

Surname						Other Names					
Centre Number						Candidate Number					
Candidate Signature											

Leave blank

General Certificate of Secondary Education
 Summer 2003
 Foundation Tier



**DESIGN AND TECHNOLOGY:
 TEXTILES TECHNOLOGY**

3547/F

F

Monday 16 June 2003 9.30 am to 11.30 am

In addition to this paper you will require:
 a pen, pencil, ruler, eraser, pencil sharpener and
 coloured pencils.

For Examiner's Use	
Number	Mark
1	
2	
3	
4	
5	
6	
TOTAL	
Examiner's initials	

Time allowed: 2 hours

Instructions

- Use blue or black ink or ball point pen. Use pencil and coloured pencils only for drawing.
- Fill in the boxes at the top of this page.
- Answer **all** questions in the spaces provided.
- All working must be shown.
- Do all rough work in this book. Cross through any work you do not want marked.

Information

- The maximum mark for this paper is 125.
- Mark allocations are shown in brackets.
- An insert with body shapes has been provided as a guide for the candidates doing the fashion option.
- Wherever calculations are needed you should show your working.
- You are reminded of the need for good English and clear presentation.

Design brief

You are the designer for a manufacturing company.

A client has asked you to use inspiration from the shape, pattern, colours and texture of insects to design and make an original and exciting product that will sell well.

Choose **one** of the following:

either

A a fashion top

or

B a product for use on a chair in a living room.

- The product will be made by batch production.
- The product must be based on the shape, patterns, colours and textures linked with insects.

Tick the box to show which one you have chosen.

Fashion top.

Product for a chair.

You should answer the questions in this paper in the order in which they are written.

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

Question 1 is about research for your product.

1 (a) Give **two** different ways of finding out about insects.

1

2

(2 marks)

(b) You can use the colours, shapes and patterns linked with insects to give you ideas.

(i) How could you use colour?

.....
.....
.....

(3 marks)

(ii) How could you use shape?

.....
.....
.....

(3 marks)

(iii) How could you use pattern?

.....
.....
.....

(3 marks)

TURN OVER FOR THE NEXT QUESTION

Turn over ▶

Question 2 is about the design of your product.

2 (a) A designer works to a specification.

Give **two** reasons why a design specification is important.

1

2

(2 marks)

(b) You have been asked to show your design ideas.

The **design** specification says that it must:

- be based on the shape, pattern, colours and textures linked with insects;
- be batch produced.

(i) In the spaces below, use pencil sketches to show **two** initial ideas for the product.

--	--

Idea A

Idea B

(8 marks)

(ii) Choose **one** of your ideas for development.

Tick the box to show the idea you would choose.

Idea A

Idea B

(iii) Why have you chosen this idea?

.....
.....

(2 marks)

(c) Before a prototype of your final product is made you will need to develop your chosen idea.

Describe in detail **one** area you will develop.

I will develop the

by

.....
.....

(3 marks)

QUESTION 2 CONTINUES ON THE NEXT PAGE

Turn over ►

(d) Use sketches, labelling and notes to show a final design for your product.

You have this page and the next to present your design.

If you have chosen the fashion top you may use the body shapes as a guide.

Marks will be awarded for:

- **choice** and **use** of fabrics/components; (5 marks)
 - use of colour in the product; (4 marks)
 - quality of the design and use of shapes, patterns and textures linked with insects; (8 marks)
 - presentation of the final idea. (3 marks)
- (20 marks)

Question 3 is about fabrics/components for the product you have designed.

3 (a) (i) List **two** ways designers can use computers to help decide which fabrics to choose.

- 1
- 2
(2 marks)

(ii) What information would they expect to find?

-
-
(3 marks)

(b) You have chosen the fabric to make your product.

(i) The **fibre** content of your **main** fabric is:

-
(1 mark)

(ii) Give **three** reasons for choosing this fabric.

