termed:

- (a) Risk assessment
- (b) Carbon resetting
- (c) Carbon assessment
- (d) Carbon offsetting

[1]

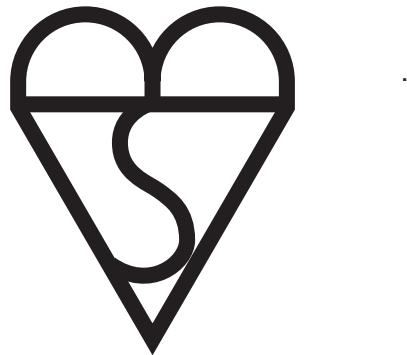
6 State the term that means a product is designed to minimise its environmental impact.

..... [1]

7 Name the type of recycling that involves the breakdown of fibres from a product.

..... [1]

8 What is the correct term given to the symbol shown below?



..... [1]

9 Smart labelling refers to:

..... [1]

10 Complete the following to give the meaning of the abbreviation LCA.

L C Assessment [1]

Decide whether the following statements below are **True** or **False**.

Tick (✓) the box to show your answer.

11 Cotton woven fabrics are environmentally friendly.

True	False	[1]
<input type="checkbox"/>	<input type="checkbox"/>	

12 Plastic bottles cannot be recycled.

<input type="checkbox"/>	<input type="checkbox"/>	[1]
--------------------------	--------------------------	-----

13 A managed resource ensures that as a plant is harvested, a replacement is planted.

<input type="checkbox"/>	<input type="checkbox"/>	[1]
--------------------------	--------------------------	-----

14 All dyeing processes produce toxic waste.

<input type="checkbox"/>	<input type="checkbox"/>	[1]
--------------------------	--------------------------	-----

15 Smart materials can sense and react to environmental conditions.

<input type="checkbox"/>	<input type="checkbox"/>	[1]
--------------------------	--------------------------	-----

- 16 Fig. 1 shows an outdoor chair with fabric cushion seating.

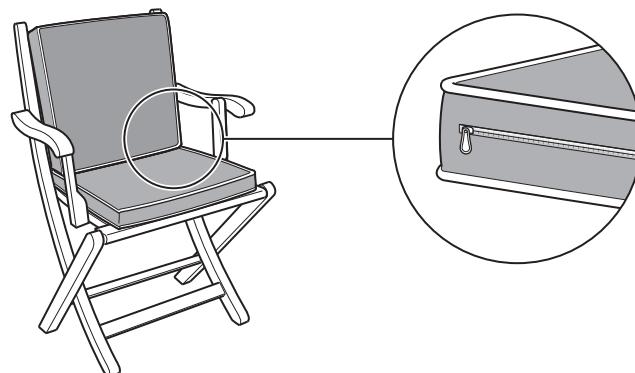


Fig. 1

- (a) The fabric cushion seating is both functional and aesthetic.

- (i) State **two** functional design features of the fabric cushion seating.

1

2

[2]

- (ii) State **two** aesthetic design features of the fabric cushion seating.

1

2

[2]

- (b) The fabric cushion seating is to be sold with a Fairtrade label attached.

Give **two** reasons why a consumer chooses to buy Fairtrade products.

1

.....

2

.....

[2]

- (c) The fabric cushion seating is to be manufactured in a factory that uses renewable energy sources.

Name **two** renewable energy sources.

1

.....

2

.....

[2]

- (d) The fabric cushion seating is to be updated to appeal to the teenage market.
In the space below, use sketches and notes to show a design for the new fabric cushion seating.

The fabric cushion seating must be:

- Easy to carry and store when not in use
- Decorative, to include at least **one** surface pattern.

Annotate your sketch to show all design and construction details.

[6]

(e)* Customers often tire of textile products before they reach the end of their life span.

Discuss ways in which textile products can be given a new lease of life.

. [6]

SECTION B

Answer **all** the questions.

