

Surname	Centre Number	Candidate Number
Other Names		0



GCSE

4131/01

DESIGN & TECHNOLOGY

UNIT 1

FOCUS AREA: Textile Technology

A.M. WEDNESDAY, 15 May 2013

2 hours

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Question 1	
Question 2	
Question 3	
Question 4	
Question 5	
Question 6	
Question 7	
Question 8	
TOTAL MARK	

ADDITIONAL MATERIALS

You will need basic drawing equipment, coloured pencils and a calculator for this examination.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

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. Where the space is not sufficient for your answer, continue at the back of the book, taking care to number the continuation correctly.

You are reminded of the necessity for good English and orderly presentation in your answers.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

Section A*Marked out of 60 60 minutes*

1. This question is about Product Analysis. It is worth a total of 15 marks.

The product shown below is a lightweight rain jacket which packs away into a bag.



Product information:

- The jacket is made from 100% polyester.
- It is shower resistant.
- It has a polka dot print with frilled edges for decoration.
- It is made in a range of sizes suitable for young girls aged 3 to 11 years.
- It is machine washable.
- It is only available in two colours - pink or turquoise.
- It folds away into its bag (shown above).
- Retail price: £5.00.

- (a) Place a **tick (✓)** in the table below to identify the target market for the rain jacket shown above. [1]

<i>All teenagers aged 13+</i>	<i>Girls aged 3 – 11 years</i>

(b) The product has been made using batch production. Explain why this is the most suitable scale of production. [2]

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(c) A design specification was produced before designing the rain jacket. Write a detailed specification point for each of the following headings.

(i) The function of the rain jacket. [2]

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(ii) The cost of the rain jacket. [2]

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(iii) The aesthetic appeal of the rain jacket. [2]

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(d) Justify the choice of material used to manufacture the rain jacket. [3]

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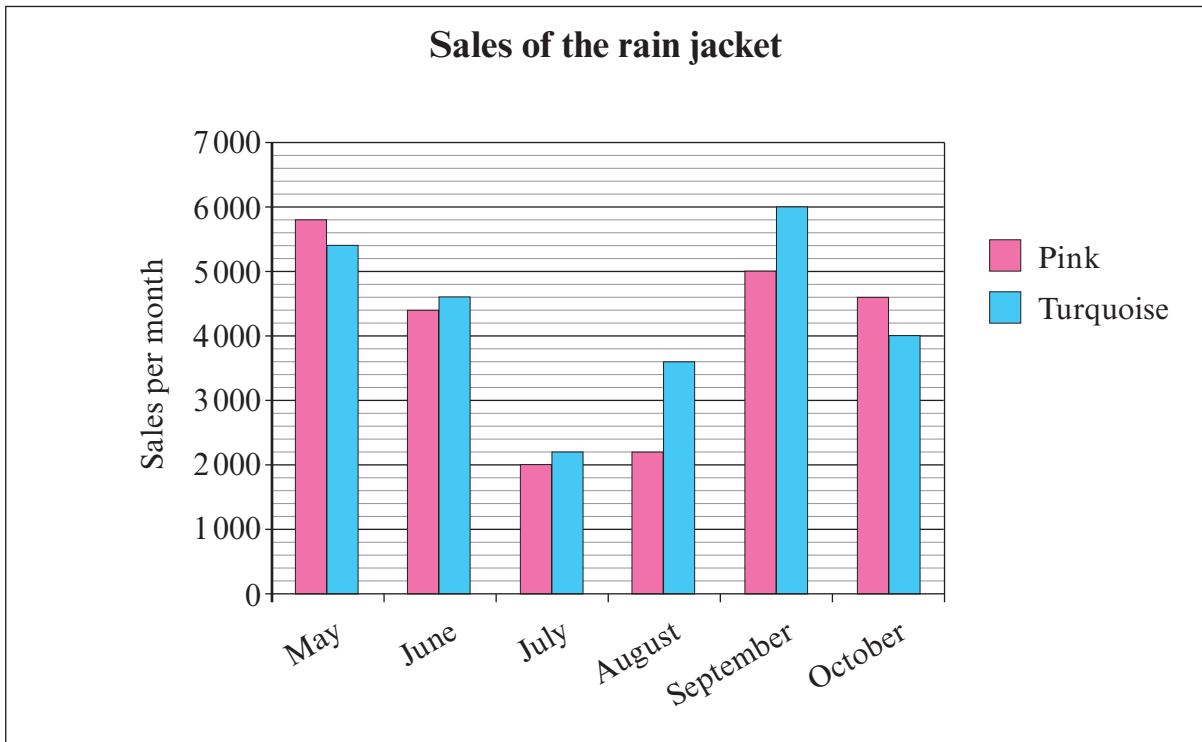
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(e) The graph below shows the sales of the rain jacket over a six month period.