- 1
-
- 2
-
- 3
-
(6 marks)

(c) Give **two** quality checks that should be made on the fabric before it is cut.

- 1
- 2
(2 marks)

(d) (i) Name **one** component you have used to make your product.

.....
(1 mark)

(ii) Explain why you have chosen this component.

.....
.....
(2 marks)

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TURN OVER FOR THE NEXT QUESTION

Turn over ►

Questions 4 and 5 are about the manufacture of your product.

4 (a) A *manufacturing specification* is needed for **your product**.

List **four** things that would be on this manufacturing specification.

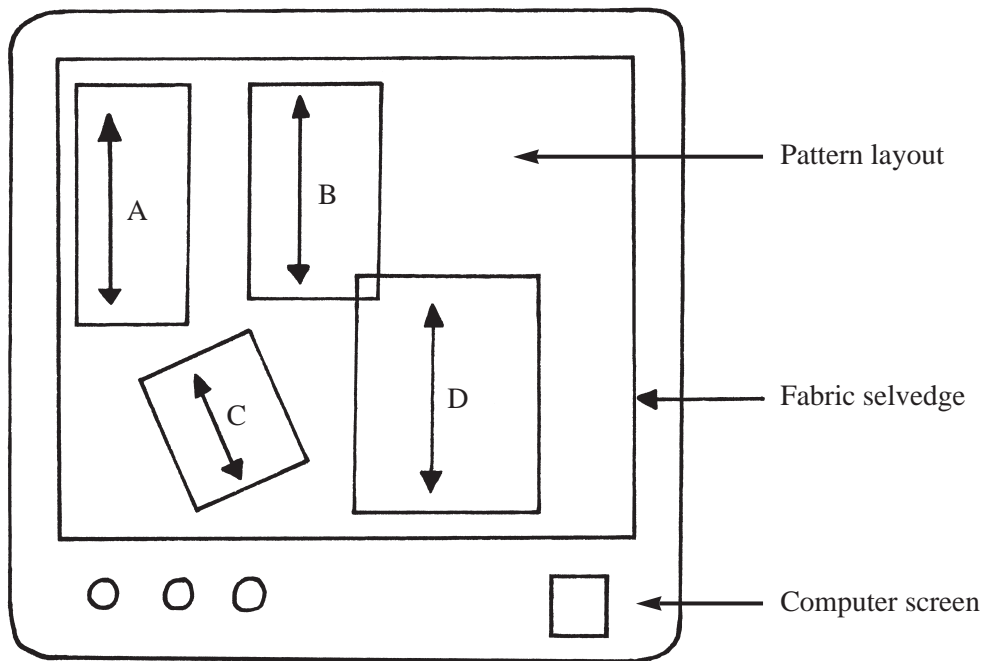
- 1
- 2
- 3
- 4

(4 marks)

(b) Cutting the fabric into pattern shapes is an important process.

Look at the computer pattern layout below.

The pattern pieces are labelled A–D.



Give **three** ways of improving this pattern layout.

Give a reason for each.

Improvement 1 is

Reason

.....

Improvement 2 is

Reason

.....

Improvement 3 is

Reason

.....

(6 marks)

(c) Your product must be made to a very high standard or it will not sell.

The quality department set tolerance levels for products.

(i) What do *tolerance levels* mean?

.....

.....

(2 marks)

(ii) Describe **one** part of your product that will have a tolerance level.

.....

.....

(2 marks)

5 (a) The manufacturer will use batch production to make your product.

(i) What is meant by *batch production*?

.....
.....
(2 marks)

(ii) Why would this be a good method to use?

.....
.....
(2 marks)

(b) Cost is important.

List **three** ways in which a manufacturer can cut the cost of making products.

1
2
3
(3 marks)

(c) A production line often includes sub-assembly lines.

(i) What is meant by *sub-assembly*?

.....
.....
(2 marks)

(ii) Give **two** advantages of using sub-assemblies.

1
2
(2 marks)

(iii) Name **one** part of **your product** that could be made on a sub-assembly line.

