

Surname		Other Names	
Centre Number		Candidate Number	
Candidate Signature			

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General Certificate of Secondary Education
 Summer 2003
 Higher Tier



**DESIGN AND TECHNOLOGY:
 TEXTILES TECHNOLOGY**

3547/H

H

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	
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 batch produced.
- The product must be based on the shape, patterns, colours and textures linked with insects.
- The product must have an interesting feature made from fabric you have manipulated.

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) Describe the ways in which information about product trends can be found.

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(4 marks)

(b) Describe **two** ways in which you might use the theme of insects in your product.

1

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2

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(4 marks)



TURN OVER FOR THE NEXT QUESTION

Turn over ►

Question 2 is about the design of your product.

2 You have been asked to design a product for manufacture.

The **design** specification says that the product must:

- have an interesting feature made from fabric you have manipulated;
- be based on the shape, patterns, colours and textures linked with insects;
- be batch produced.

(a) Add **two** more points to the design specification.

1

2

(2 marks)

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

(i) Use pencil sketches to show **two** initial ideas for the product.

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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?

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(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.

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(3 marks)

QUESTION 2 CONTINUES ON THE NEXT PAGE

Turn over ►

(d) Use sketches, labelling and notes to present 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 of suitable fabrics/components; (4 marks)
 - manipulation of fabric; (3 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)
- (22 marks)

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

3 (a) Describe how ICT helps designers to choose fabrics and components.

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(5 marks)

(b) Explain how the fabrics/components you have chosen for your product would reflect the theme.

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(6 marks)

(c) You have been asked to manipulate fabric to make an interesting feature.

(i) Explain how you have done this. You may use a labelled diagram if you wish.

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(5 marks)

(ii) Explain **two** fabric qualities that will be needed in order to produce the **feature** you have chosen.

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(4 marks)

20

TURN OVER FOR THE NEXT QUESTION

Turn over ►

Question 4 is about the manufacture of your product.

4 (a) The fabric has been delivered to the factory.

Explain what the quality controller would check before the fabric is used.

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(5 marks)

(b) Pattern laying is an important process in the manufacturing industry.

Discuss the ways in which computer technology helps at this stage of manufacture.

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(4 marks)

(c) Cost is a vital consideration.

Many manufacturers use a *just in time* system to help control costs.

What is a *just in time* system?

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(2 marks)

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

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

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(2 marks)

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

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(2 marks)

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

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

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(2 marks)

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

1
2
(2 marks)

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

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(1 mark)

(f) Modern factories use computerised sewing machines when manufacturing products.

(i) Explain the advantages of using computerised sewing machines.

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(4 marks)

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

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(2 marks)

QUESTION 4 CONTINUES ON THE NEXT PAGE

(g) Many companies have their products manufactured abroad.

Discuss the increasing use of overseas factories to manufacture textile products.

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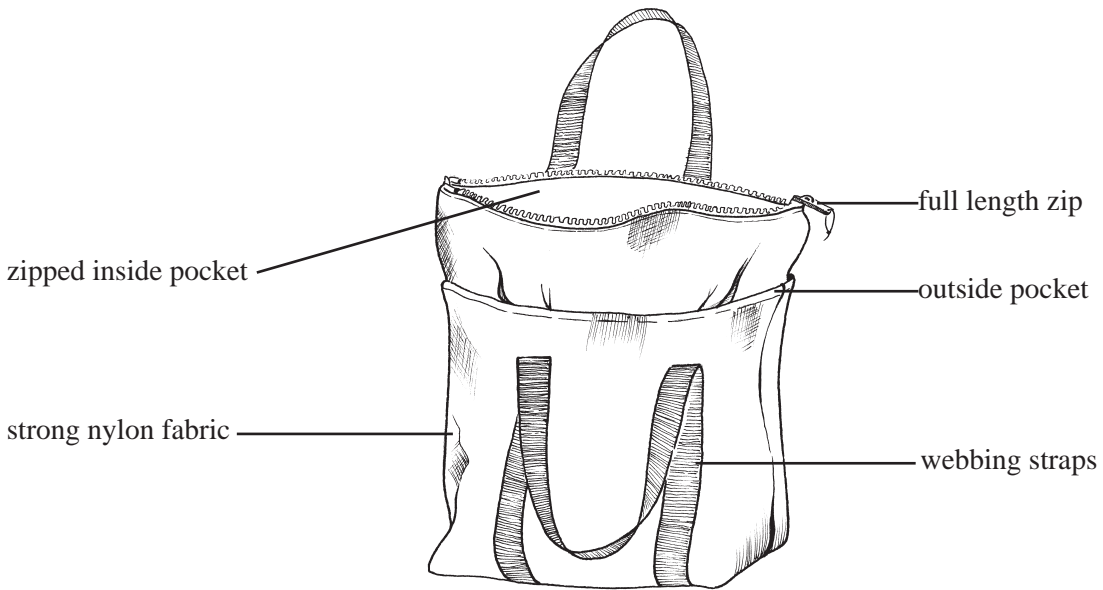
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(10 marks)

Question 5 is about evaluating an existing product.