(i) State in which month the most rain jackets were sold. [1]

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(ii) The total sales for the turquoise jacket over the six month period is 25 800. Calculate the average sales for the turquoise jacket over the six month period. [2]

Show all your workings.

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2. This question is about the general issues of Design and Technology. It is worth a total of 10 marks.

(a) (i) Complete the following table by selecting the correct meaning from the list below and matching it to the symbols shown. [3]

<i>Hand wash</i>	<i>Dry clean only</i>	<i>Do not iron</i>	<i>Machine wash</i>
			
.....	

(ii) State **one** other piece of information found on textile labels alongside the care label. [1]

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(b) Complete the following table by inserting the missing 'R' word. [1]

Reuse	Repair	Reduce
Refuse	Recycle

(c) Explain why the choice of materials is important when developing sustainable products. [2]

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(d) Explain why the practice of **planned obsolescence** has a negative impact on the environment. [3]

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3. This question is about the Designers that you have studied. It is worth a total of 10 marks.

- (a) The pictures below show the two designers you have studied. Draw a line to match the designer to the collection each is associated with. [2]



Les Incroyables

Electric Angels

The Mini-Crini Collection

- (b) You have studied the work of Vivienne Westwood and John Galiano. Describe the similarities and explain the main differences between their styles. [8]

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

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4. This question is about the Design Process and how it is used. It is worth a total of 25 marks.

(a) List **three** activities you could use to gather information as part of your research. [3]

(i)

(ii)

(iii)

(b) (i) Explain why it is important to test materials when developing new products. [2]

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(ii) Explain the purpose of a user or wearer trial when making new products. [2]

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- (c) The picture below is of a stain glass window. Use it as inspiration to design an imaginative cushion cover for an interesting and unusually shaped cushion.



Sketch the **front** and **back views** of your design in the spaces provided.

Specification

The design must:

- be for an interesting cushion cover for an unusually shaped cushion;
- be inspired by the stained glass window;
- include an imaginative and decorative fastening for the cushion cover;
- include the creative use of colour;
- include named style details.

Marks will be awarded for:

- | | |
|--|-----|
| (i) designing a cushion and cover; | [1] |
| (ii) an inspirational and unusual design inspired by the stained glass window; | [5] |
| (iii) the creative use of colour; | [3] |
| (iv) an imaginative and decorative fastening for the cover; | [3] |
| (v) labelling two specific style details; | [2] |
| (vi) quality of communication. | [4] |

