

Candidate Name	Centre Number	Candidate Number

WELSH JOINT EDUCATION COMMITTEE
General Certificate of Secondary Education



CYD-BWYLLGOR ADDYSG CYMRU
Tystysgrif Gyffredinol Addysg Uwchradd

143/04

DESIGN AND TECHNOLOGY

PAPER 2

FOCUS AREA: TEXTILES TECHNOLOGY

(Higher Tier – Grades D to A*)

P.M. TUESDAY, 6 June 2006

(1½ hours)

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Question 1	
Question 2	
Question 3	
Question 4	
Question 5	
TOTAL MARK	

ADDITIONAL MATERIALS

In addition to this examination paper you will need coloured pencils.

INSTRUCTIONS TO CANDIDATES

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 the answer at the back of the book, taking care to number the continuation correctly.

INFORMATION FOR CANDIDATES

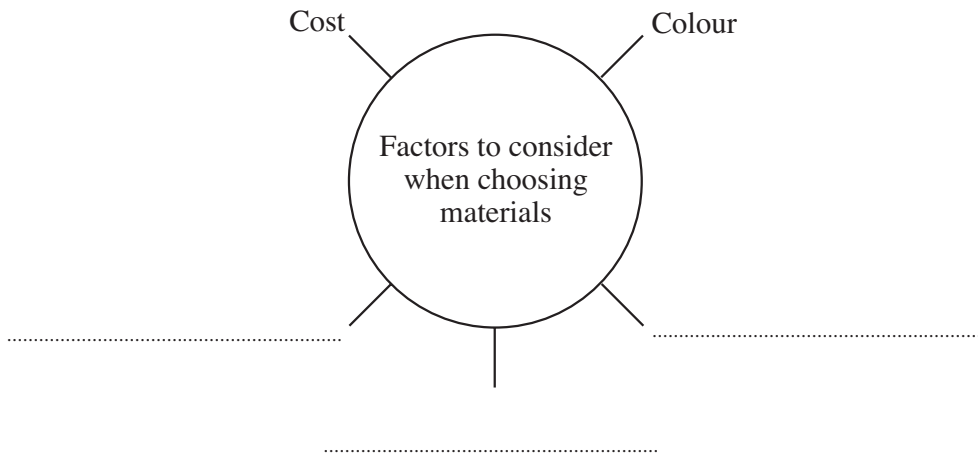
The number of marks is given in brackets at the end of each question or part-question.

No certificate will be awarded to a candidate detected in any unfair practice during the examination.

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



1. (a) Complete the diagram below by adding **three** factors that you would consider when choosing the right material for a textile product. [3]

Two examples have been done for you.

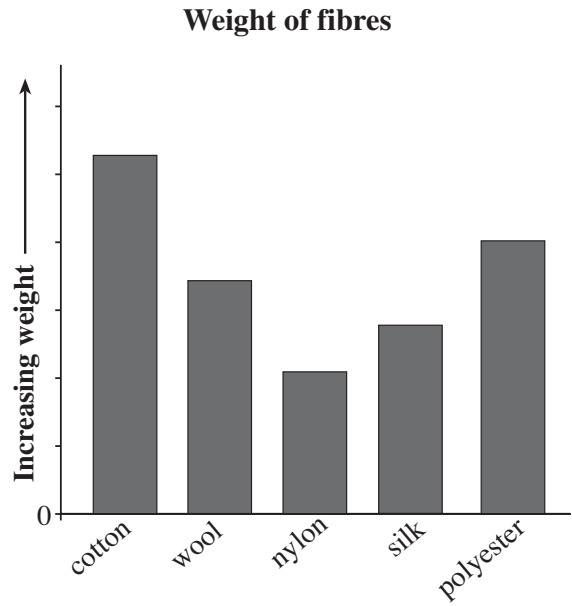
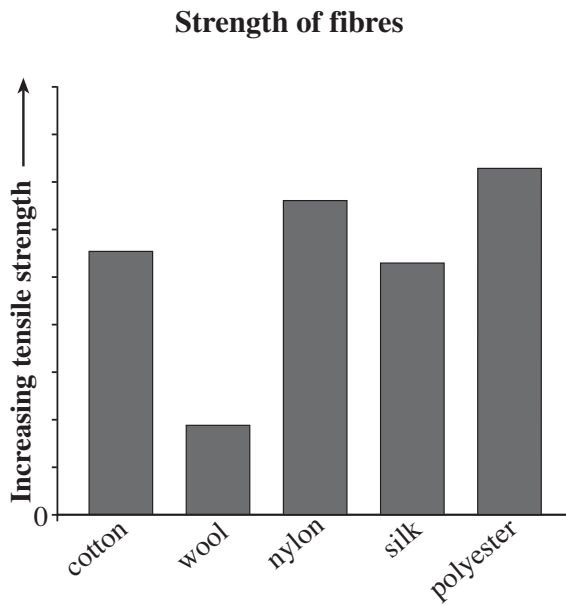


