

Candidate Name	Centre Number	Candidate Number

WELSH JOINT EDUCATION COMMITTEE
General Certificate of Secondary Education



CYD-BWYLLGOR ADDYSG CYMRU
Tystysgrif Gyffredinol Addysg Uwchradd

140/04

DESIGN AND TECHNOLOGY

PAPER 2

FOCUS AREA: GRAPHIC PRODUCTS

(Higher Tier – Grades D to A*)

P.M. TUESDAY, 5 June 2007

(1½ hours)

	Leave Blank
Question 1	
Question 2	
Question 3	
Question 4	
Question 5	
TOTAL MARK	

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) Study the photographs below of a disposable camera with its packaging.
The plastic camera is covered by a card case.



The camera without any of its packaging case.



The camera in its card case as it is meant to be used.

- (i) Give **two** reasons why the company has decided to cover the plastic camera with a card case. [4]

Reason 1:

.....

Reason 2:

.....

- (ii) The card case for the camera is made from 350 micron white boxboard.
Give **two** reasons why this is the most appropriate material. $2 \times [2]$

Reason 1:

.....

Reason 2:

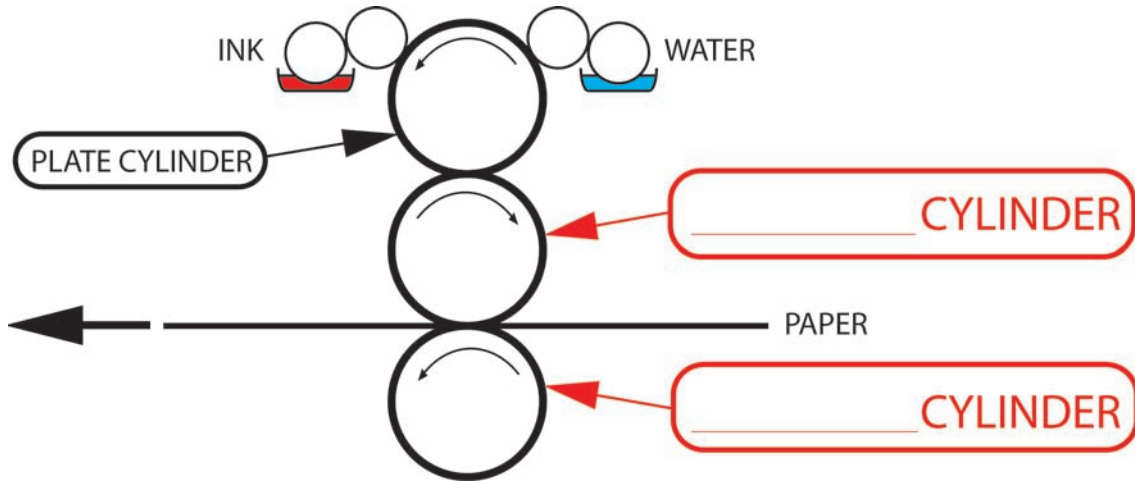
.....

- (iii) Using a labelled diagram, explain the die cutting process used to cut out 10,000 copies of the card case. [3]

- (b) The card case for the camera is printed using the offset lithographic printing process. A labelled diagram of the main parts of an offset lithographic printing press is given below.

Complete the **two** unfinished labels.

[2]



- (c) Lithographic printing uses ink and water to print.

(i) State the type of ink that is used in lithographic printing.

[1]

.....

(ii) Explain how lithographic printing uses the ink and water.

[3]

.....

.....

.....

.....

- (d) State the name of the principle used in letterpress printing.

[1]

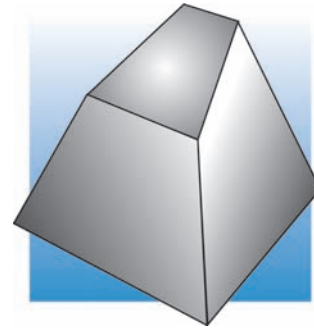
.....

- (e) Use a labelled diagram to describe the gravure printing method.

[3]

2. (a) State the full name of the solid shape shown.