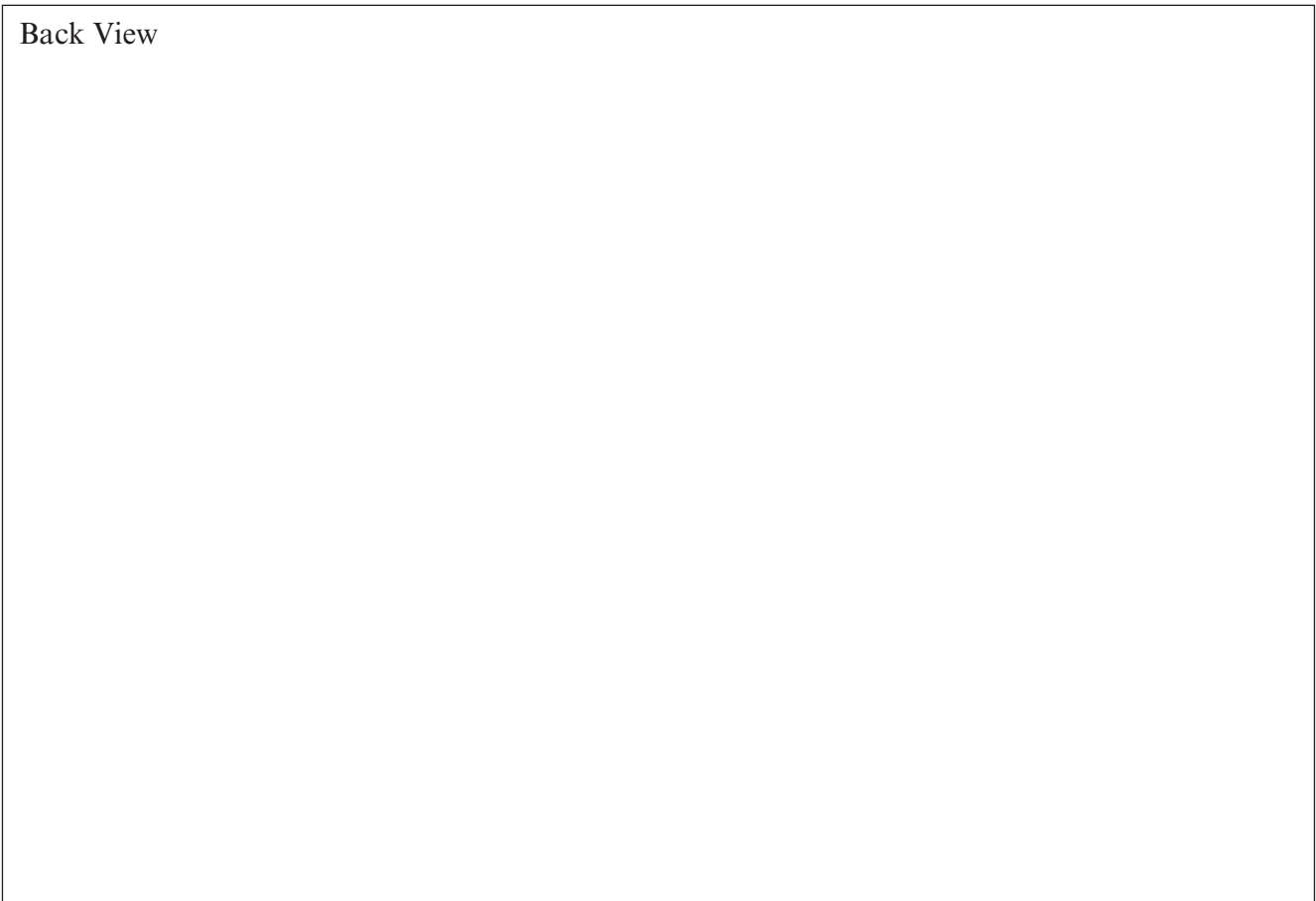
Draw your design in the spaces below.

Examiner
only

Front View



Back View



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Section B

Marked out of 60 60 minutes

5. This question is about Commercial Manufacturing Processes. It is worth a total of 10 marks.

(a) (i) Complete the table below to show the **five** main fashion capitals of the world.

[2]

New York	Milan	Tokyo
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(ii) Place a **tick (✓)** in **one** of the boxes below to show which statement is true.

[1]

Bespoke clothing is made to specific measurements for an individual customer.

Bespoke clothing is usually cheap to produce and often of poor quality.

(iii) Describe what is meant by the term contemporary fashion.

[2]

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(b) (i) Lay plans like the one shown below are used in commercial manufacturing as part of the production process.



Explain the advantages to the manufacturer of using computer programmes to plan fabric usage.

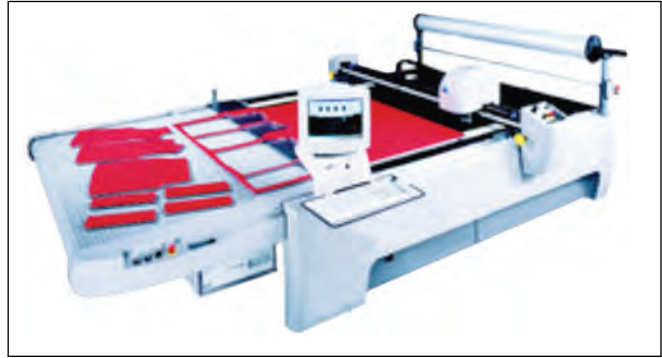
[2]

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- (ii) Explain the main function of the machine shown below and how it is linked to the lay plan. [3]



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6. This question is about Materials and Components. It is worth a total of 15 marks.

