



**Shrewsbury School  
Design & Technology**

**Product Design**

Aptitude Examination Paper

Time allowed: 1 hour

**Instructions**

Use blue or black ink or ball-point pen. Use pencil and coloured pencils only for drawing.

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 **56**.

Mark allocations are shown in brackets.

Wherever calculations are needed you should show your working.

You are reminded of the need for good English and clear presentation.

Name:

**In addition to this paper you will require:**

- a pen, pencil, ruler, eraser, pencil sharpener and coloured pencils;
- an insert of colour photographs (enclosed).

<b>For Examiner's Use</b>		
NO.	Mark	Mark Available
1		<b>32</b>
2		<b>13</b>
3		<b>11</b>
<b>Total</b>		<b>56</b>

**Section A**

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

Question 1 is about designing.

You are advised to spend about 35 minutes on this question.

**1** The products shown below all belong to the Memphis design movement.



**1 (a) (i)** Describe **two** features of the Memphis style.

Feature 1 .....

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Feature 2 .....

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*(4 marks)*

**1 (a) (ii)** Give the name of **one** designer in this design movement.

.....

*(1 mark)*

**1 (b)** You are going to create a design for a product for a child in the **under-seven age range**. This product must be based on the Memphis style.

Name the product you are going to design.

.....

In the table below give **three different** design criteria which will make your product suitable for the user.

Give **one** reason for each design criteria.

An example is given for you.

Example Design Criteria	Reason
<i>Should be hard wearing.</i>	<i>So that it stands up to everyday use and does not break easily.</i>

Your Design Criteria	Reason
1..... ..... ..... .....	..... ..... ..... .....
2..... ..... ..... .....	..... ..... ..... .....
3..... ..... ..... .....	..... ..... ..... .....

(6 marks)

**Question 1 continues on the next page**

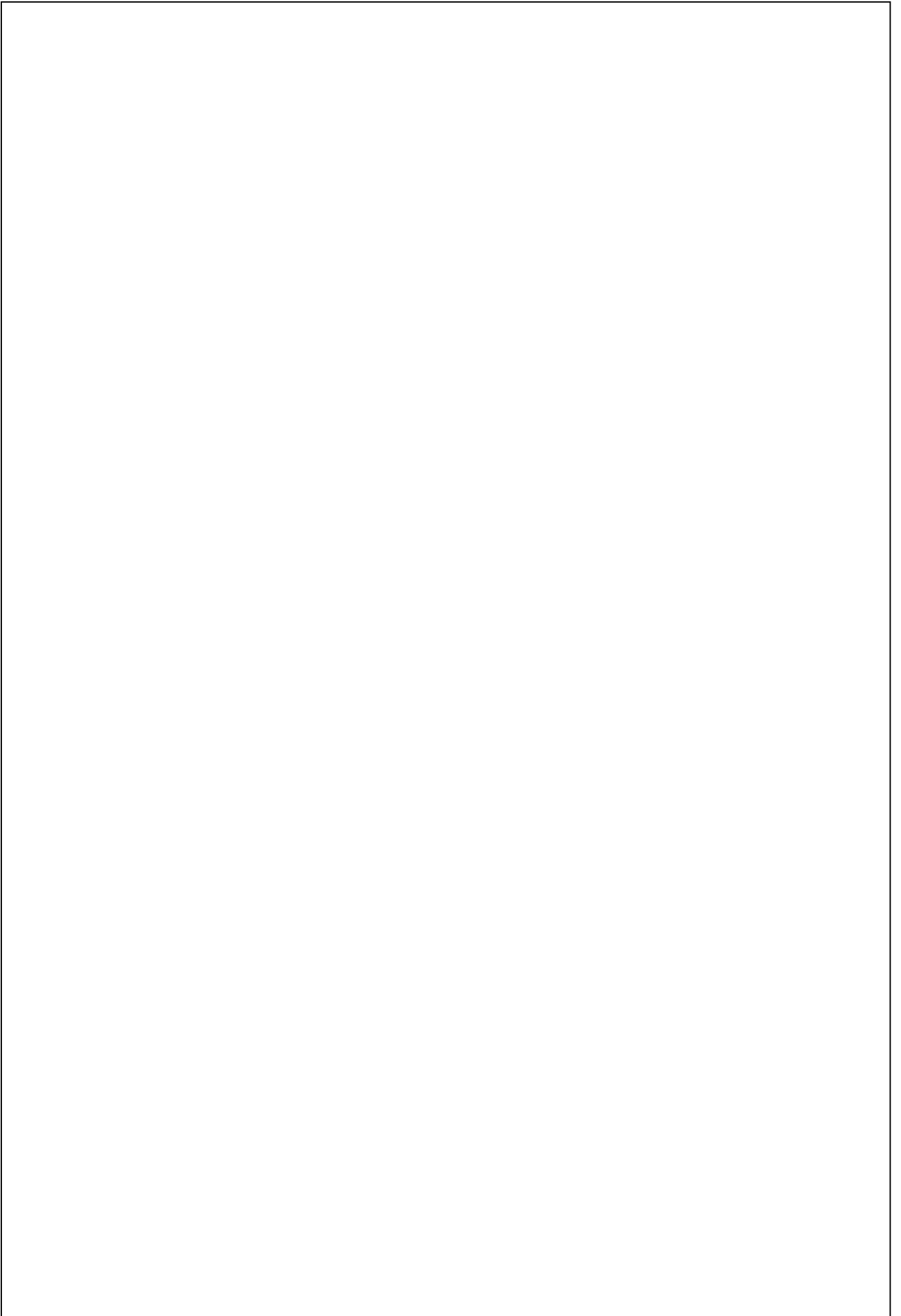
The products shown below all belong to the Memphis design movement.



**1 (c)** In the space below and opposite, develop a design for the product you named in part (b). You should show enough detail for somebody else to be able to make it.

There are marks for:

- # how well your design links to the Memphis style
- # originality of ideas
- # materials and construction techniques
- # how well you communicate your design.



1 (d) Using your design criteria you gave in part (b), evaluate how your design is suitable for a **child under seven**.

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*(6 marks)*

## Section B

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

Question 2 is about materials.

You are advised to spend about 15 minutes on this question.

**2 (a)** Complete the table below.

You should:

# identify a specific material which comes from each of the sources

# tick whether the material is renewable or non-renewable

# name a product made from the material.

An example is given for you.

Source	Specific material	Renewable	Non-renewable	Product
<i>The Earth and rocks</i>	<i>Aluminium</i>		✓	<i>Ladder</i>
Oil				
Plants and trees				
Animals				

(9 marks)

**Question 2 continues on the next page**

**2 (b) (i)** Name **either** a new **or** a smart material.

.....  
(1 mark)

**2 (b) (ii)** Describe the properties of the new or smart material you have named in part (i).  
Explain how it could be used in a product.

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(3 marks)



Question 3 is about product marketing.

You are advised to spend about 10 minutes on this question.

**3 (a)** Using examples, explain what is meant by *brand identity*.

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(4 marks)

**Question 3 continues on the next page**

**3 (b) (i)** Manufacturers market their products through advertising.

Name **three** different methods of advertising.

1 .....

2 .....

3 .....

*(3 marks)*

**3 (b) (ii)** Choose **one** of the methods you have named in part (i).

Explain how this method of advertising persuades consumers to buy the product.

Use examples of products in your answer.

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*(4 marks)*