



**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 22 January 2010
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 clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions in sections **A and B**.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided.

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 image used to promote a new film called Eddie the Elephant.

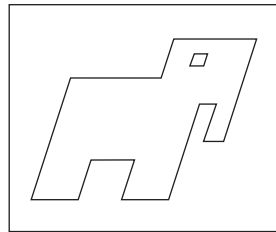


Fig.1

(a) Complete the drawing of the image in Fig. 2 by adding:

- the rest of the outline [1]
- the word EDDIE [2]

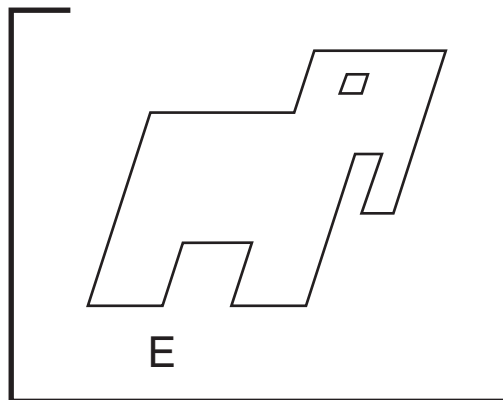


Fig. 2

(b) A prototype design is to be printed on a single sheet of card. Complete the list below to show the **three** items of equipment that would be used to cut out the prototype design accurately by hand.

The first one has been done for you.

1 Craft knife

2 [1]

3 [1]

(c) The image is to be used on a range of products and will be printed onto different materials. Complete the table below.

Material	Physical property
Paper
.....	Does not require glue to fasten it to a surface
Card	Available in a range of thicknesses
.....	Waterproof
Foam board

[4]

(d) The lettering on the design is to be embossed. Describe the embossing process.

.....

.....

.....

.....

.....

..... [3]

[Total: 12]

2 A prototype of an Eddie the Elephant key ring is to be made. Specification points for the key ring are:

- rectangular back made from 1 mm thick plastic sheet
- a hole in the back to attach a ring
- elephant shape cut from foam board and glued to the back

(a) (i) Complete the third angle orthographic views shown in Fig. 3 below.

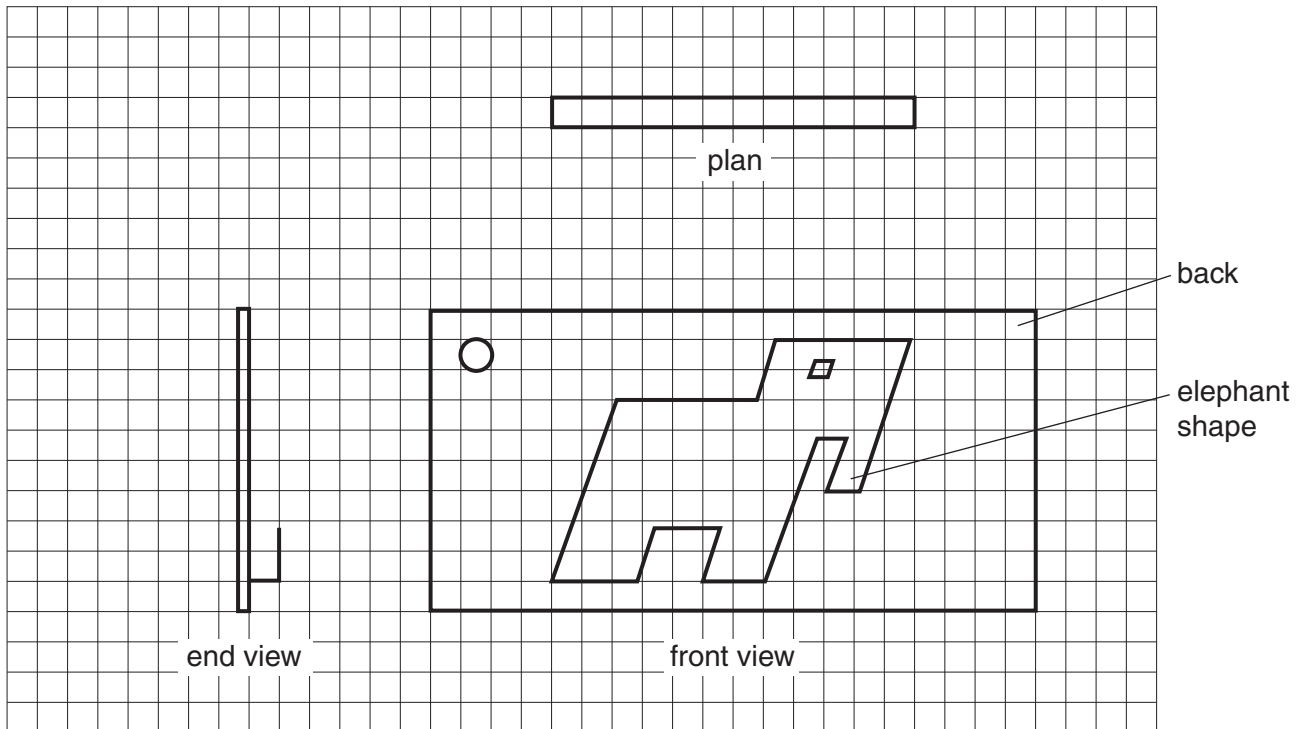


Fig. 3

[4]

(ii) Complete the freehand 3D sketch of the assembled key ring shown in Fig. 4.