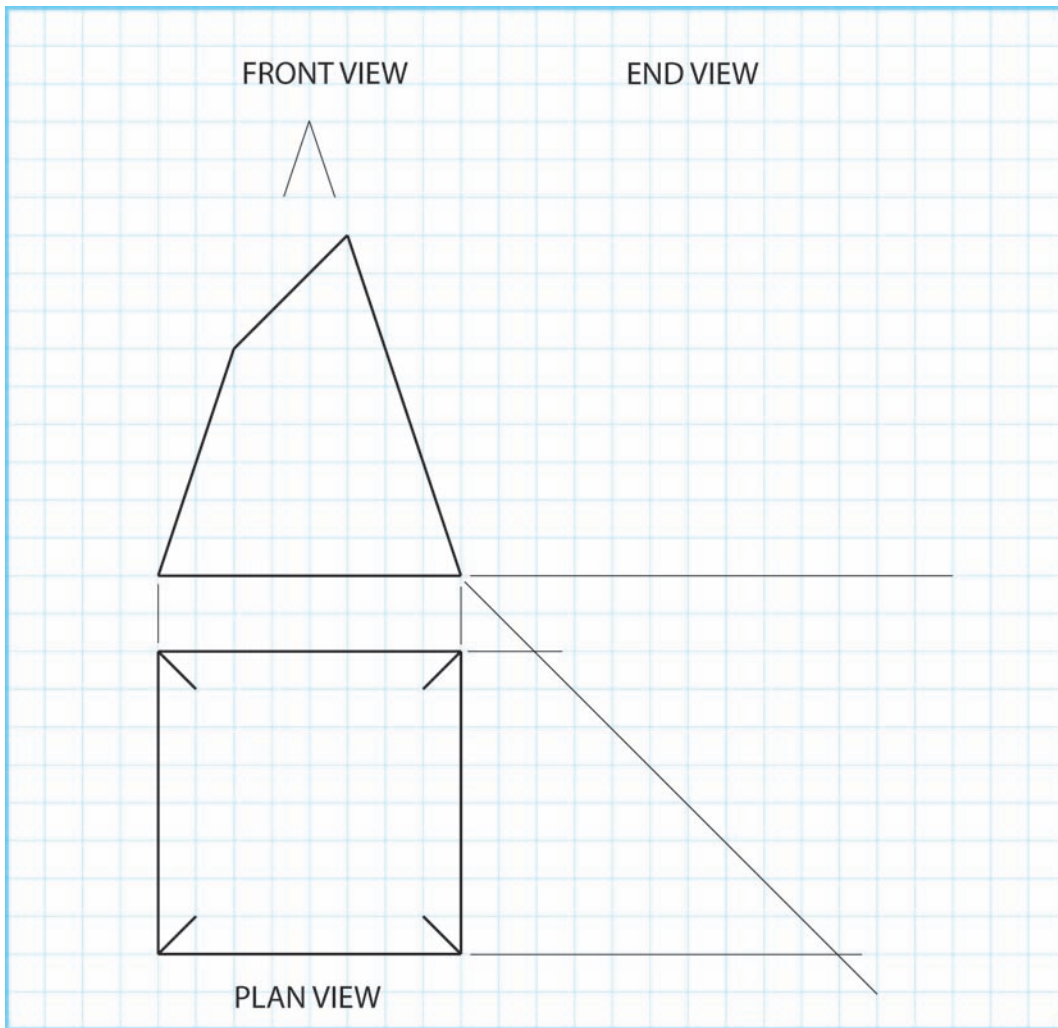
.....



[3]

(b) A partly completed orthographic drawing of the solid is shown below. Accurately complete the plan view and the end view showing all projection lines.

[7]



(c) Give **one** reason why designers make orthographic drawings.