- (b) For **each** textile product shown below, state:

- (i) the name of a suitable material to make the product; [2]
- (ii) the *most important property* that makes the material suitable for the product. [2]

Textile product	Name of material	Material property
 Bath towel
 Swimwear

(c) The graphs below show the comparative strengths and weights of various *fibres*. Study the graphs and answer the questions that follow.



(i) State the weakest *synthetic* fibre. [1]

.....

(ii) State the lightest *natural* fibre. [1]

.....

(d) Nylon is often used to manufacture the material for the wing of a hang glider or for a parachute. Explain why this is a suitable material. [2]

.....
.....

(e) Describe **two** methods that can be used to strengthen a textile yarn or material. 2 × [2]

Description of method 1:

.....
.....

Description of method 2:

.....
.....

2. (a) Some textile materials are given a *special finish* in order to improve their properties. Complete the table below to show:

- (i) the names of **two** special finishes that can be given to textile materials to improve their properties; 2 × [1]
- (ii) the function of **each** finish; 2 × [2]
- (iii) the name of a material to which **each** finish can be applied. 2 × [1]

An example has been completed for you.

Name of special finish	Function of finish	Material
Anti-static	To prevent the build up of static charge which makes synthetic clothes cling.	Nylon
.....
.....

(b) The illustrations below show a design for a rucksack.

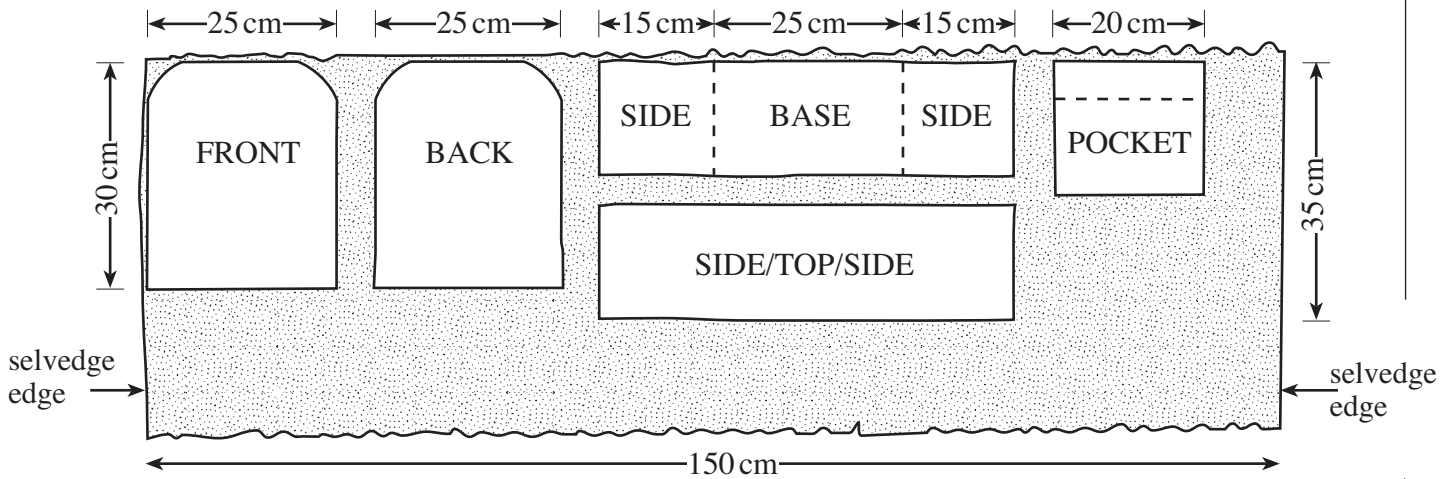


(i) *Cordura* is to be used to make this rucksack. Give **two** useful properties of *Cordura*. [2]

Property 1:

Property 2:

(ii) Use the layplan shown below to work out the minimum length of material needed to make the rucksack. *Cordura* is 150 cm wide.



