

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
3	
4	
TOTAL	



General Certificate of Secondary Education
Specimen Paper

Design and Technology: **XXXX/W**

Short Course

Unit 1: Written Paper

Date: Time

<p>For this paper you must have:</p> <ul style="list-style-type: none"> • a pen, a pencil, colour pencils, a ruler, an eraser and a pencil sharpener. • You may use a calculator.

Time allowed

- 1 hour

Instructions

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

Information

- The maximum mark for this paper is 60.
- The marks for questions are shown in brackets.
- You are reminded of the need for good English and clear presentation in your answers. Quality of Written Communication is assessed in question 3(b)(i)

XXXX/W

Question 1 is about materials and components.

1 Materials / ingredients come from many different sources.

1 (a) From the following list of materials/ingredients choose **three** and match them to the correct source.

You should write your answers in the correct boxes below.

An example has been done for you.

Copper	Wool	Flour	Acrylic
Cotton	Cheese	Silk	Polyester
Pine	Mild Steel	Lard	Pine
Oak	Nylon	Polythene	Oak

Materials/ingredients made from trees and plants	
Materials/ingredients made from oil	Nylon
Materials/ingredients taken from animals	
Materials dug out of the ground	

(3 marks)



1 (b) Consumers are increasingly concerned about where materials and products come from because of environmental, health or ethical issues.

These issues include:

- | | |
|----------------|----------------|
| Fair trade | Organic |
| Animal welfare | Sustainability |
| Product miles | Special diets |

Choose **two** topics from above and explain in detail, with examples, why consumers are concerned about these issues.

1 (b) (i) Chosen issues.....

Explanation.....

.....

.....

.....

(2 marks)

1 (b) (ii) Chosen issues.....

Explanation.....

.....

.....

.....

(2 marks)

7

Question 2 is about the process of designing.



Turn over ►

2 Scamper is a strategy which helps designers develop their ideas.



Substitute



Combine



Adapt
Add



Modify
Magnify
Minimise



Put to
other
uses

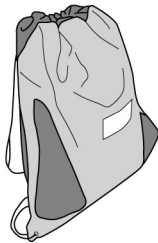


Eliminate

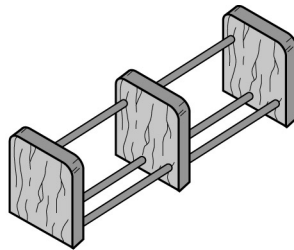


Reverse
Rearrange

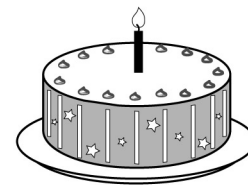
2 (a) Use scamper to produce a design, in the space opposite for **one** of the ideas shown below.



Draw string bag



CD storage rack



Celebration cake

You should annotate your design to explain the changes you have made.

