

**GENERAL CERTIFICATE OF SECONDARY EDUCATION
DESIGN AND TECHNOLOGY**

A534

Graphics

Technical Aspects of Designing and Making

Candidates answer on the question paper.

OCR supplied materials:

None

Other materials required:

None

**Friday 21 January 2011
Afternoon**

Duration: 1 hour 15 minutes



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Answer **all** the questions in sections **A and B**.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this paper is **60**.
- Your quality of written communication is assessed in questions marked with an asterisk (*).
- This document consists of **16** pages. Any blank pages are indicated.

Section A

Answer **all** questions.

1 Fig. 1 shows a box for a set of crayons.

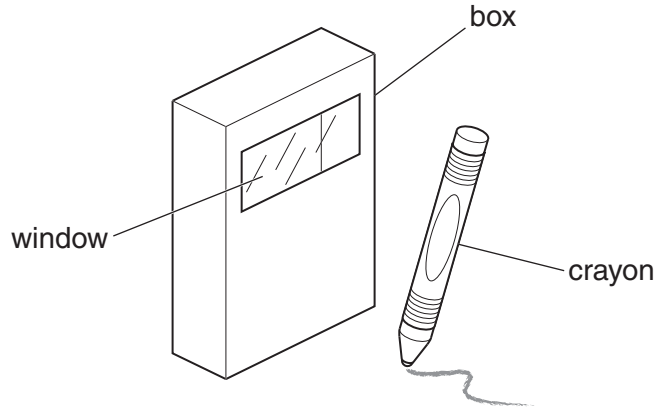


Fig. 1

(a) Name **one** suitable material for the box.

..... [1]

(b) Give **one** reason why a window is included in the box.

.....
..... [1]

(c) Tick (✓) a suitable method of making the window in the box.

Die cutting	Embossing	Laminating
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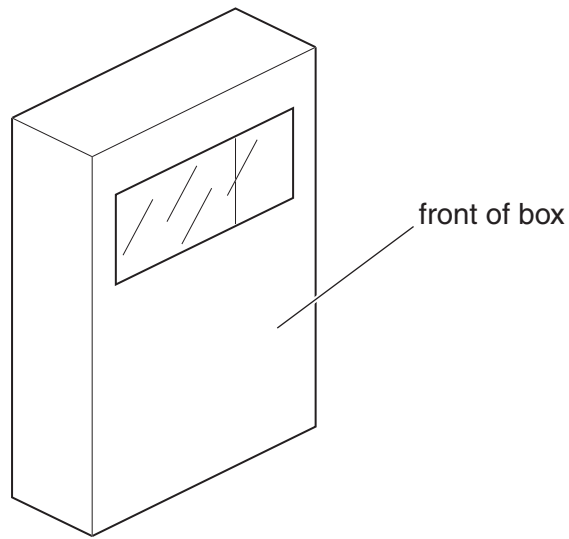
[1]

(d) A foil triangle shape is to be applied to the front of the box. Describe the process of foil application.

.....
.....
.....
.....
..... [3]

3

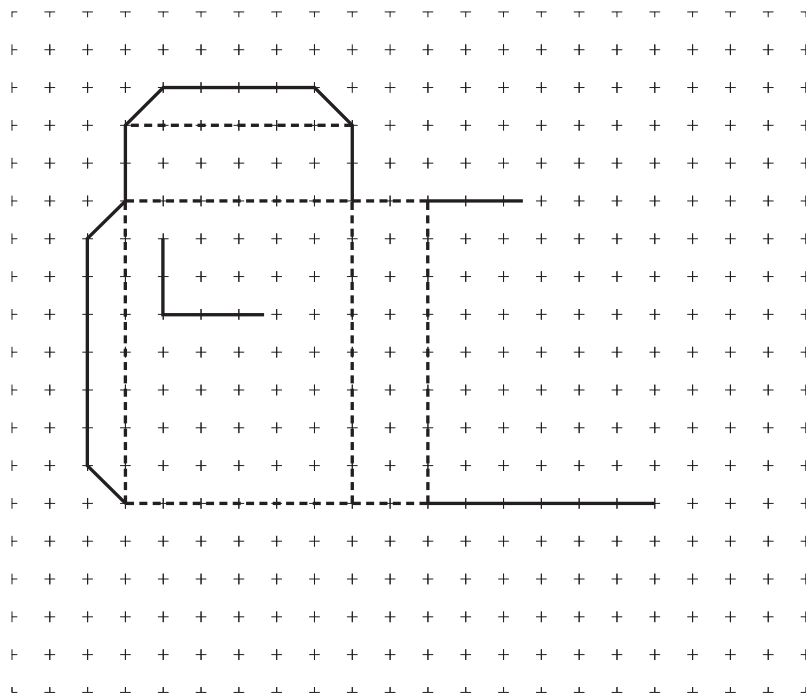
(e) Complete Fig. 2 by sketching an equilateral triangle on the front of the box.



[2]

Fig. 2

(f) Complete Fig. 3 to show the development (net) required to make the box.



