

Cambridge IGCSE™

DESIGN & TECHNOLOGY**0445/04**

Paper 4 Graphic Products

For examination from 2028

MARK SCHEME

Maximum Mark: 50

Specimen

This document has **8** pages. Any blank pages are indicated.

Generic Marking Principles

All examiners must apply these general marking principles when marking candidate responses. Examiners must apply them alongside the specific content of the mark scheme or generic level descriptions for a question. Each question paper and mark scheme must also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptions for the question
- the specific skills defined in the mark scheme or in the generic level descriptions for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptions.

GENERIC MARKING PRINCIPLE 5:

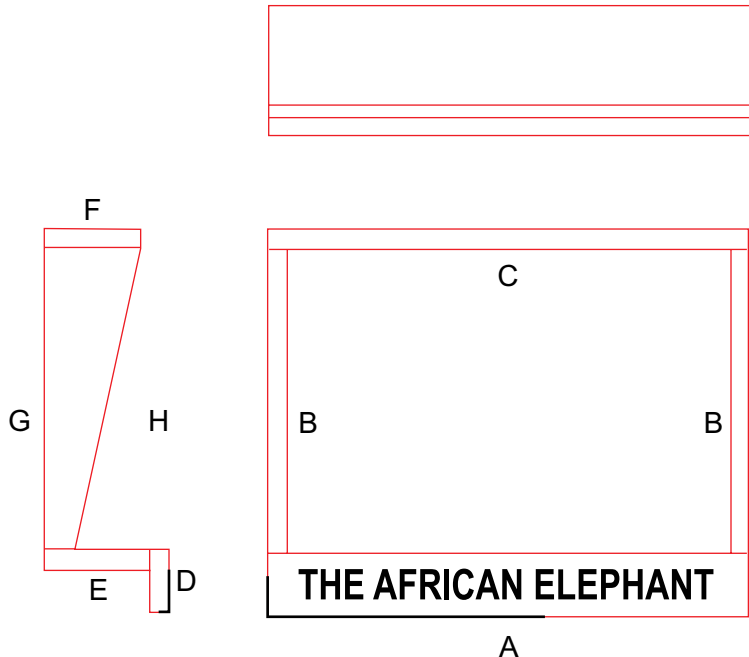
Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

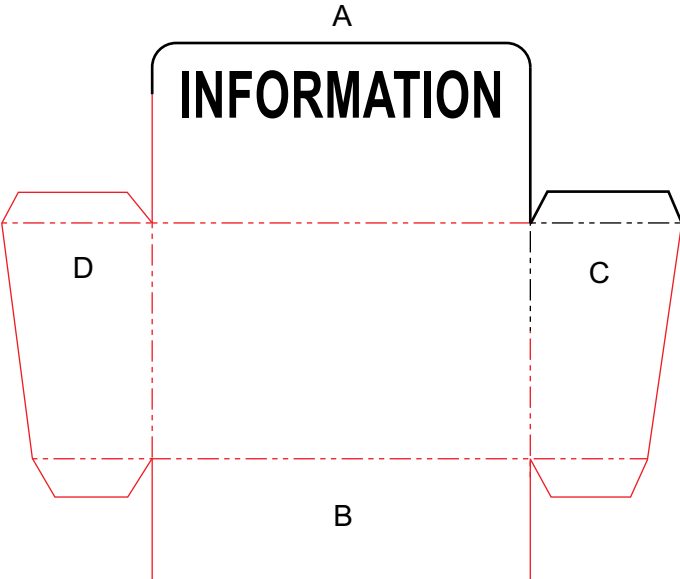
GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptions in mind.

Question	Answer	Marks	Guidance
1(a)	<ul style="list-style-type: none"> • Semi-circle R20 in correct position and horizontal end line added [1] • Two legs with vertical sides 30 mm wide and 40 mm apart [1] • Horizontal line 40 mm high between [1] • Two R30 arcs added left and right [1] • Horizontal top line and two vertical lines (front and back) to complete outline [1] • Any regular hexagon or symmetrical hexagon in correct centre position [1] • Hexagon correct to overlay [1] • Any isosceles triangle on given centre axis [1] • Triangle correct to overlay [1] 	9	
1(b)(i)	Waterproof / weather resistant / durable / available in various colours / corrosion resistant / flexible	1	Accept any one reason
1(b)(ii)	More accurate / neater [1] Quicker [1] Safer than using knife [1]	2	Do not accept 'easier' Any other valid response
1(b)(iii)	Changes colour [1] depending on light level [1]	2	1 mark for any reference to 'changing colour' 1 mark for reference to 'amount of light'

Question	Answer	Marks	Guidance
2(a)	Grain lines added to at least two sides [1] End grain added to top face [1]	2	
2(b)	Softwood because: Softwood can be more sustainable because softwood trees grow more quickly [1] Softwood is cheaper / more readily available than hardwood so is easier to source/replace [1] Softwood is easier to fix a sign to the post [1] OR Hardwood because: Hardwood can be seen as more sustainable as it withstands weather conditions better than softwood [1] Hardwood can be more aesthetically pleasing as there are a variety of colours available [1]	2	1 mark for each point, up to 2 marks Both points must relate to the same classification of wood. Two points can be made for the same reason e.g. two different points relating to sustainability. Any other valid response
2(c)	Top face correct to overlay [1] Front face correct height and with correct arrow end [1] Sloping face correct to candidate solution [1]	3	
2(d)(i)	Sign can be understood by people who don't understand text [1] and people who don't know the language [1]	2	Accept any other valid responses e.g. children
2(d)(ii)	Simple sketch showing food/drink that does not use text [1] High quality communication [1]	2	

Question	Answer	Marks	Guidance
3(a)	<p>Front view: Front of shelf 'A' correct to overlay [1] Left and right sides 'B' correct to overlay [1] Top face 'C' correct to overlay [1]</p> <p>Side view: Rectangle end of shelf front 'D' correct to overlay [1] Rectangle end of shelf 'E' correct to overlay / candidate solution [1] Top rectangle end 'F' projected from front view to correct width [1] Back edge 'G' correct to candidate solution [1] Diagonal edge 'H' correct to candidate solution [1]</p> <p>Plan: Outer rectangle length correct to front view [1] Outer rectangle width correct to side view [1] Top of shelf front line correct to side view [1] Top front edge correct to side view [1]</p>	12	
3(b)(i)	<p>Any suitable method shown of attaching card to softwood [1] Method shown allows easy removal [1] High quality communication [1]</p>	3	Non temporary method e.g. glue, staples, tape, drawing pins, blu-tack, Velcro, slot method etc.
3(b)(ii)	Lamination / UV varnish / encapsulation	1	Accept plastification

Question	Answer	Marks	Guidance
3(c)	Back face and base 'A' correct to overlay [1] Front face 'B' correct to overlay [1] Side 'C' correct to overlay / candidate solution [1] Side 'D' correct to overlay / candidate solution [1] 3 glue tabs in appropriate positions and similar in size to existing [1] Correct line convention used for fold lines [1]	6	
3(d)	Explanation: Deforestation of trees [1] to source the materials for the paper. [1] Transport of leaflets by fossil-fuelled vehicles [1] increases greenhouse gas emissions. [1] Disposal of leaflets to landfill/incineration [1] impacts climate change. [1] Suggestion: Use recycled paper. [1] Use electric vehicles for transport / produce the leaflets close to the park. [1] Provide recycling bins in the park for leaflets. [1]	3	Two marks for an explanation. No marks awarded for repeating the stages in the question. One mark for a suggested improvement. The explanation and improvement must relate to the same stage of the life cycle. Any other valid response

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