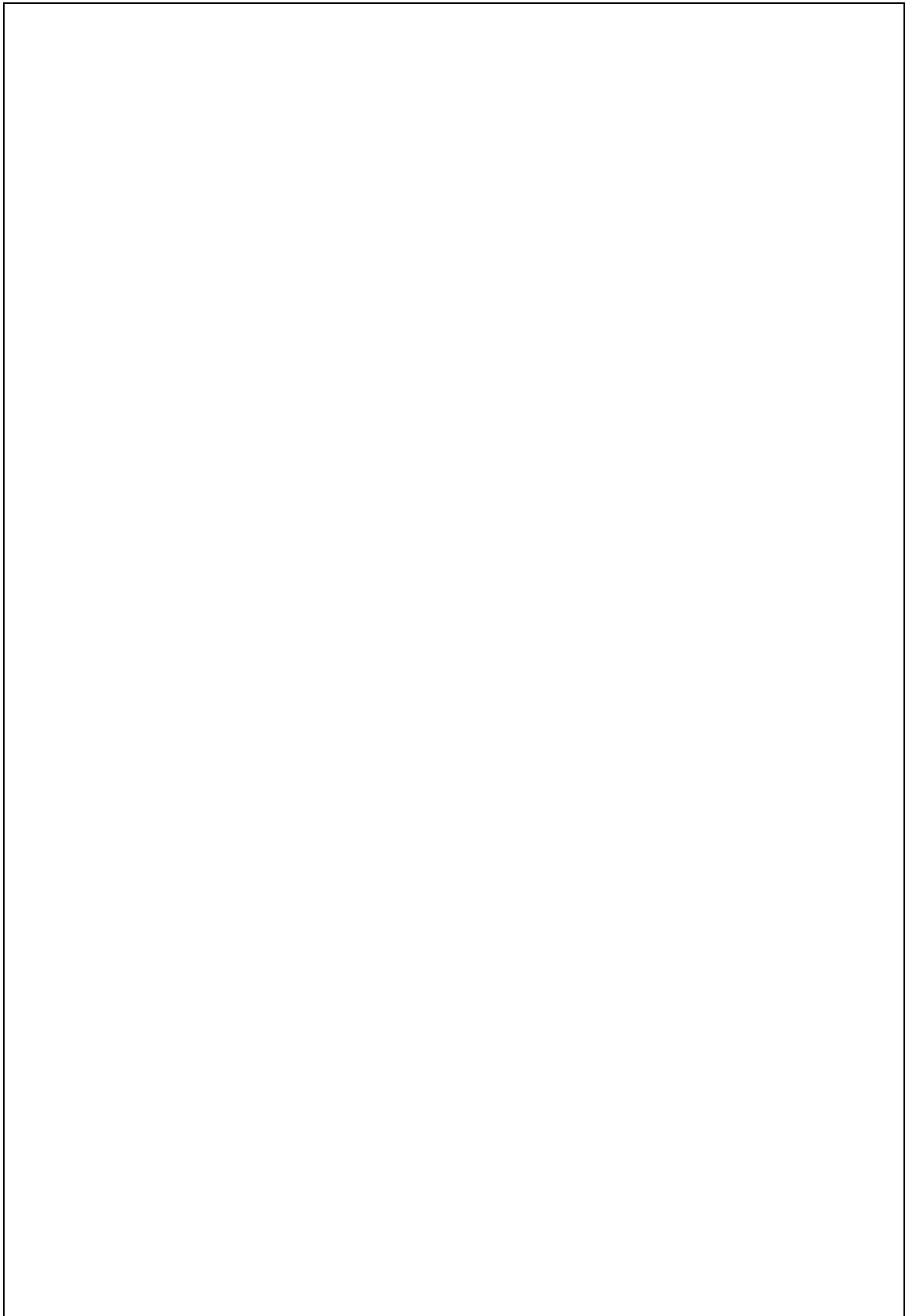
Your design must be possible to make using equipment and making processes you are familiar with.

You will be asked to describe how you would make this product in part 2(b).

Marks will be awarded for developments which are significantly different to the original idea.

(6 marks)





Barcode

Turn over ►

- 2 (b) Exploded, cross-section or detailed views are often used to help communicate technical details of a design.

Use diagrams, notes and/or flowcharts to produce a plan of making for a development produced in part (a).

You should show your work in the space provided below and opposite.

Marks will be awarded for:

- 2 (b) (i) quality of communication using exploded, cross-section or detailed views and annotation;