(a) State the names of the components shown below which are often found on textile products. [3]

		
<p>.....</p>	<p>.....</p>	<p>.....</p>

(b) (i) Use the words provided below, to complete the sentences that follow which relate to the beach towels shown. [3]

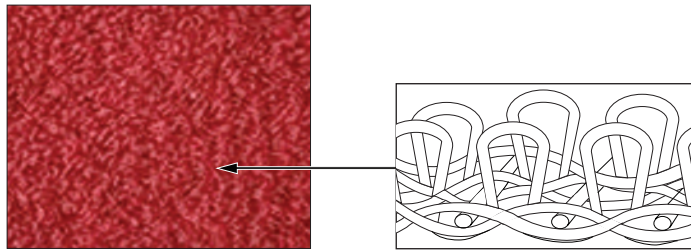


absorbency polyester plant cotton

The yarn used to make towels is usually made from 100%

The fibre used to make the yarn comes from a and is classed as natural. An important property of the cotton fibre is which makes it suitable for a towel.

- (ii) Towelling is made using a pile weave which is shown below. Explain how the construction of the weave improves the functional quality of the beach towel. [2]



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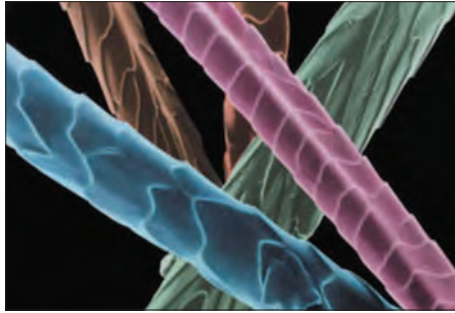
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- (c) Some textile materials are given a special finish to improve their properties. Complete the table below by explaining how each finish is applied and its function.

An example has been done for you.

<i>Name of finish</i>	<i>Application of finish and the function</i>
Water proofing	Silicone based chemicals are sprayed on to the material which creates a barrier to prevent water penetration.
Anti-static	<p>.....</p> <p>.....</p> <p>..... [2]</p>
Shrink resistance	<p>.....</p> <p>.....</p> <p>..... [2]</p>

(d) Wool fibres have scales on their surface as shown in the picture below.



Explain how the scales offer both advantages and disadvantages when wearing and caring for woollen clothing. [3]

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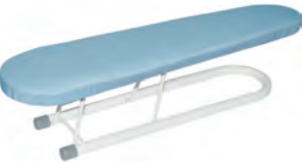
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7. This question is about Tools, Equipment and Making. It is worth a total of 20 marks.

(a) Complete the table below by stating either the name of the equipment or explaining what it is used for. [3]

<i>Equipment</i>	<i>Name</i>	<i>Used for</i>
	This gives an alternative finish to seams.
	Pins
	This allows you to press seams on sleeves more easily.

(b) The pictures below show equipment needed for screen printing and a finished design that has been screen printed on to fabric.



(i) A stencil is needed to transfer the design on to fabric. Briefly explain how you would make a stencil suitable for screen printing. [2]

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(ii) Describe the process of screen printing using a stencil. [3]

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(c) The picture below shows a child's storage tidy.



(i) Name **one** method of stitching the elephant design on to the storage tidy. [1]

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(ii) Name **one** method of applying the words *dans la jungle* on to the storage tidy. [1]

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(iii) The back panel of the storage tidy has been quilted. Give **two** reasons why quilting has been used on this product.

Reason 1:

..... [2]

Reason 2:

..... [2]

- (iv) Using notes and sketches, explain the main stages needed to prepare and make a quilted panel suitable for a storage tidy like the one on the product shown below.

Examiner
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[6]



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8. This question is about ICT, CAD, CAM, Systems and Processes. It is worth a total of 15 marks.

(a) (i) Place a **tick** (✓) in the table below to match the resource to the correct abbreviated term. [3]

<i>Resource</i>	<i>ICT</i>	<i>CAD</i>	<i>CAM</i>
Laser cutter			
Spreadsheet			
Drawing programme			

(ii) Give **two** reasons for using the internet to carry out research. [2]

