

Candidate Name	Centre Number	Candidate Number

WELSH JOINT EDUCATION COMMITTEE  
General Certificate of Secondary Education



CYD-BWYLLGOR ADDYSG CYMRU  
Tystysgrif Gyffredinol Addysg Uwchradd

271/01

**GCSE  
DESIGN AND TECHNOLOGY**

**SHORT COURSE**

**FOCUS AREA: GRAPHIC PRODUCTS**

(Foundation Tier - Grades G to C)

P.M. TUESDAY, 5 June 2007

(1 Hour)

	<b>Leave Blank</b>
<b>Question 1</b>	
<b>Question 2</b>	
<b>Question 3</b>	
<b>Question 4</b>	
<b>TOTAL MARK</b>	

**ADDITIONAL MATERIALS**

You will need basic drawing equipment and coloured pencils for this examination.

**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) A designer needs to carry out research before designing a new toy for a three-year-old child.



Draw a line to match the **research activity** with the **information found**.  
One has been done for you.

3 × [1]

Research Activity	Information found
Look at tables of children's sizes	What children can do
Read a book on child development	Size of children's hands
Look at a materials properties website	Find the most popular colour
Talk to a three-year-old child	Safety of materials

(b) Give three safety concerns that a parent may have when buying a toy.

3 × [2]

Concern 1: .....

.....

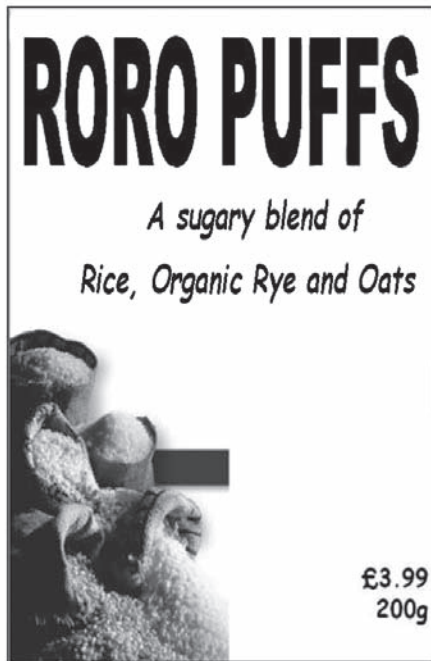
Concern 2: .....

.....

Concern 3: .....

.....

2. Sales of the breakfast cereal shown below are falling.



Ingredients: Rice, rye, oats, honey, sugar, salt.			
	Guideline daily amount	Each serving with milk	% guideline daily amount
Calories	2000kcal	170kcal	8%
Sugar	90g	27.8g	30%
Salt	6g	0.8g	14%
Saturated fat	20g	2.4g	12%
Fat	70g	4.0g	6%

(a) **Study** the pictures shown and **give two** reasons why you think sales of this cereal have fallen. 2 × [2]




Reason 1: .....

.....

Reason 2: .....

.....

(b) The pictures below show three kettles.

			
Kettle	A	B	C
Cost	£4.99	£19.99	£37.99
Materials	White Plastic	Stainless Steel	Colour Changing Plastic
Where made	China	Europe	UK
Water capacity	1.5 Litres	1 Litre	2.3 Litres

(i) **State** which kettle holds the most water. [1]

.....

(ii) **State** which kettle you think is the easiest to use and **give two** reasons for your choice. 2 × [1]

Kettle ..... is easiest to use.

Reason 1: .....

.....

Reason 2: .....

.....

(iii) Even though it is expensive, some people would decide to buy kettle C. **Give one** reason for this. [2]

.....

.....

(iv) **State** the price of kettle A. [1]

.....

(v) **Give two** reasons why kettle A can be sold at this price. 2 × [2]

Reason 1: .....

.....

Reason 2: .....

.....

3. (a) One part of the design process is called *development*. Place a **tick** (✓) next to the **three** activities that are part of *development*. 3 × [1]

Test the finished product.	
Decide on final sizes.	
Try out different materials and finishes.	
Think about possible ways to join parts together.	
Draw initial ideas for the product.	

- (b) **Describe two** ways in which ICT/CAD could be used to help with the development of a new product. 2 × [2]

(I) .....

.....

(II) .....

.....

- (c) For a product of your choice, **describe two** benefits of using CAM (computer aided manufacturing) to make the product. 3 × [1]

Product: .....

Benefit 1: .....

Benefit 2: .....

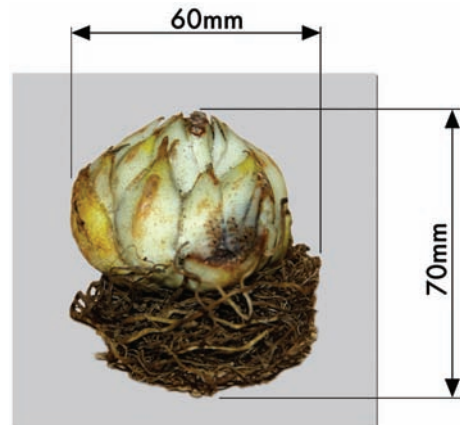
- (d) **Describe one** environmental issue that should be taken into account when *designing* products. [2]

.....

.....

4. A garden centre sells flower bulbs in the spring. A photograph of a bulb is shown alongside with its overall sizes. Packaging for the bulbs is needed.

The name of the garden centre is 'GROW'.



- (a) A logo is needed for the package.

In the rectangle below, **design** a logo using the name 'GROW' or an image to represent the name. The logo must fill the rectangle.

**Marks will be awarded for:**

- designing a logo that uses the name or an image to represent the name; [3]
- using all the space available; [1]
- quality of drawing; [2]
- quality of use of colour. [2]



(b) The package needs to hold two bulbs.

- (i) **Design** a package that:
- holds two bulbs;
  - is made from folded card that is protected from moisture;
  - has the logo of the garden centre printed on it;
  - is decorated to make it look appealing;
  - has space on the package to include planting instructions.

**Marks will be awarded for:**

- holding two bulbs; [1]
- showing the space for the logo; [1]
- showing the decoration to be printed on the package; [2]
- showing the space for the planting instructions; [1]
- showing how the folded card package can be made. [3]

- (ii) **State** the specification of the card to be used to make the package. [1]
- .....

- (iii) **State** how the card can be protected from moisture. [1]
- .....

- (c) **Make** an accurate drawing of the net of your design for the package.  
You should show both fold lines and cutting lines.  
You must add the **three** (3) most important dimensions to your drawing.

[7]