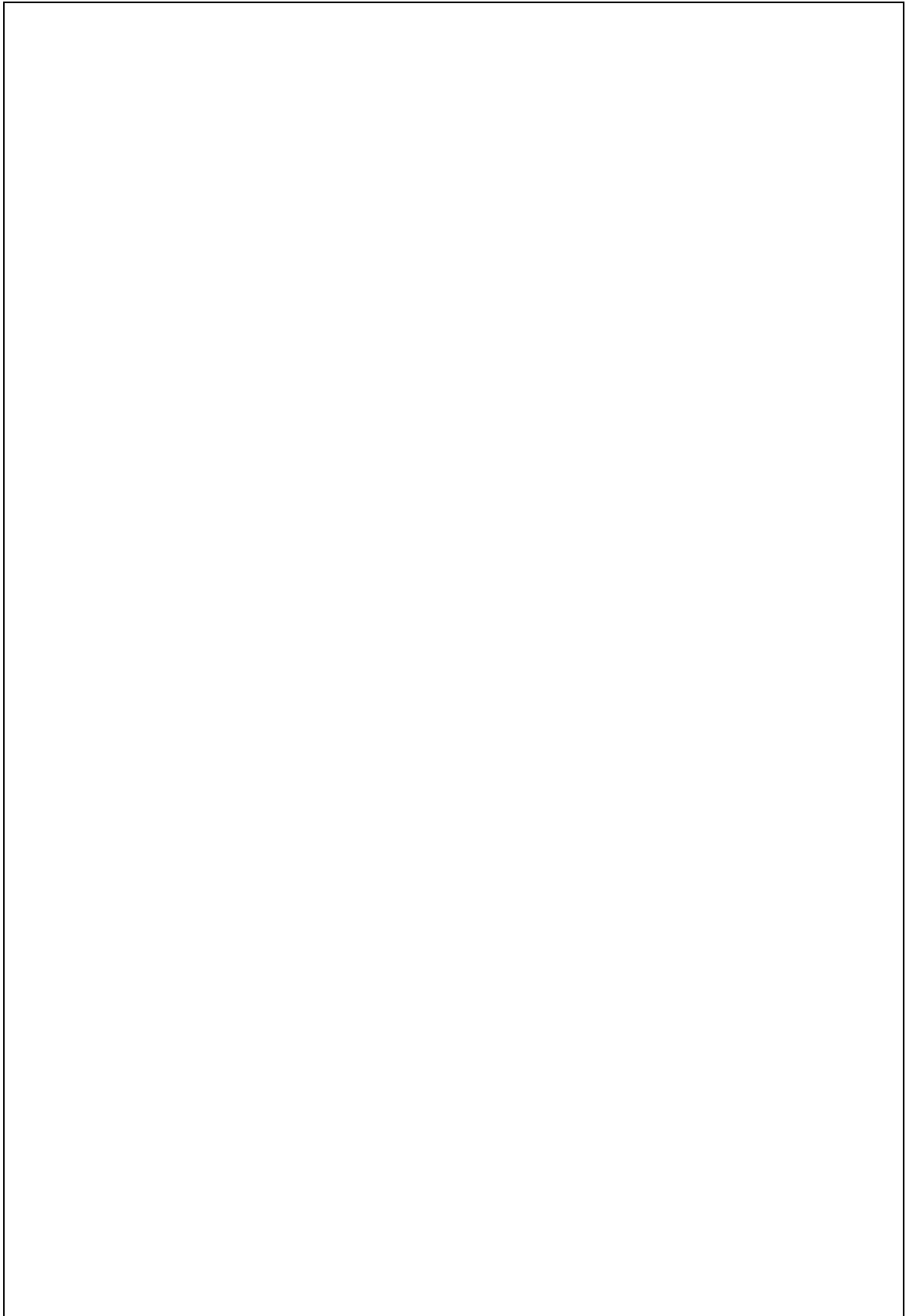
(3 marks)

- 2 (b) (ii) information which would allow someone else to make your design. This would include for example:

- dimensions / size / weight
- materials
- construction / assembly details
- processes for making

(9 marks)