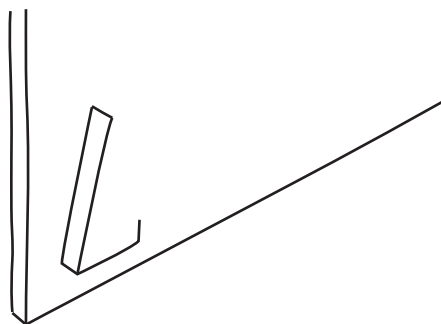


Fig. 4

[3]

(b) On Fig. 5 show a modification that would make the plastic back safer for users to handle.



Fig. 5

[1]

(c) The elephant shape is to be cut from the foam board shown in Fig. 6.

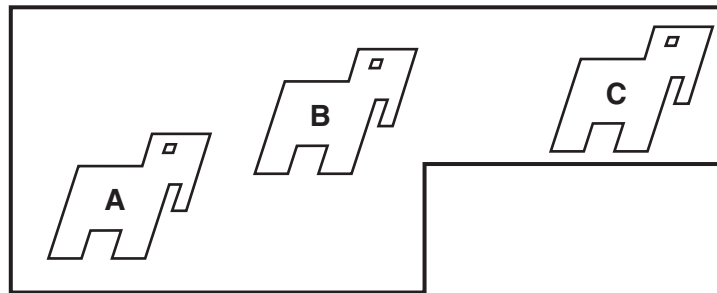


Fig. 6

(i) Tick (✓) the most appropriate position for the elephant shape.

A	B	C
----------	----------	----------

[1]

(ii) Give **one** reason for your choice of position.

.....
 [1]

(d) Name **one** type of adhesive that would be used to join the foam board elephant to the plastic back.

..... [1]

(e) During market testing of the key ring, the foam board proved to be unsuitable for the elephant shape.

Give **one** reason why foam board is unsuitable for making key rings.
 [1]

[Total: 12]

3 The Eddie the Elephant image in Fig. 7 is to be made available in an electronic format so that it can be used on a computer system.

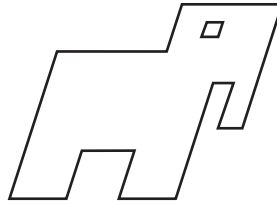


Fig. 7

(a) Name **one** CAD **tool** that would be used to draw the eye on the electronic image.
..... [1]

(b) Name **one** method of **converting** the image into an electronic format.
..... [1]

(c) Name **two** methods of **storing** the image in an electronic format.
1 [1]
2 [1]

(d*) Explain, using examples, how manipulation software could be used to **alter** the electronic image of Eddie the Elephant.
.....
.....
.....
.....
.....
.....
.....
.....
.....
..... [6]

(e) When the design of the electronic image has been finalised, Computer Aided Manufacture (CAM) will be used to make 50 self adhesive labels.

(i) Name **one** type of CAM equipment that could be used to cut out the labels.

..... [1]

(ii) Give **one** advantage of using CAM to make 50 copies of the labels.

..... [1]

[Total: 12]

Section B

Answer **all** questions

4 Fig. 8 shows the design for a cinema ticket to see the film Eddie the Elephant.

The tickets are to be printed on recycled paper.

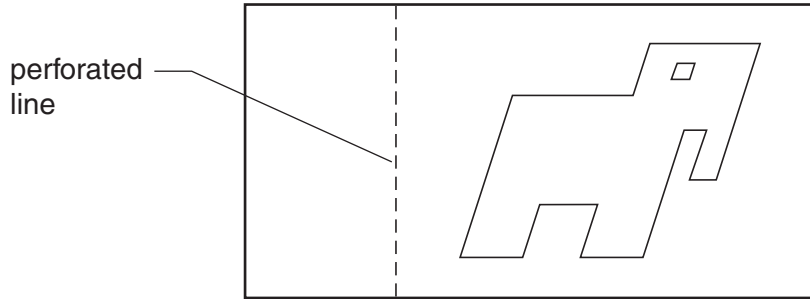


Fig. 8

(a) Give **two** reasons why recycled paper is used for the cinema tickets.

Reason 1

.....

Reason 2

..... [2]

(b) The ticket has a 'perforated line'.

(i) What is a perforated line?

..... [1]

(ii) Give **one** reason why a 'perforated line' has been used.

.....

..... [1]

5 Promotional 'headwear' is to be given to children when they go to see the Eddie the Elephant film.

(a) In the space below use sketches and notes to show **one** idea for the promotional 'headwear'.
Specification points for the 'headwear' are:

- made from a single sheet of thin card [1]
- joined together without the use of other materials [1]
- adjustable for different head sizes [2]
- incorporates an elephant shape [2]

(b) Name **one** smart material that could be used to enhance the appearance of the promotional 'headwear' and explain how it works.

(i) Name of smart material

..... [1]

(ii) Explanation

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

(c) The promotional 'headwear' is to be produced in large numbers.

(i) Name **one** mark or symbol that could be used to inform consumers about quality.

..... [1]

(ii) Describe **one** quality control check that would ensure accuracy and quality of finish.

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

[Total: 12]

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