5 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.

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(4 marks)

(b) The bag is made from a strong nylon fabric.

Why is this fabric suitable for bags?

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(3 marks)

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

Discuss the use of the zip instead of other fastenings.

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(6 marks)

- (ii) Describe the way in which the webbing straps have been used for carrying the bag.

Suggest alternative ways in which this could have been done.

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(6 marks)

- (d) A basic block pattern has been used for the bag design.

Discuss the advantages to the manufacturer of using a basic block pattern.

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(5 marks)

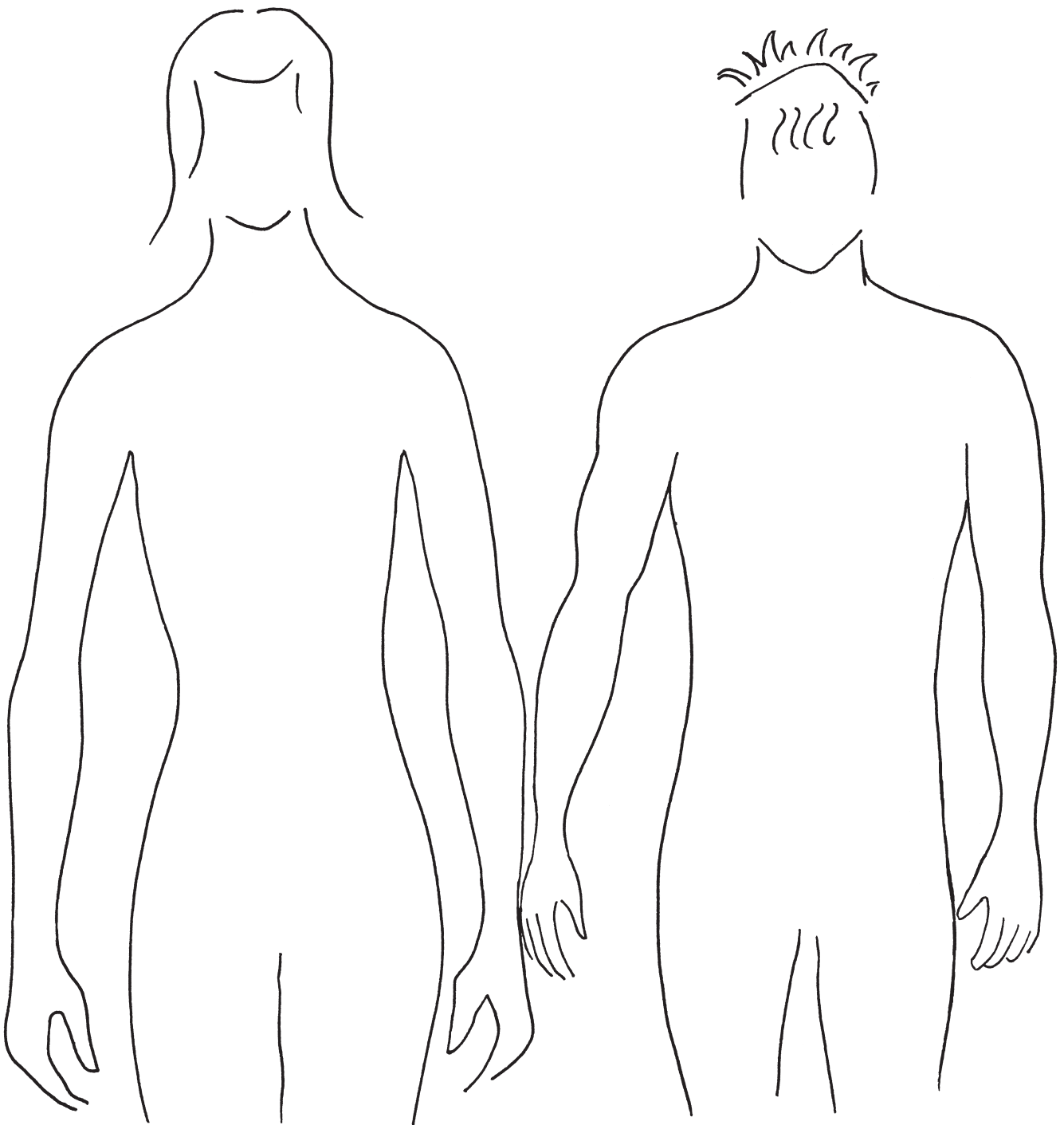
END OF QUESTIONS

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