CAMBRIDGE
International Education

Cambridge IGCSE™

DESIGN AND TECHNOLOGY **0445/52**

Paper 5 Graphic Products **May/June 2025**

MARK SCHEME

Maximum Mark: 50

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the May/June 2025 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

This document consists of **10** printed pages.

PUBLISHED

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptions for a question. Each question paper and mark scheme will 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 descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors 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 descriptors.

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 descriptors in mind.

Annotations guidance for centres

Examiners use a system of annotations as a shorthand for communicating their marking decisions to one another. Examiners are trained during the standardisation process on how and when to use annotations. The purpose of annotations is to inform the standard isation and monitoring processes and guide the supervising examiners when they are checking the work of examiners within their team. The meaning of annotations and how they are used is specific to each component and is understood by all examiners who mark the component.

We publish annotations in our mark schemes to help centres understand the annotations they may see on copies of scripts. Note that there may not be a direct correlation between the number of annotations on a script and the mark awarded. Similarly, the use of an annotation may not be an indication of the quality of the response.

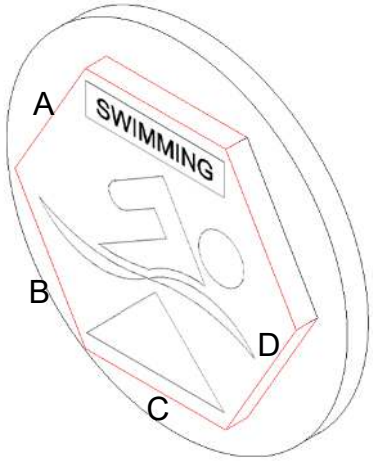
The annotations listed below were available to examiners marking this component in this series.

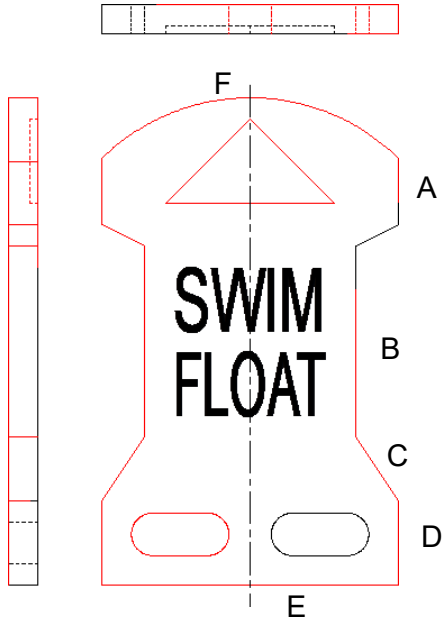
Annotations

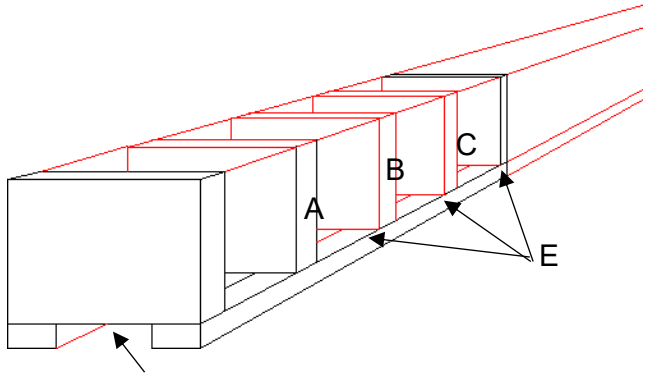
Annotation	Meaning
	Incorrect point
	Indicates that the point has been noted, but no credit has been given
	Correct point
Numbers	Indicating the mark allocated for the response

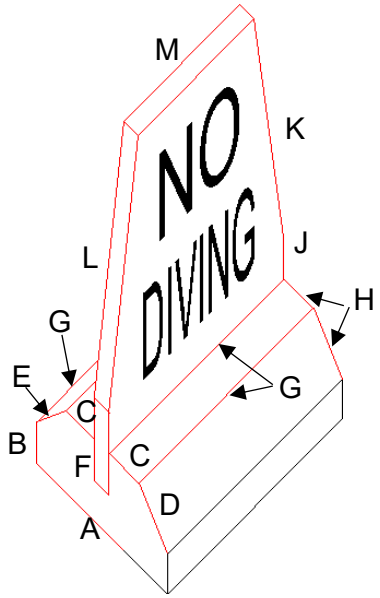
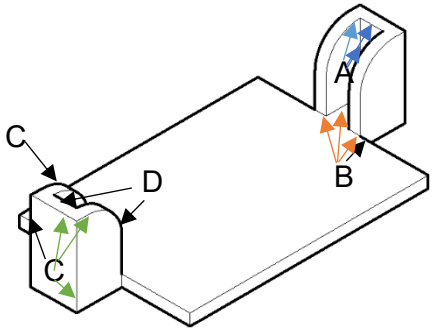
Question	Answer	Marks	Guidance
A1(a)	Circle correct to overlay [1]	**1**	
A1(b)	Rectangle drawn to correct width or height [1] Rectangle correct to overlay [1]	**2**	
A1(c)	Any isosceles triangle [1] Triangle correct to overlay [1]	**2**	
A1(d)	Any 6 sided shape with **straight** sides [1] Any regular hexagon [1] Hexagon correct to overlay [1]	**3**	
A1(e)	Three parallel 'ARM' lines projected at 30º up to the right [1] Line of 'SHOULDER' projected at 60º up to the left [1] Line of INNER ARM 15mm away from shoulder and parallel [1]	**3**	
A1(f)	Any regular curve added between correct points on left hand side [1] Curve radius correct to overlay [1] Any regular curve added between correct points on right hand side [1] Curve radius correct to overlay [1]	**4**	