State the minimum length of material needed to make the rucksack. [1]

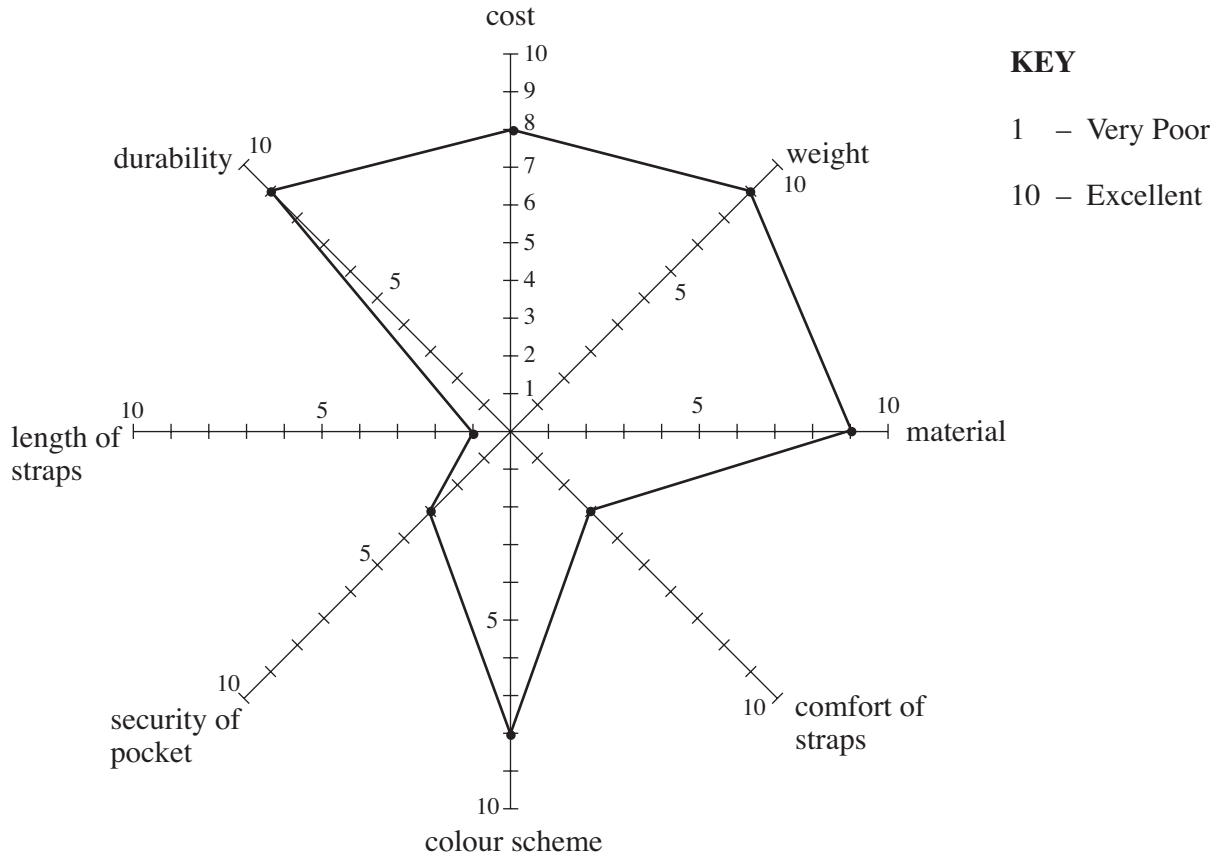
.....

(iii) *Cordura* costs £11.25 per metre length. State how much it would cost for the length of material you stated in part (ii) above. Show your calculation. [2]

.....

.....

(c) The star profile diagram below shows the strengths and weaknesses of the prototype rucksack.