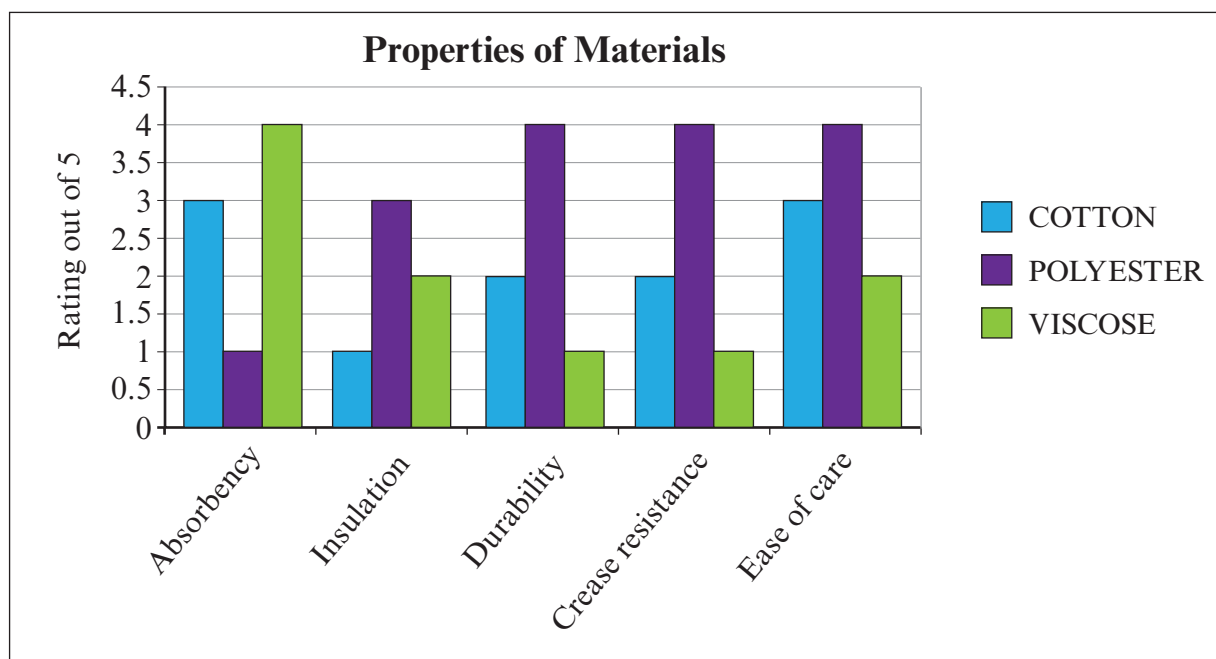
Reason 1:

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Reason 2:

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(iii) The chart below shows how the properties of three different materials have been rated out of five.



Give **one** advantage of using ICT in this way to help with material research when designing new textile products. [2]

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- (b) (i) Name the most suitable piece of equipment that would produce the embroidered motif shown below. [1]



Name of equipment:

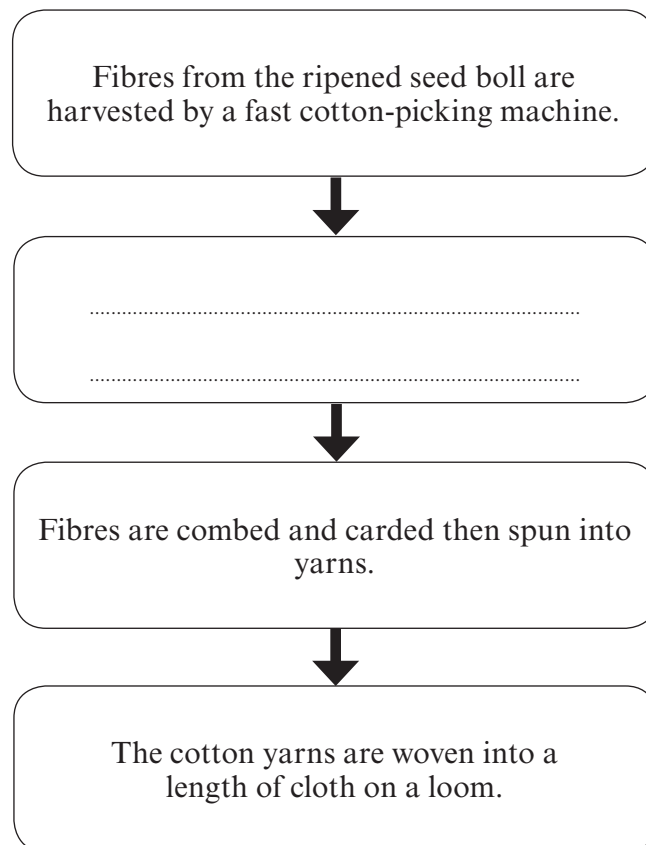
- (ii) State **two** ways CAD can be used during the designing and making of textile products. [2]

I.

II.

- (c) Production systems are followed throughout the manufacture of textile fabrics and products.

- (i) Complete the missing stage in the production system for a length of cotton fabric. [1]



(ii) Describe the purpose of a flowchart.

[2]

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(iii) Feedback is an important feature when controlling systems during the manufacture of textile products. Define the term feedback.

[2]

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END OF PAPER

