Surname	Centre Number	Candidate Number
First name(s)		0

GCSE

3602U10-1

S24-3602U10-1

TUESDAY, 18 JUNE 2024 – MORNING

DESIGN AND TECHNOLOGY
Unit 1
FASHION AND TEXTILES

2 hours

For Examiner's use only		
Question	**Maximum Mark**	**Mark Awarded**
1.	**10**	
2.	**10**	
3.	**15**	
4.	**20**	
5.	**20**	
6.	**25**	
Total	**100**	

3602U101
01

ADDITIONAL MATERIALS

In addition to this examination paper, you will need a calculator.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.

You may use a pencil for graphs and diagrams only.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided in this booklet. If you run out of space, use the additional page(s) at the back of the booklet, taking care to number the question(s) correctly.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question. You are advised to divide your time accordingly.

The total number of marks available is 100.

You are reminded of the need for good English and orderly, clear presentation in your answers.

The quality of your written communication, including appropriate use of punctuation and grammar, will be assessed in your answer to question **4**(b)(ii).

JUN243602U10101

© WJEC CBAC Ltd.

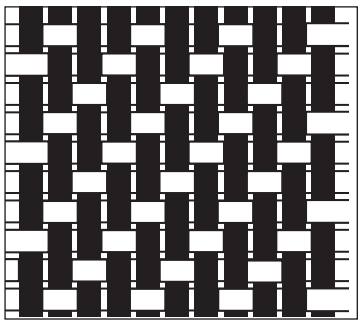
Examiner only

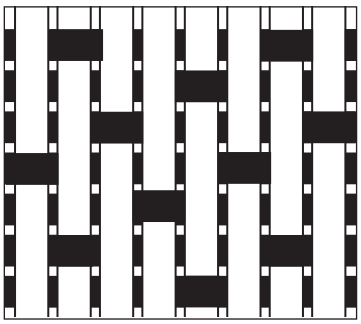
Answer **all** questions.

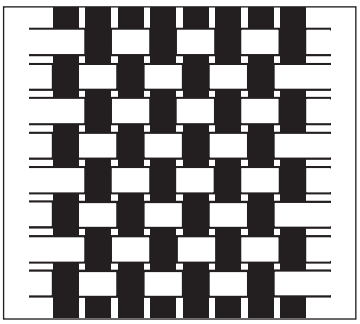
1. Weaving is one method of constructing textile materials.

(a) (i) Select the correct name from the list below for each of the weave formations shown. 3 × [1]

satin **herringbone** **twill** **plain**







....

(ii) The party dress below has been made from a velvet material which has a pile weave construction.

Explain how a pile weave differs from the three weave formations pictured in (i). [2]

.....

.....

.....

© WJEC CBAC Ltd.

Examiner only

(b) (i) When cutting out the party dress, all the template pieces are laid out in the same direction. Explain the importance of following this rule when using velvet material. [3]

.....

.....

.....

.....

(ii) Describe **one** reason for choosing to use a velvet fabric for the party dress. [2]

.....

.....

.....

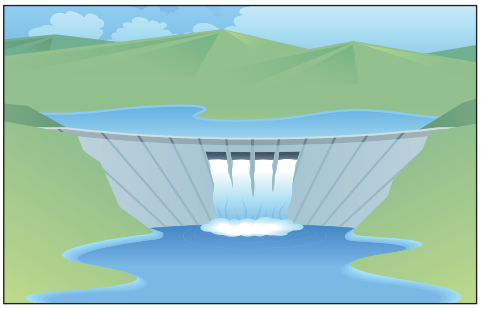
3602U101 03

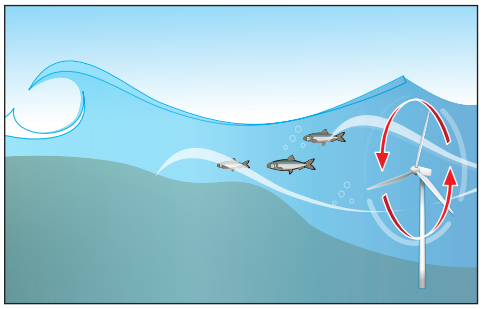
© WJEC CBAC Ltd.

Examiner only

2. Fashion and textile manufacturers can reduce the industry's carbon footprint by adopting more sustainable ways of producing products.

(a) (i) Name the **two** different renewable energy sources indicated by the pictures below that could help reduce the industry's carbon footprint. 2 × [1]





Source 1: .....