The star profile shows the length of the straps as one weakness of the design. Identify **one** other weak feature in the design of the rucksack and use notes and sketches to show how this feature can be improved. [3]

Poor feature

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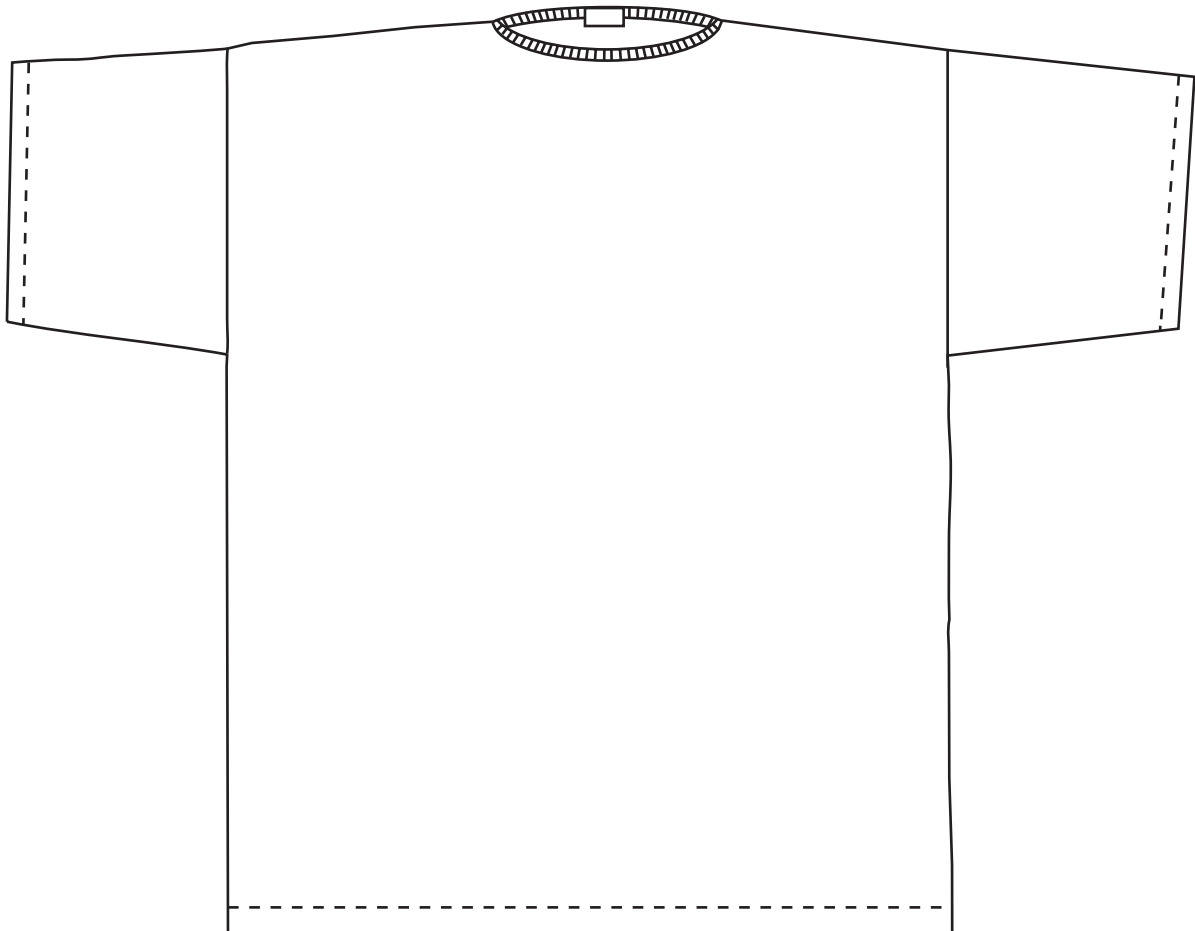
3. Designers use nature as a source of inspiration for new ideas. The photograph below shows a collection of items found on the beach.



- (a) Use the collection of items shown above as inspiration to produce a design to be added to the plain white T-shirt shown below.

Marks will be awarded for:

- creating an imaginative and colourful design; [3]
- using the inspirational material; [2]
- annotating the sketch to explain how your design can be applied to the T-shirt. [3]



- (b) (i) Describe **two** methods a designer can use to present design ideas for a collection of winter separates to their clients. 2 × [2]

Method 1:

.....

Method 2:

.....

- (ii) Choose **one** of the methods you have described in (i) and explain **two** benefits of using this method to show ideas. [2]

Method:

Benefits:

.....