[2]

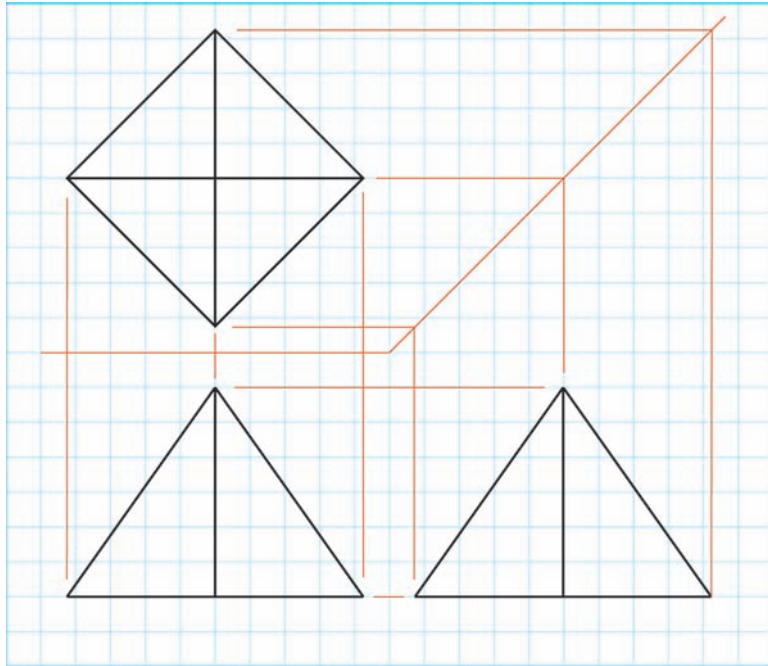
Reason:

.....

(d) State the British Standard that applies to Orthographic Drawing. **BS**

[1]

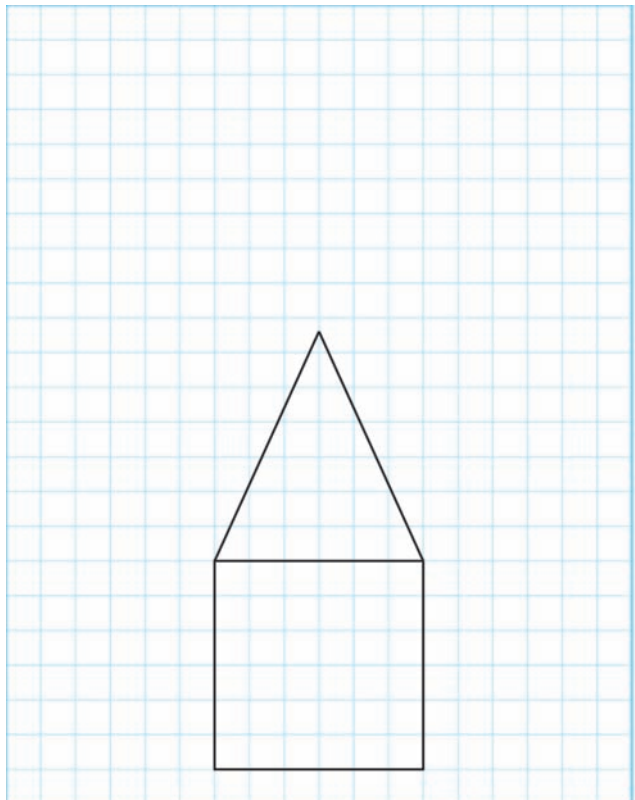
(e) An orthographic drawing of a card box is shown below.



(i) A partial drawing of the net is shown.

Complete the net. [5]

Keep your drawing within the grid provided. *Do not include any glue tabs.*



(ii) Explain why the triangular side shown in the net **appears** to be a different size to that shown in the orthographic drawing. [3]

.....

.....

.....

3. (a) State the names of the **four** process colours. [4]

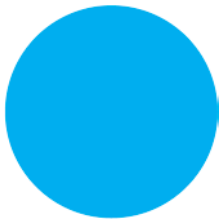
Colour 1:

Colour 2:

Colour 3:

Colour 4:

(b) In the space provided, write the name of the process colour shown below. [2]

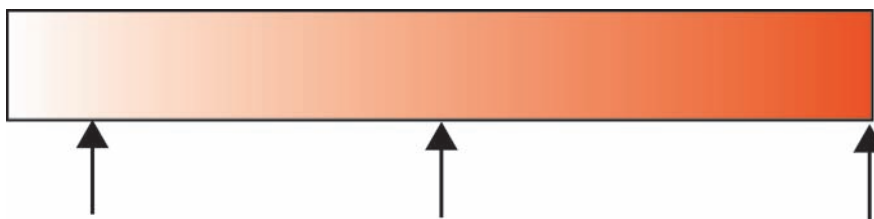


Colour name:

(c) Colours are sometimes called spot colours. Explain what is meant by this term. [2]

.....
.....