.....
(1 mark)

(d) Modern factories use computerised sewing machines when making products.

(i) Explain **two** advantages of using computerised sewing machines.

1

.....

2

.....

(4 marks)

(ii) Explain how a computerised sewing machine could help during the manufacture of your product.

.....

.....

(2 marks)

(e) Many companies now have their textile products made abroad.

Give **two** reasons for this.

Reason 1:

.....

Reason 2:

.....

(4 marks)

(f) The manufacturer has to make sure that accidents do not happen in the factory.

Give **three** ways in which accidents can be prevented.

1

.....

2

.....

3

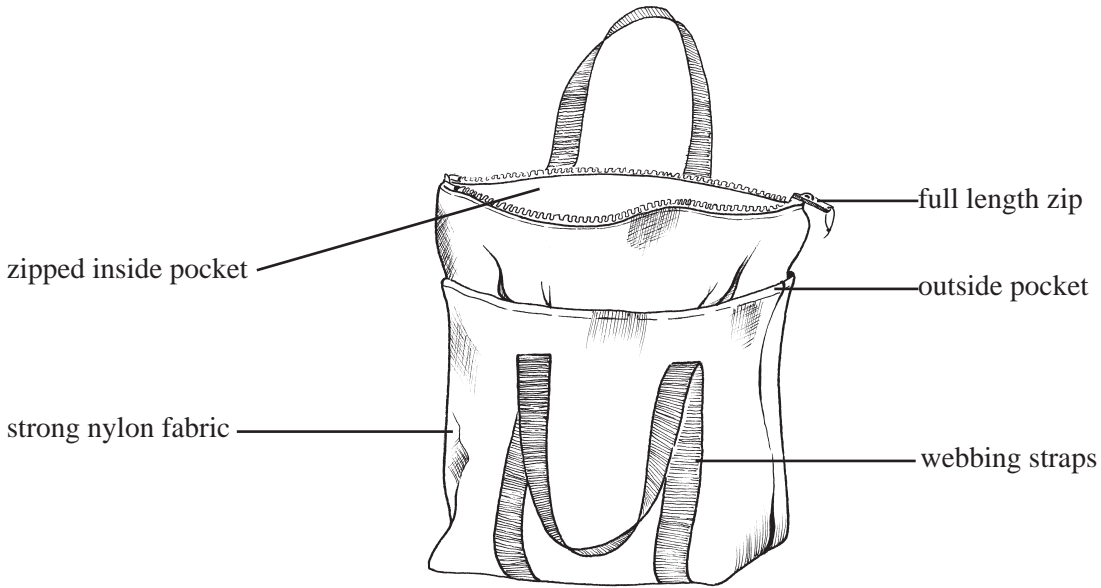
.....

(6 marks)

Turn over ►

Question 6 is about evaluating an existing product.

6 Look at this picture. The bag is strong enough for shopping and light enough for the beach.



(a) Explain how the bag has been designed so that it has lots of different uses.

.....

.....

.....

.....

(4 marks)

(b) The bag is made from a strong nylon fabric. Explain **three** reasons why this fabric is suitable for a bag.

Reason 1:

.....

Reason 2:

.....

Reason 3:

.....

(6 marks)

(c) Name and describe **two** components used on the bag.

Component 1:

.....

Component 2:

.....

(6 marks)

(d) The designer has chosen to use a full length zip on the outside of the bag.

(i) Name **one** other fastening that could have been used instead.

.....

(1 mark)

(ii) Explain why you think the zip was chosen.

.....

.....

.....