.....

- (c) Supermarkets are now selling a range of clothes and accessories.

Other than low cost, give **three** reasons why their ranges of clothing and accessories are popular. [3]

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.....

.....

- (d) Explain what you understand by the term *fashion forecasting*. [2]

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.....

- (e) Textile items often carry a care label. Draw and describe **one** important piece of information contained on a care label. [2]

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.....

.....

4. People are encouraged to 'reduce, reuse and recycle'. The picture below shows a plastic wash bag made from recycled drinks containers.



- (a) (i) Give **two** reasons why some manufacturers are using recycled materials in their products. 2 × [2]

Reason 1:

.....

.....

Reason 2:

.....

.....

- (ii) Explain how the *WasteWatch* scheme encourages the recycling of textile materials. [2]



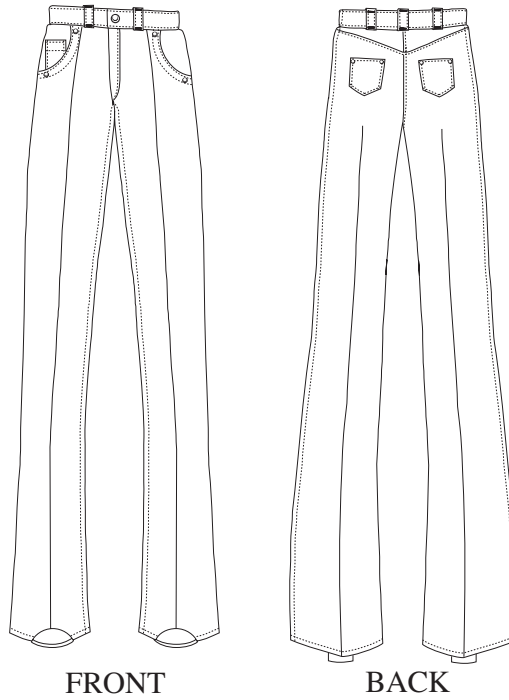
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(b) The sketch below shows some of the main style details used on denim jeans.



Sketch and label **one interesting** idea to show how an old pair of denim jeans could be used to create a fashion accessory.

Marks will be awarded for:

- a clearly labelled design idea; [3]
- using at least **one** feature from the original denim jeans. [2]

(c) In industry, batches of materials are carefully checked for faults. Give **three** quality checks that could be carried out on a length of material before it is used in a textile product. [3]

Check 1:

.....

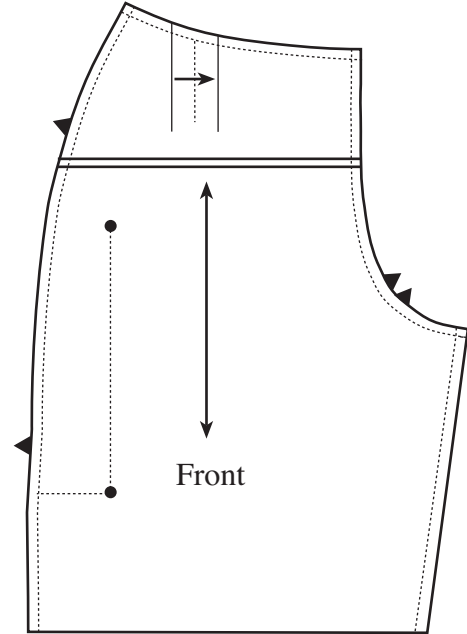
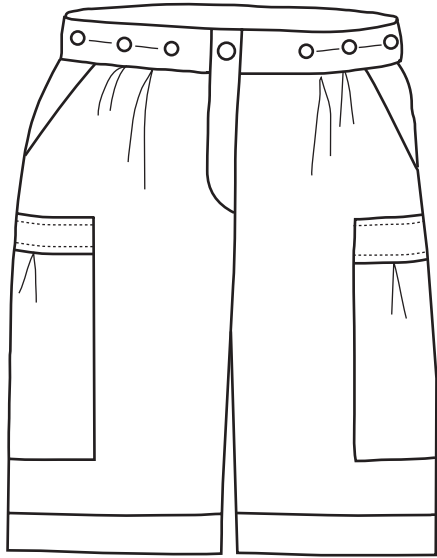
Check 2:

.....

Check 3:

.....