(d) Colours are often described as a percentage colour e.g. 25% red.
Look at the strip of red below and label the points indicated with their percentage colour. [3]



..... % RED

..... % RED

..... % RED

(e) Colours are linked to words.

From the list below, **choose** the colour that best represents the words listed in the table. [3]

RED

WHITE

BROWN

PURPLE

Words	Name of the colour
Luxury.
Power, danger.
Earth, nature.

4. (a) Some font categories are listed below. Complete the table by adding the category to which **each** font belongs. [4]

DECORATIVE MODERN OLDSTYLE SANS SERIF SCRIPT SLAB SERIF

Example of a font	Category
Gloves keep your hands warm.
Gloves keep your hands warm.
<i>Gloves keep your hands warm.</i>
<i>Gloves keep your hands warm.</i>

- (b) State approximately what point size will produce text that is 5mm tall. [2]

.....

- (c) Fonts are suitable for a particular use. The image alongside is a frame from a children’s comic book that gives information about animals.

From the list below, **select** the most appropriate font to be used in the speech bubble and **give two** reasons why you have chosen it.



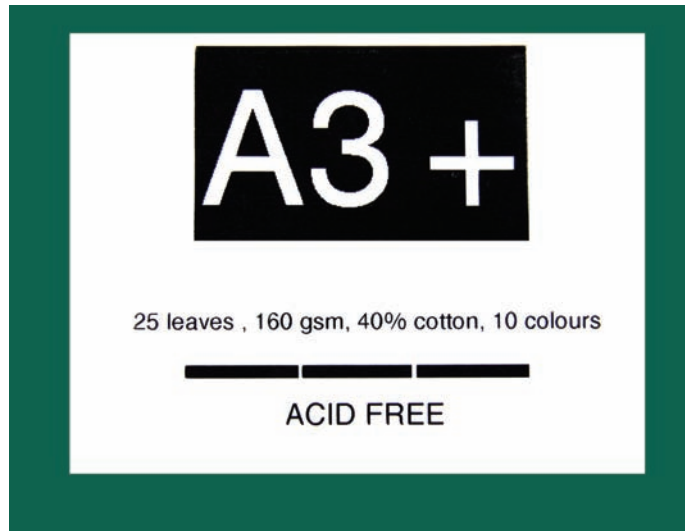
BANK GOTHIC POSTERBODONI COMIC SANS *JOKERMAN*

Selected font : [2]

Reason 1: [2]

Reason 2: [2]

(d) A label from a pack of paper is shown below.



(i) State what is meant by *25 leaves*. [1]

.....
.....

(ii) State what is meant by *160 gsm*. [1]

.....
.....

(iii) State what is meant by *A3+*. [1]

.....
.....

(e) Plotter Cutting CAM machines, like a CAMM 1, are often used when making graphic products. State **one** advantage and **one** disadvantage of using such machinery to manufacture a graphic product of your choice. 2 × [2]

Name the product of your choice:

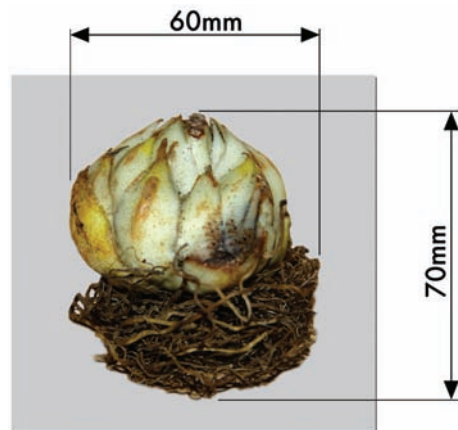
Advantage:

.....
Disadvantage:

.....