18



Barcode

Turn over ►

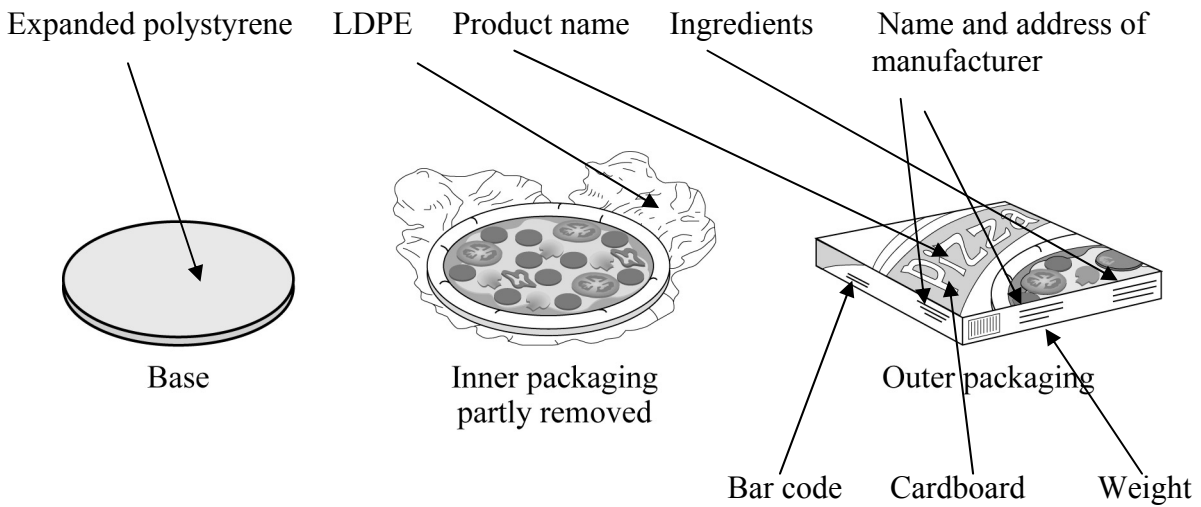
Question 3 is about packaging.

3 (a) Give three reasons why food products need to be packaged.

- 1.....
- 2.....
- 3.....

(3 marks)

3 (b) The packaging shown below is used to package pizzas.



3 (b) (i) Analyse to what extent the design of the packaging and materials shown above help to meet the requirements you have listed in part 3(a).

-
-
-
-
-
-

(6 marks)



Barcode

3 (b) (ii) Explain how the packaging could be improved

.....

.....

.....

(3 marks)

3 (c) The following symbols are often found on packaging.

Draw a line to match each symbol to the material it refers to.

Symbol

Material



Plastic



Steel



Aluminium



Glass

(4 marks)

3 (d) Explain why these symbols are included on packaging.

.....

.....

.....

.....

(2 marks)



Barcode

Turn over ►

3(e) Evaluate each part of the pizza packaging in terms of the impact it has on the environment.

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(6 marks)

24

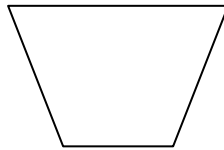
Turn over for the next question



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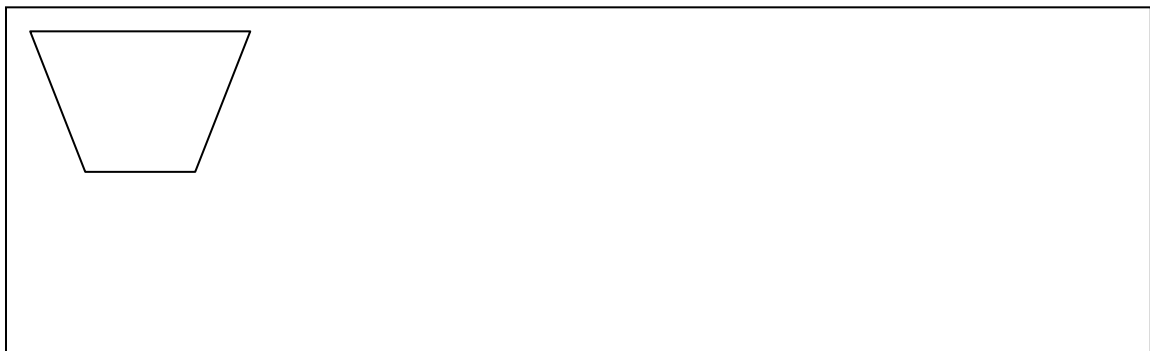
Question 4 is about making processes.

4 You are to cut the following shape from a material supplied in sheet form.



4 (a) In the box below, show how you would lay out 10 shapes to cut out economically from a sheet of material, for example; metal, plastic, wood, fabric or dough.

(3 marks)



4 (b) Explain why you have arranged the shapes in this way.

.....
.....

(2 marks)

4 (c) Name a **specific** material which is supplied in sheet form.

.....

(1 mark)



4(d) Use diagrams and notes to describe how you would cut out 10 **identical** shapes in your chosen material.



END OF QUESTIONS

(5 marks)

11



Barcode