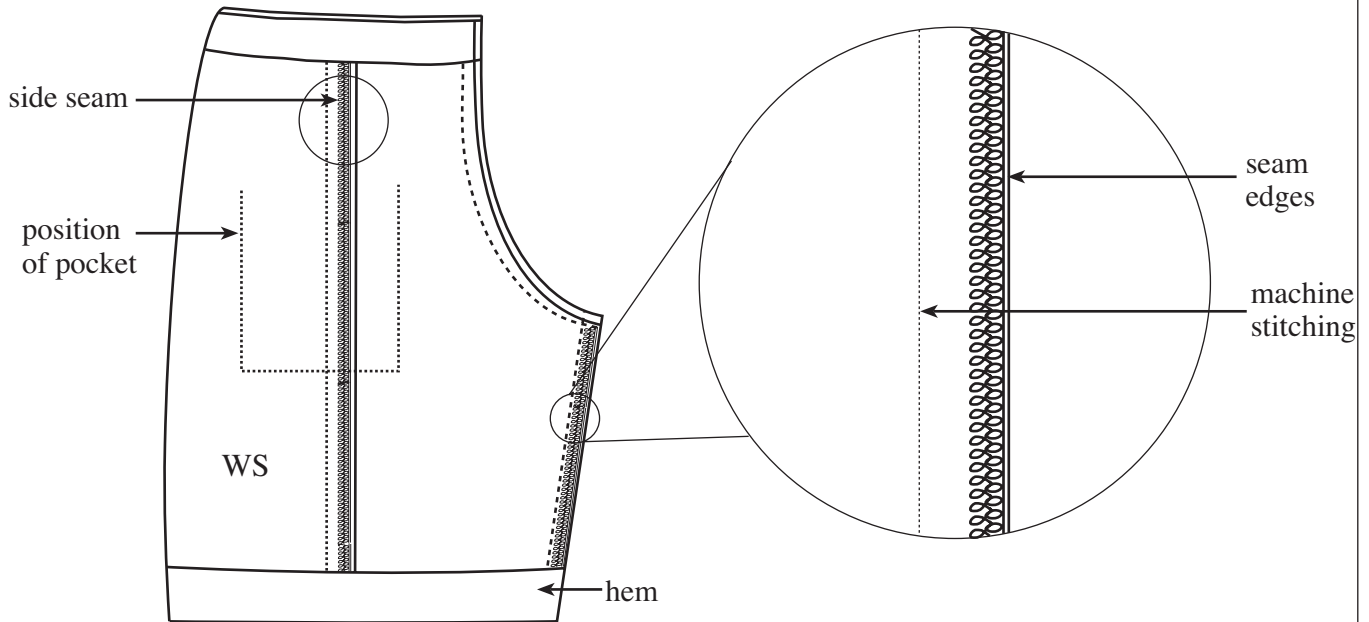
(d) The diagrams below show a pair of shorts and one of the pattern templates that could be used to make them.



(i) Explain the meaning of **each** of the following symbols shown on the pattern template. 3 × [2]

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

- (ii) The diagrams below show a view of the shorts folded inside out and a close up view of the seam detail.



An overlocker has been used to neaten the seams. In the space below, sketch and label a *different* method that could be used to neaten the seams. [3]

5. Popular films, stories and cartoon characters are often used as a theme for decorating and furnishing children’s rooms.

(a) Using a theme of your own choice, sketch and label **one** idea, on the page opposite, for an imaginative and innovative floor cushion for use in a child’s room.

Your design must:

- reflect a popular film, story or cartoon character that would appeal to a child;
- show clear details of the design and construction of the cushion, including an opening so that the outer covering can be removed for washing;
- make use of a range of *warm* colours.

Marks will be awarded for:

- (i) a detailed design which reflects the theme and shows the front and back views; [5]
- (ii) using a warm colour scheme; [2]
- (iii) construction details for an opening; [5]
- (iv) two important dimensions; [2]
- (v) quality of communication. [4]

(b) Name the main material that you would choose to use for the outer cover and give **two** reasons for your choice. [5]

Name of material:

Reason 1:

.....

.....

Reason 2:

.....

.....

(c) Give **two** safety considerations that should be taken into account when designing soft furnishings. [2]

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Theme:

For continuation only.

A series of horizontal dotted lines for writing.