5. 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:

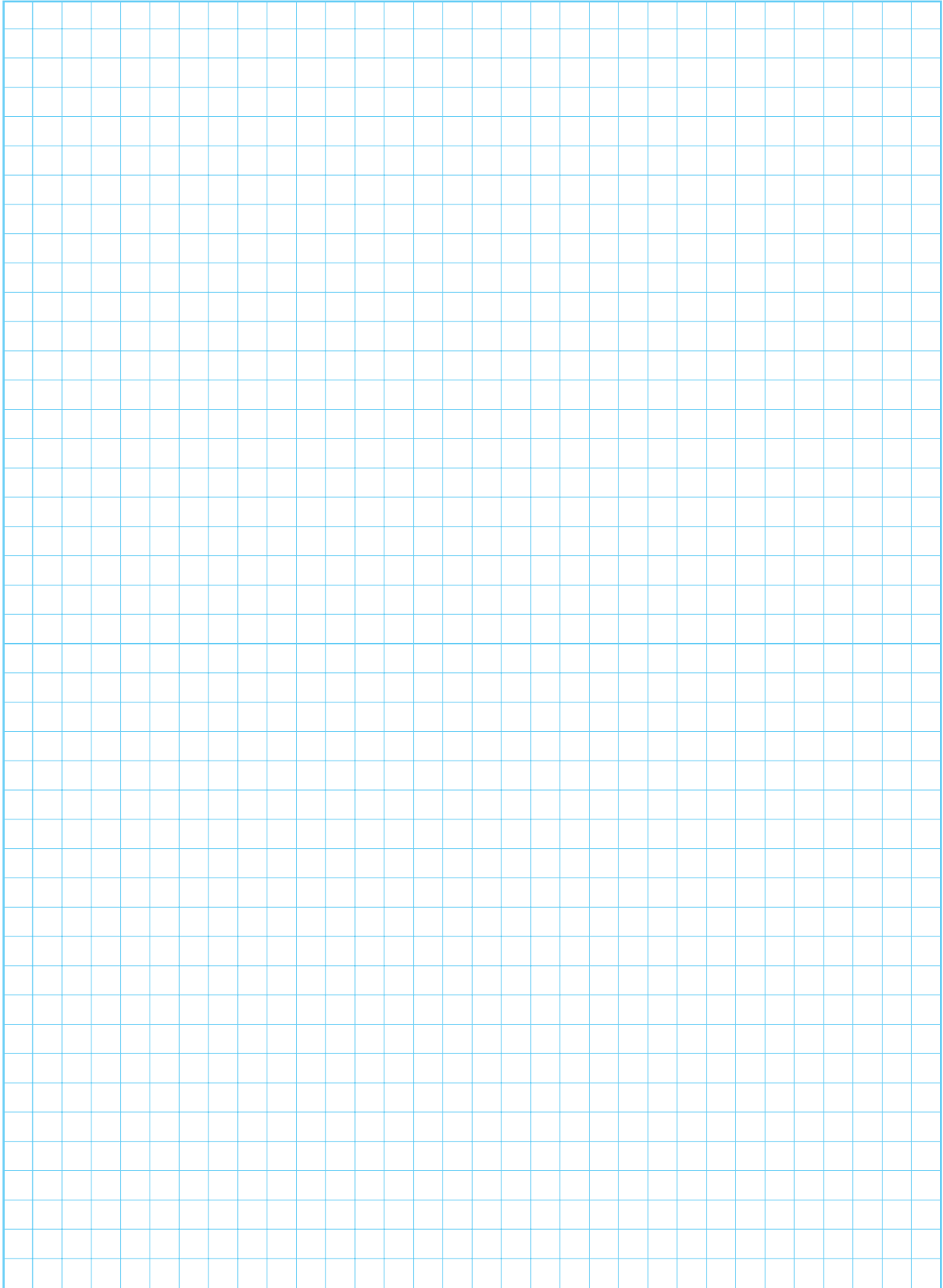
- holding two bulbs; [1]
- showing the space for the logo; [1]
- showing the decoration to be printed on the package; [2]
- showing the space for the planting instructions; [1]
- showing how the folded card package can be made. [3]

- (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 must add the **three** (3) most important dimensions to your drawing.

[7]



For continuation only.

A series of horizontal dotted lines for writing.