[4]

Fig. 3

[Total: 12]

2 Fig. 4 shows a display stand for jewellery.

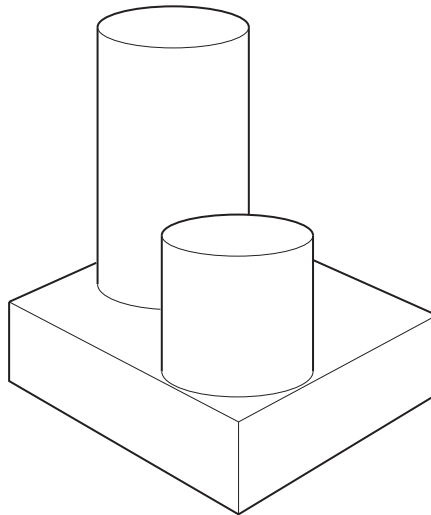


Fig. 4

(a) Use different tones of pencil shading to enhance the 3D appearance of the display stand. [3]

(b) The display stand is made from three pieces of Styrofoam. The three pieces are cut from a large block, shaped, smoothed and glued together.

(i) Name **one** physical property of Styrofoam that makes it suitable for the display stand.
..... [1]

(ii) Name **one** suitable adhesive that could be used to join the Styrofoam blocks.
..... [1]

(iii) Describe **one** quality control check that could be carried out when making the Styrofoam display stand.
.....
.....
..... [2]

(c) Complete the freehand orthographic drawing of the display stand shown in Fig. 5. Do **not** show hidden detail.

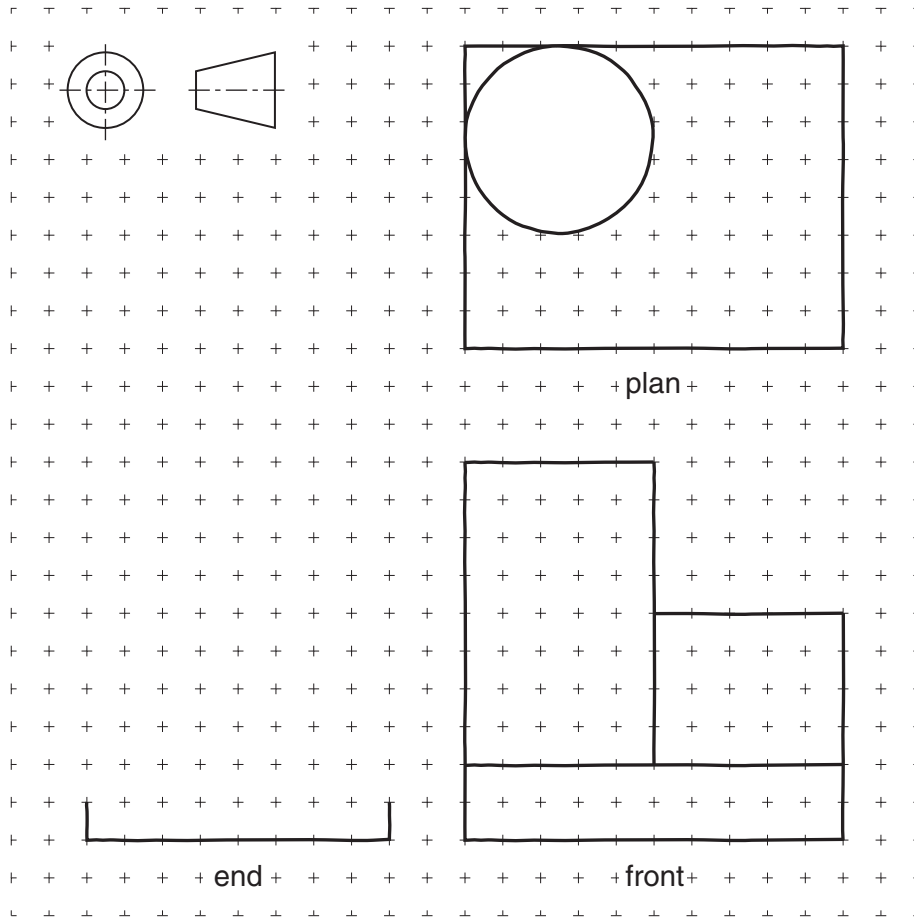


Fig. 5

[5]

[Total: 12]

3 Fig. 6 shows an electronic template for a business card. The client's design is imported into the three spaces on the template and then printed.



Fig. 6

(a) Complete the list to show **two** more decisions a client would have to make when selecting lettering for the business card.

1 Choose a suitable colour for the lettering.

2

3 [2]

(b) Name **two** more types of contact detail that could be added to the business card.

1

2 [2]

(c) Explain why copyright issues must be considered before selecting an image for the business card.

.....

.....

.....

..... [2]

Section B

Answer **all** questions.

- 4 Fig. 7 shows a point of sale display for CDs. The point of sale display is made from corriflute sheet.