You are advised to spend 50 minutes on this section.

- 17 Fig. 2 shows some toys made from woollen felt fabric.

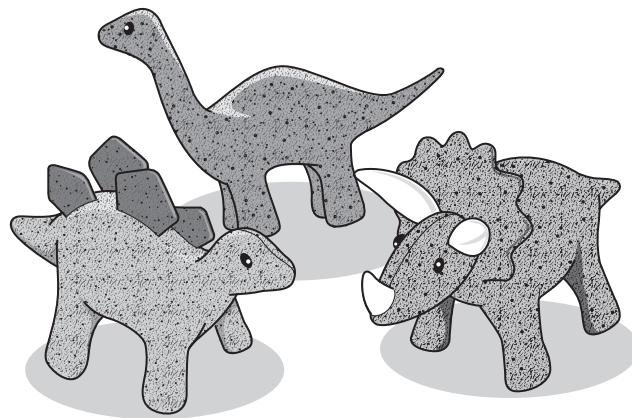


Fig. 2

- (a)** Using notes and/or sketches, explain how woollen felt fabrics are made.

31

- (b) The felt toys are made using a sewing machine.

Fig. 3 shows an incorrect sewing machine stitch.

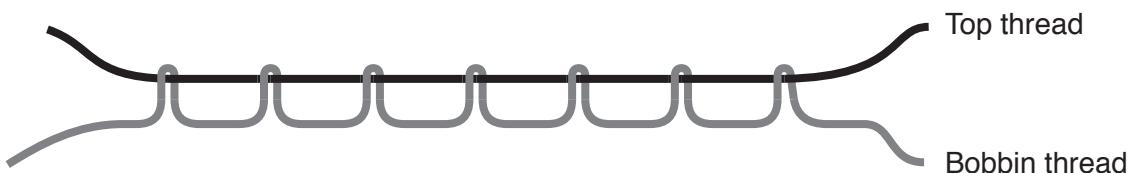


Fig. 3

Give **one** reason for the faulty stitching shown in Fig. 3.

.....
.....

[1]

- (c) Name **two** other tools or pieces of equipment needed to make the felt toys.

1

2

[2]

- (d) Describe **three** electrical safety checks that should be carried out before using a sewing machine.

1

.....

2

.....

3

.....

[3]

10

(e)* Explain the **advantages** of using non-woven fabrics, like felt, when manufacturing textile products.

[6]

- 18 Fig. 4 shows a jacket decorated using batik.



Fig. 4

- (a) Describe, using notes and/or diagrams, how to work batik.

[6]

12

- (b) Explain **two** advantages of using the batch production system to manufacture the batik jacket.

1

.....

.....

.....

[4]

- (c) Pre-manufactured components are used to make the jacket.

Complete the chart below by naming the pre-manufactured components shown.

Pre-manufactured Component	Name

[3]

- (d) Give **two** pieces of information you would expect to find on a label in the batik jacket.

1

2

[2]

19 A pre-school requires a set of aprons for the children to wear when taking part in craft activities.

The apron must:

- include the pre-school's logo, worked using a computerised sewing machine
- protect the children's clothes
- be easy to put on and take off
- be suitable for children aged 18 months to 3 years.

(a) In the space below, sketch a design for the apron.

Annotate your sketch to show all design and construction details.

[6]

- (b)** The pre-school logo will be stitched onto each apron using a computerised sewing machine.

Complete the table below to outline this process.

Stage	Method
Preparing the machine	
Preparing the fabric	
Working	
Finishing	
Quality check	

[5]

- (c)** Give **two** examples of how microencapsulation can be used in textile products.

Example 1

.....

.....

.....

Example 2

.....