(3 marks)

END OF QUESTIONS

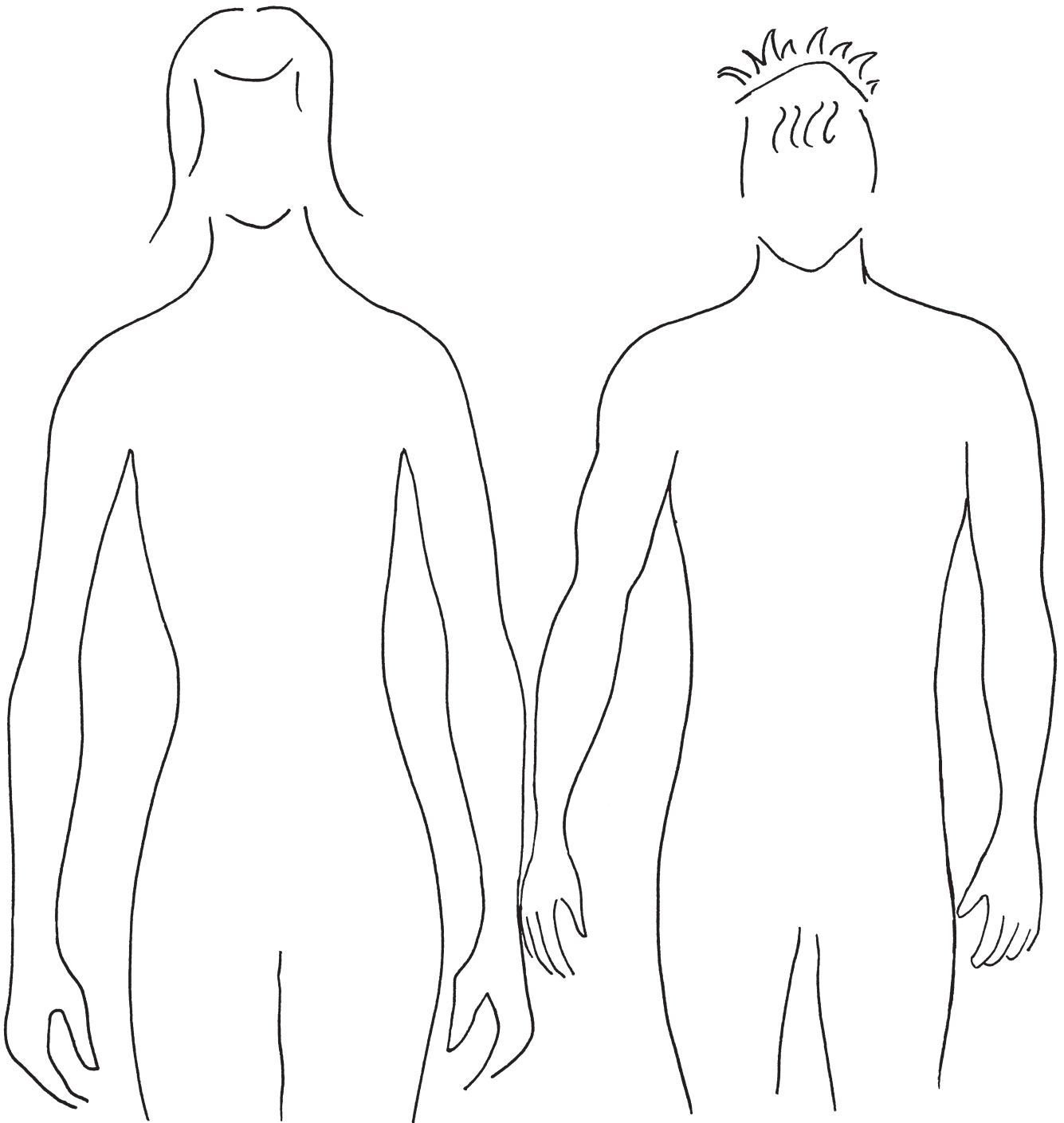
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DESIGN AND TECHNOLOGY:

TEXTILES TECHNOLOGY: Full and Short Courses

This insert is provided for use in the examination. It may be used as a guide for the Fashion option.

Do not draw on this page.



This insert page should **not be** sent to the examiner.

Insert to

3547/F 3547/H
3557/F 3557/H