

**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 10 June 2011  
Afternoon**

**Duration: 1 hour 15 minutes**



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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**MODIFIED LANGUAGE**

**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 **12** pages. Any blank pages are indicated.

Section A

Answer **all** questions.

1 Fig. 1 shows an invitation for a birthday party.



Fig. 1

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

..... [1]

(b) The invitations are to be sold in packs.

(i) Tick (✓) the most appropriate method of printing 4000 invitations.

Lithography	Photocopying	Screen printing
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[1]

(ii) Describe **one** quality control check that would be carried out **before** the print run begins.

.....  
.....  
..... [2]

(c) The images on the invitations are to be 'spot' coated with UV varnish.

(i) State what the letters UV stand for.

U..... V..... [1]

(ii) State what is meant by 'spot' coating.

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

(iii) Give **two** reasons why UV varnish has been used on the invitations.

1 .....

2 ..... [2]

(d) Complete the sketch in Fig. 2 to show the development (net) needed to make **one** invitation.

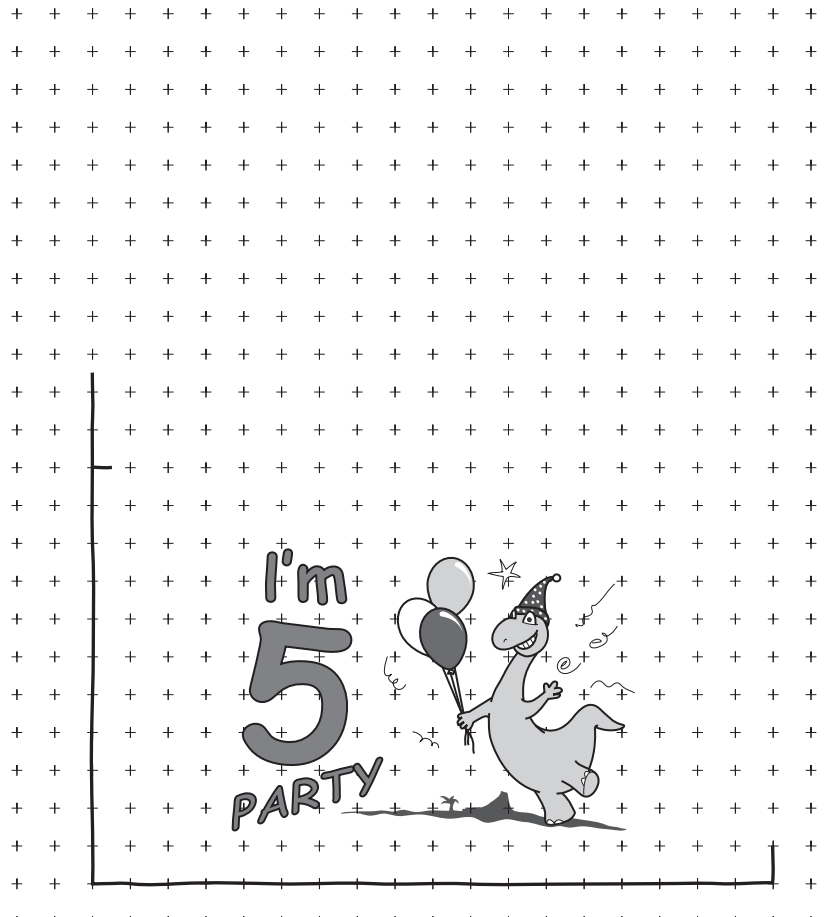


Fig. 2

[2]

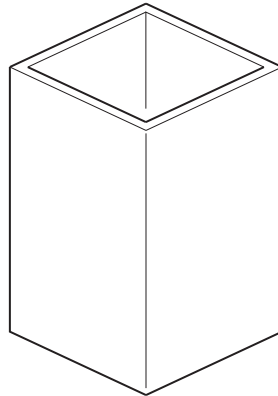
(e) Photochromic inks will be used on the inside of the invitation. Explain how photochromic inks work.

.....  
.....  
..... [2]

[Total: 12]

2 Fig. 3 shows a desk tidy.

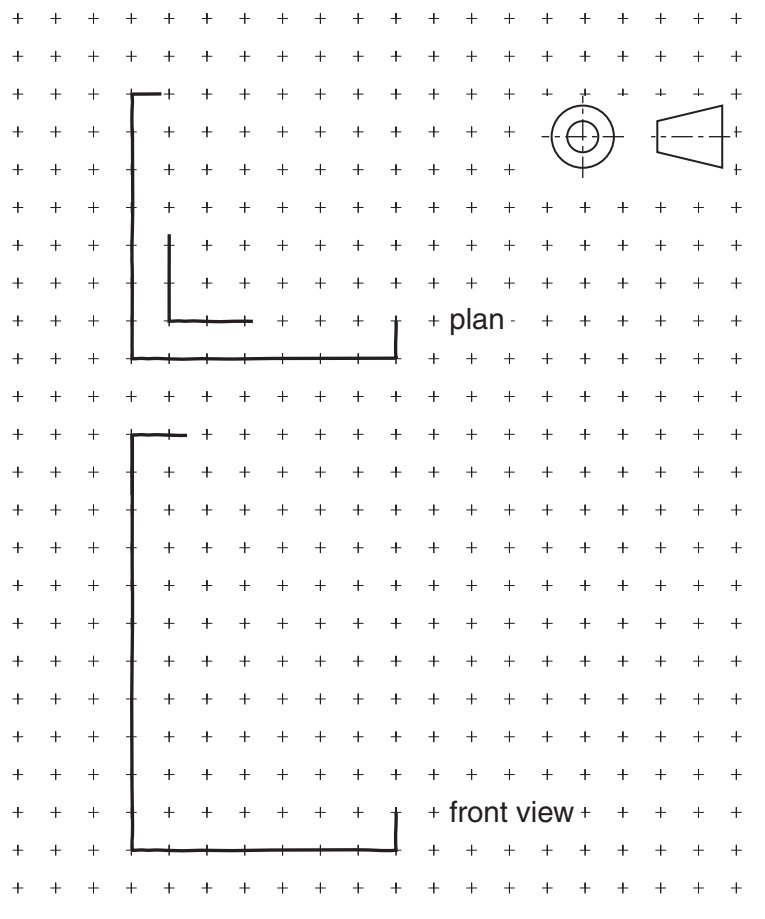
(a) Use different tones of pencil shading to enhance the 3D appearance of the desk tidy.