Source 2: .....

(ii) Describe **one** disadvantage associated with the use of wind turbines as a sustainable way of producing energy. [1]

.....

.....

© WJEC CBAC Ltd.

Examiner only

(b) Globalisation allows fashion and textile manufacturers to trade and operate on an international scale.

(i) Explain how globalisation has contributed to the increase in the fashion and textile industry's carbon footprint. [3]

.....

.....

.....

.....

(ii) Describe **two** different examples of how manufacturers could operate more sustainably on a global scale, which would also help reduce the industry's carbon footprint.

Example 1: .....

.....

..... [2]

Example 2: .....

.....

..... [2]

3602U101 05

© WJEC CBAC Ltd.

Examiner only

3. Interactive and smart fibres and fabrics are used throughout fashion and textiles.

(a) Place a tick (✓) in the table below to indicate which statements are true or false. 3 × [1]

Statement	True	False
Thermochromic fabrics respond to changes in light.		
SMA is the abbreviated term for shape memory alloy.		
Polymorph is a thermoplastic that can only be heated and set once.		

(b) (i) Explain what is meant by the term 'micro-encapsulation.' [2]

.....

.....

.....

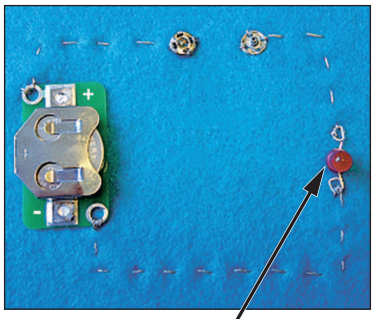
(ii) Explain how a micro-encapsulated fabric could be beneficial to a user in the following situations:

Dry skin condition for example, eczema	.... [2]
Medical dressings	.... [2]

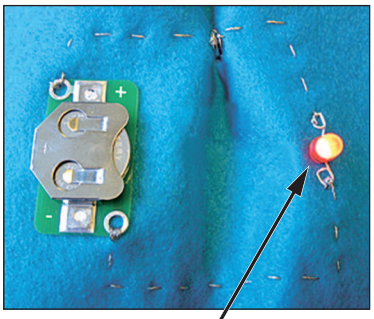
© WJEC CBAC Ltd.

Examiner only

(c) The picture below shows a simple electronic circuit integrated into a textile material.



LED off



LED on

(i) Explain the function and significance of the thread and snap fasteners in this circuit. [3]

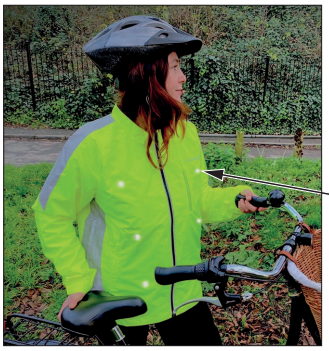
.....

.....

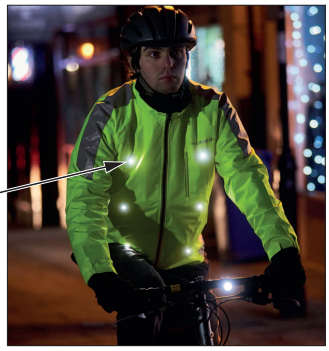
.....

.....

(ii) The hi-vis jackets worn by the cyclists shown below have LEDs (light emitting diodes) integrated onto the front and back panels.



LEDs (light emitting diodes)



(iii) Explain how the LEDs improve the functionality of the hi-vis jackets. [3]

.....

.....

.....

.....

3602U101 07

© WJEC CBAC Ltd.

Examiner only

4. The fashion industry impacts people's lives and the environment in different ways.

(a) (i) Explain why a designer might compile a mood board like the one pictured below. [2]

.....

.....

.....

(ii) Explain the role of fashion forecasters in supporting fashion designers. [2]

.....

.....

.....

(iii) Explain what is meant by the term 'contemporary fashion'. [2]

.....

.....

.....

© WJEC CBAC Ltd.

Examiner only

(b) 'Fast fashion' refers to the practice of buying clothes in the latest styles, wearing them a few times then discarding them or throwing them away.

(i) Evaluate the environmental impact of 'fast fashion' and a 'throwaway' society. [5]

.....

.....

.....

.....

.....

.....

.....

.....