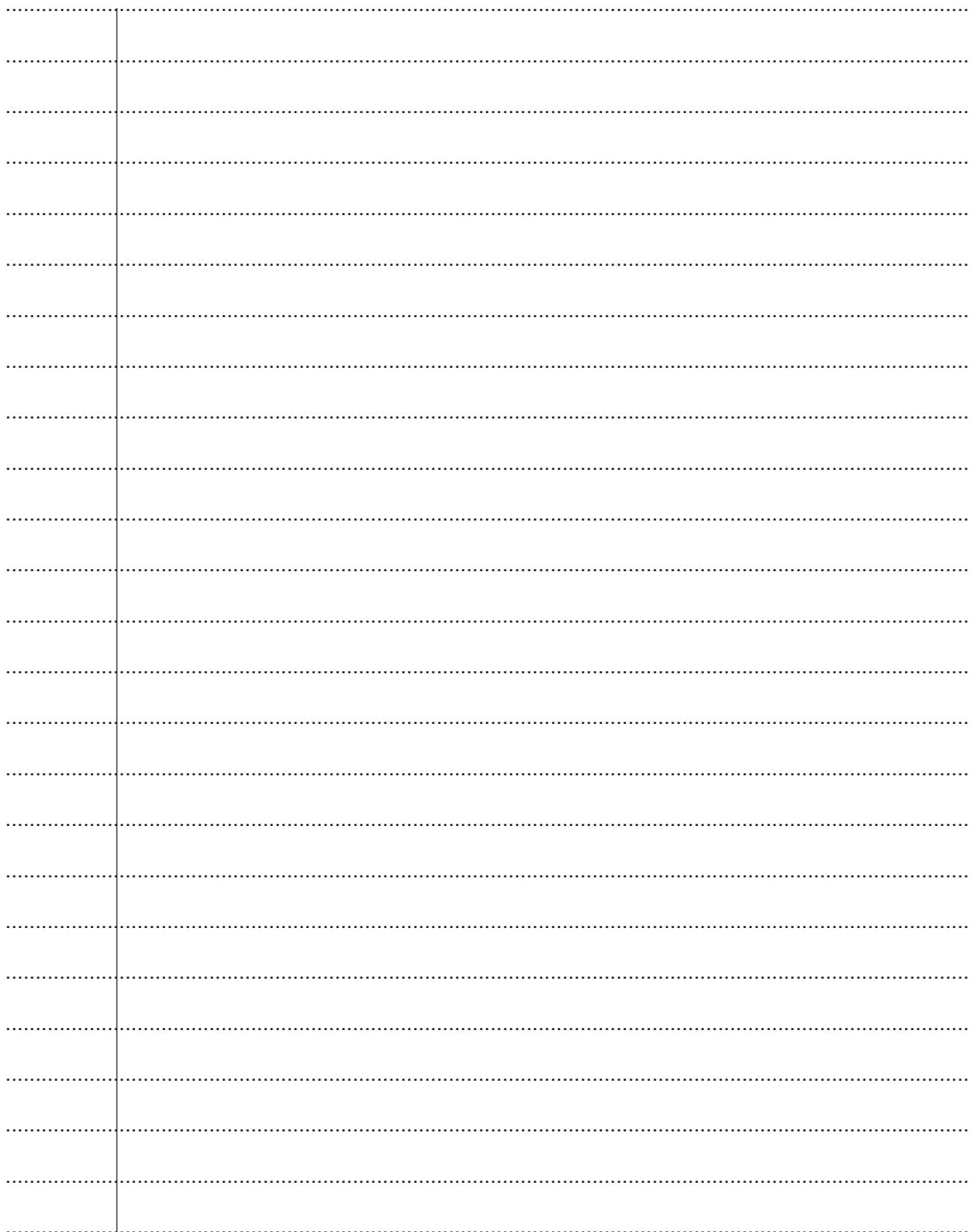
.....

.....

[4]

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).





Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact the Copyright Team, First Floor, 9 Hills Road, Cambridge CB2 1GF.

For queries or further information, please contact the Copyright Team, The University, Trumpington Street, Cambridge CB3 9EE.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.