[3]

Fig. 3

(b) Complete the freehand orthographic views of the desk tidy shown in Fig. 4. Include hidden detail.



[3]

Fig. 4

(c) A model of the desk tidy is to be made from a single piece of 5 mm thick foam board. Use a sketch to show a method of cutting the foam board so that it can be folded to form **one** corner.

[2]

(d) Market testing has shown that the model of the desk tidy falls over during use. Use a sketch to show how to prevent this problem.

[2]

(e) Explain why the use of foam board might **not** be considered environmentally friendly.

.....  
.....  
..... [2]

[Total: 12]

3 Fig. 5 shows a former for a vacuum formed tray.

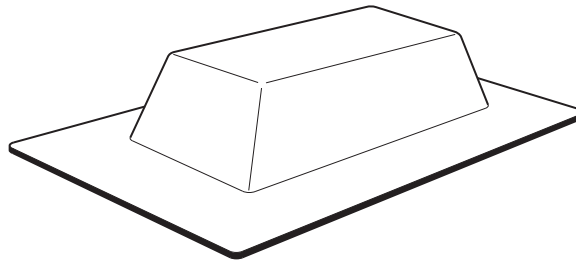


Fig. 5

(a) Sketch a sectional view of the vacuum formed tray.

[3]

(b) Fig. 6 shows a symbol found on the vacuum formed tray.



Fig. 6

(i) Name the specific material that this symbol identifies.

..... [1]

(ii) Describe the most suitable method of 'including' the symbol on the vacuum formed tray.

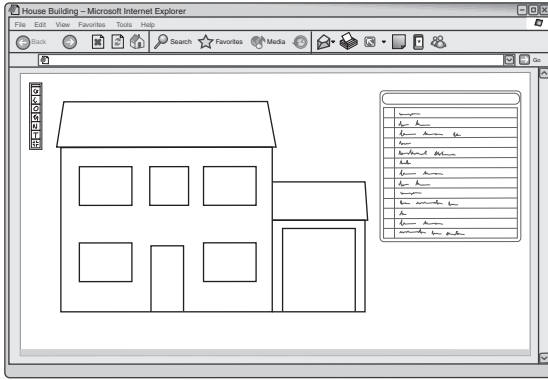
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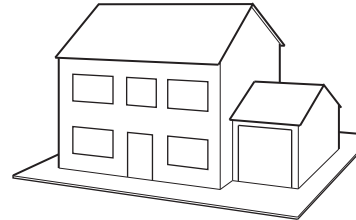
Section B

Answer **all** questions.

4 Fig. 7 shows two methods of communicating a design for a house.



CAD drawing



card model

Fig. 7

(a) State what the letters CAD stand for.

C..... A..... D..... [1]

(b) Explain **one** way of manipulating a CAD drawing on-screen.

.....

.....

.....

..... [2]

(c) State **two** safety precautions to follow when using a craft knife to cut out the pieces of the card model.

1 .....

2 ..... [2]

(d) Name **one** specific adhesive that could be used to join the pieces of the card model together.

..... [1]



(e\*) Discuss the advantages and disadvantages of producing design proposals using a computer system.

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[6]

**[Total: 12]**

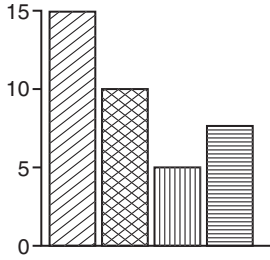
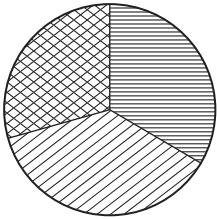
5 Data is used at many stages in a design project.

(a) Name **two** methods of gathering data.

1 .....

2 ..... [2]

(b) Name the **two** methods of presenting data shown below.

	<p>.....</p>
	<p>.....</p>

[2]

(c) Explain how anthropometric data could be used in the design of a product.

.....  
.....  
.....  
..... [2]

- (d) A school needs to raise £1000 to build an eco-friendly garden. The money will be raised at several different events. The first three events raised £100, £200 and £50.

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

- is made from an environmentally friendly material
- is freestanding
- shows the purpose of the fundraising
- is easily updated and shows **progress** towards the total of £1000.

[6]

[Total: 12]

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