(ii) Analyse the impact on workers from economically developing countries who are employed to make the clothing described as 'fast fashion'. [5]

Marks will be awarded for the content of the answer and the quality of written communication.

.....

.....

.....

.....

.....

.....

.....

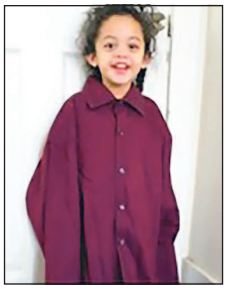
.....

3602U101 09

© WJEC CBAC Ltd.

Examiner only

(c) Upcycling garments as shown below, is one way of reducing fabric waste and extending the life of fashion and textile products.



Before

After

In the space below, draw an annotated sketch for a different idea for upcycling a man's shirt. [4]

Note: Include some key style details from the shirt on the upcycled design.
(The new design does not have to be clothing.)

© WJEC CBAC Ltd.

BLANK PAGE

PLEASE DO NOT WRITE ON THIS PAGE

© WJEC CBAC Ltd.

Examiner only

5. The product below is an environmentally-friendly hemp beach bag with an organic cotton lining.

(a) (i) Explain why hemp is a suitable material for the beach bag. [2]

.....

.....

.....

(ii) Explain why lining the bag improves its functionality. [2]

.....

.....

.....

(iii) Explain how anthropometric data would have been used in the design of the beach bag. [2]

.....

.....

.....

© WJEC CBAC Ltd.

Examiner only

(b) Appliqué has been used to apply the flower design to the front of the bag.

Using notes and sketches, describe the process of appliqué in stages that could be followed to apply the design to the beach bag. [4]

(c) Analyse how the materials used to make the beach bag allow it to be labelled as environmentally-friendly. [5]

.....

.....

.....

.....

.....

.....

.....

.....

© WJEC CBAC Ltd.

Examiner only

(d) The beach bag is intended for users who are environmentally responsible. Evaluate the marketability of the beach bag in meeting the needs, wants and values of the intended users. [5]

.....

.....

.....

.....

.....

.....

.....

.....

© WJEC CBAC Ltd.

BLANK PAGE

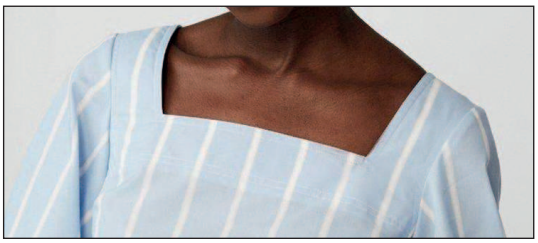
PLEASE DO NOT WRITE ON THIS PAGE

© WJEC CBAC Ltd.

Examiner only

6. A variety of processes and machinery are used to construct fashion and textile products.

(a) The neckline of the summer top pictured below has been finished using a facing.



Faced neckline

Gathered sleeve

(i) Explain why a facing is the most suitable method of finishing the edge of this neckline. [3]

.....

.....

.....

.....

(ii) Give **one** detailed reason why interfacing would have been used on the facing when constructing the top. [2]

.....

.....

.....

© WJEC CBAC Ltd.

Examiner only

(iii) The edge of the sleeve has been gathered into a cuff. Using notes and sketches, explain how to gather the edge of the fabric before attaching it to the cuff. [4]

(iv) Pattern markings were followed when cutting out the summer top. Explain the meaning of the pattern marks when found on the named pattern templates and why each must be followed.

Pattern marking	Explanation
	Front template: .... [2]
	Back template: .... [2]

(v) Explain the purpose of a dart when used on a summer top like the one pictured. [2]

.....

.....

.....

© WJEC CBAC Ltd.

Examiner only

(b) (i) The summer top is made from a linen fabric. Describe the properties of linen that make it suitable for the summer top. [3]

.....

.....

.....

.....

(ii) Describe **one** disadvantage of using linen for the summer top. [1]

.....

.....

(c) (i) In industry an overlocker would be used in the construction of the summer top. Explain what the overlocker would be used for and why. [3]

.....

.....

.....

.....

(ii) Justify the use of batch production to manufacture the summer top. [3]

.....

.....

.....

.....

END OF PAPER

© WJEC CBAC Ltd.

Question number	Additional page, if required. Write the question number(s) in the left-hand margin.

Examiner only

© WJEC CBAC Ltd.

Question number	Additional page, if required. Write the question number(s) in the left-hand margin.	Examiner only

© WJEC CBAC Ltd.