Question	Answer	Marks	Guidance
A2	'25' added to label [1] Height of letters correct / projected from existing label [1] Letters consistent with 10m label [1]	**3**	

Question	Answer	Marks	Guidance
A3(a)	Change colour [1] of lines then set one colour for 'engrave' / kiss cut and one for full cut [1] use different colours [1] for different cut depths [1]	**2**	Allow 1 mark set different 'layers'. 1 mark for mentioning different colours / dotted or solid 1 mark for saying what that means (1 colour for full depth cut and 1 colour for partial depth cut)
A3(b)	Side A correct to overlay [1] Side B correct to overlay [1] Side C correct to overlay [1] Side D correct to overlay [1] Correct thickness added to top face **and** side D face [1]	**5**	

Question	Answer	Marks	Guidance
B4(a)	Front view: Line 'A' vertical and in correct position [1] Line 'B' vertical and in correct position [1] Line 'C' correct angle and length [1] Line 'D' correct to candidate solution [1] Line 'E' correct to overlay [1] Top curve 'F' correct to overlay [1] Isosceles triangle correct to overlay [1] Hole on left hand side correct to overlay [1] Left hand side of float mirror image of right-hand side [1] Side view: Outline rectangle correct to overlay / candidate solution [1] **Five** corner lines projected correctly (solid lines) [1] Triangle projected correctly and to correct depth and dotted [1] Plan: Outer rectangle correct to overlay / candidate solution [1] Four hidden detail lines (dotted) correct to overlay / candidate solution [1]	**14**	
B4(b)(i)	Any two from: Waterproof / buoyant /low density / easy to cut and shape / lightweight / comfortable /soft / range of colours [1] [2 × 1]	**2**	Must relate to a swim float Do not allow: durable, strong, impact / shock resistant / flexible Accept any other valid response.
B4(b)(ii)	Any two from: PVA is water based [1] Float would come apart in the water [1] PVA is not resistant to water / waterproof [1]	**2**	Do not allow: not strong enough

Question	Answer	Marks	Guidance
B4(c)	Divider ‘A’ completed correct to overlay [1] Divider ‘B’ side face drawn in appropriate position and thickness [1] Divider ‘B’ correct to candidate solution (top face, left side & base [1] Divider ‘C’ side face drawn in appropriate position and thickness [1] Divider ‘C’ correct to candidate solution (top face, left side & base [1] [Baseline ‘D’ added to overlay [1] Inner lines ‘E’ added correct to candidate solution [1]	7	

Question	Answer	Marks	Guidance
B5(a)	Baseline ‘A’ correct to overlay [1] Vertical back edge ‘B’ correct [1] Top horizontal edge ‘C’ 20mm above baseline ‘A’ [1] Sloping edge ‘D’ correct to overlay / candidate solution [1] Sloping edge ‘E’ correct to overlay / candidate solution [1] Cutout ‘F’ correct size and in centre of top edge [1] Lines ‘G’ projected at 45º to correct length [1] Two back edges ‘H’ parallel to lines ‘C’ and ‘D’ / [1] Vertical back edge ‘J’ correct to overlay / candidate solution [1] Sloping back edge ‘K’ correct to overlay [1] Sloping face ‘L’ correct to overlay [1] Top face ‘M’ correct to overlay / candidate solution [1]	**12**	
B5(b)(i)	Outer edge thick with some inner edges thin [1] Curved line ‘A’ thick **and** 3 inner detail lines (blue arrows) thin [1] Line ‘B’ thick **and** inner 3 base lines (orange arrows) thin [1] Lines ‘C’ thick **and** 3 inner edges (green arrows) thin [1] Lines ‘D’ thick only (not extended onto base thickness **and** inner curve thin) [1]	**5**	
B5(b)(ii)	Line bender / strip heater / heat gun [1] Former / mould [1]	**1**	Do not allow oven

Question	Answer	Marks	Guidance
B5(b)(iii)	Tensol cement / superglue [1]	1	Allow any glue suitable for 5mm thick acrylic. Allow epoxy resin or trade names of **suitable** adhesives e.g. Gorilla glue, Araldite Do not allow: PVA, contact adhesive, hot / cold glue gun, double sided tape Accept any other valid response.
B5(c)	Lines 'A' added to complete base outline [1] Side 'B' including radius correct to overlay [1] Back face 'C' correct to overlay [1] Glue flap D added correct to overlay [1] Right hand side mirror image of Left / correct to overlay [1] Correct fold line conventions used and in correct places [1]	6