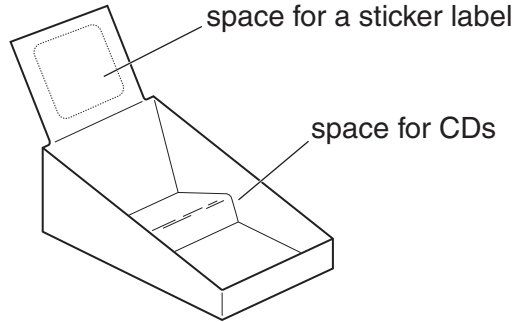


Fig. 7

- (a) Complete the drawing below to show a sectional view of corriflute sheet.



[1]

- (b) CD cases are made from resistant polypropylene. Explain why resistant polypropylene is a suitable material for CD cases.

.....

.....

.....

..... [2]

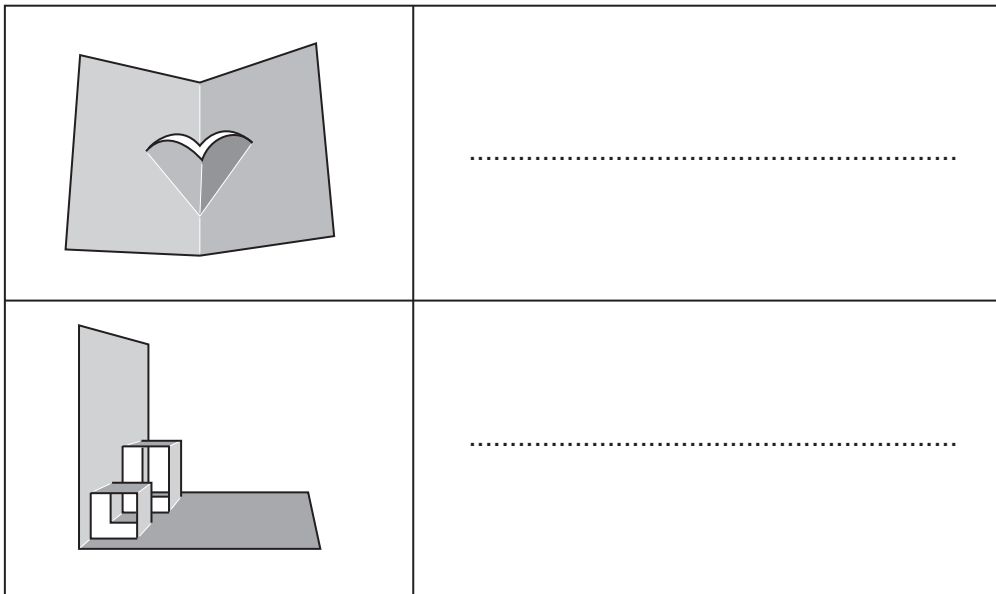
- (c) The sticker label on the point of sale display in Fig. 7 uses a heat sensitive Smart material. Complete the table below to show the specification for the sticker label.

Number required	3000
Method of printing
Method of attachment	Remove backing and stick to corriflute
Material for the sticker label
Smart material on the sticker label

[3]

5 Mechanical systems are used to add interest to cards, books and displays.

(a) Name the **two** pop-up systems shown below.



[2]

(b) Fig. 8 shows a simple ‘push-pull’ linkage. Label the fixed pivot, the moving pivots and the direction of the output.

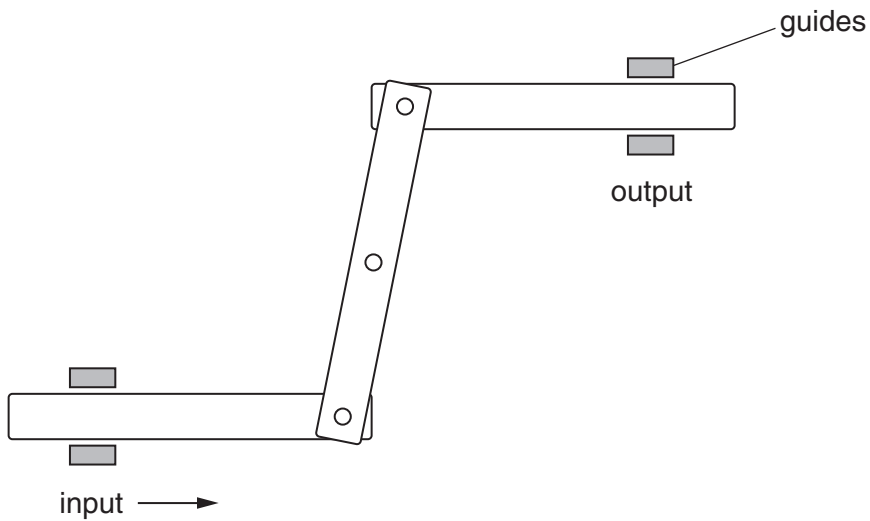


Fig. 8

[3]

(c) Tick (✓) the reason for the guides on the ‘push-pull’ mechanism in Fig. 8.

To strengthen the mechanism	To restrict vertical movement	To increase horizontal movement
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[1]

- (d) A mechanical display is to be used in a primary school to show the weather for the day. It will be made from one A3 size sheet of card.

In the space below use sketches and notes to show **one** idea for the display. Specification points for the display are that:

- the correct day of the week can be displayed
- the appropriate weather symbol can be displayed.



weather symbols

[6]

[Total: 12]

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