

Cambridge IGCSE™ (9–1)

DESIGN AND TECHNOLOGY**0979/12**

Paper 1 Product Design

May/June 2026

MARK SCHEME

Maximum Mark: 50

Published

This mark scheme contains the instructions and marking guidance that our examiners used to mark candidate responses for this component.

Before they start marking, examiners complete a standardisation process. They review a range of candidate responses and discuss the mark scheme in detail to agree which answers can and cannot be accepted. Examiners award marks where it is clear that candidate responses have met the requirements of the mark scheme. These requirements may vary between different components or different versions of the same component, depending on the exact requirements of the question and the candidate responses seen during the standardisation process.

Sometimes, our mark schemes may allow marks to be awarded to responses which contain elements that are factually incorrect or for content not covered by the syllabus. We do this in response to the demands of a specific question to support candidates and make sure that our assessments are fair. However, these allowances should not be used as a guide for teaching and learning.

We cannot discuss the mark scheme with schools, and we recommend that schools read the mark scheme together with the assessment material and the Principal Examiner Report for Teachers.

This document consists of **9** printed pages.

General marking principles

All examiners must apply these marking principles when marking candidate responses.

1	Examiners must award marks for each response in line with: - the specific content defined in the mark scheme - the specific skills defined in the mark scheme or in the level descriptions - the standard of response required as exemplified by the standardisation scripts.
2	Examiners must award whole marks (not half marks, or other fractions).
3	Examiners must award marks positively . This means that: - marks are not deducted for errors or omissions - marks are awarded for correct/valid answers as defined in the mark scheme and also for other valid answers which go beyond the scope of the syllabus and mark scheme referring to your team leader as appropriate - the quality of spelling, punctuation and grammar are judged only when the mark scheme indicates that these features are specifically assessed in the question. However, the meaning of all responses must be unambiguous.
4	Examiners must consistently apply the requirements of the mark scheme and any rules for what to do when candidates have not followed instructions correctly.
5	Examiners must use the full range of marks defined in the mark scheme, unless limited by the quality of the candidate responses seen.
6	Examiners must award marks according to the mark scheme and must not award marks with grade thresholds or grade descriptions 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 standardisation 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

PUBLISHED

Question	Answer	Marks	Guidance
1(a)	Accept any four additional specification points: stable when assembled, comfortable to sit on, easy to assemble, easy to clean, will not collapse under the weight of a large adult, weatherproof, available in a range of colours, have a handle or carrying strap [1 × 4]	4	Each specification point - 1 mark No repeats from question - used in parks, used by parents/carers, lightweight, foldable, easy to carry/transport and designed using anthropometric data Only accept unqualified answers if relevant to this specific design problem, not generic answers such as nice, safe, cheap, strong, transportable, durable, aesthetic, ergonomic... Acceptable one word answers: stable/sturdy, weatherproof or waterproof (not both), comfortable... Any other valid response
1(b)	Accept drawings of any two ways of making a solid piece of material the lighter in weight: add holes (along the length), use tubular material, use a sectional (□, L, +...) material, etc. [2 × 2]	4	Maximum of 2 marks for each drawing: Appropriate way of making the material lighter – 1 mark Clear drawing – 1 mark Any other valid response Do not accept making the material smaller (question states without altering dimensions)
1(c)	Any three suitable ideas. Award up to 6 marks for communication of ideas using the 'Communication of ideas' table. Award up to 6 marks for suitable designs using the 'Suitable designs' table.	12	At least three different ideas for maximum marks. Pro rata if fewer.

Question	Answer	Marks	Guidance
1(d)	Award up to 6 marks for evaluation of the ideas: Evaluation [2 × 3] e.g. Advantage + disadvantage explained for each idea Selection [1] Justification - not single words, or generic terms such as the best, meets the specification or most suitable [1]	8	Simple descriptions or repeats of same points for each idea not rewarded. Specific not generic justification. Award maximum marks if only either advantage or disadvantage given for each as long as includes sophisticated reasoning.
1(e)	Award up to 4 marks for quality of drawing using the 'Quality of drawing' table. Award up to 2 marks for dimensions : 2 or 3 overall dimensions only – 1 mark Additional detail dimensions – 1 mark Award up to 6 marks for construction detail using the 'Construction details' table.	12	Additional detail dimensions might show thickness of materials, diameters, etc.
1(f)	Accept any two suitable specific materials. [1 × 2] Accept any appropriate reason for choice of each material [1 × 2]	4	Each suitable specific material – 1 mark Generic terms such as wood, metal, plastic not accepted. Appropriate reason for each material – 1 mark Materials must be appropriate for the design shown in (e)
1(g)	Accept any suitable manufacturing process. [1 × 1]	1	Process must be appropriate for design in (e) .
	Award up to 3 marks for description of process .	3	Detailed description for 3 marks
	Award up to 2 marks for names of tools, equipment or machines used .	2	Basic marking out tools, such as pencil or rule, or just drawings of tools/equipment = 1 mark only

Question	Answer	Marks	Guidance
OR			
2(a)	Accept any four additional specification points: waterproof, weatherproof, attract people's attention, easy to understand/deliver a clear message, positioned on the lamp post at a height that can be understood, large enough to be easily seen, not harmful to wildlife, lightweight so it won't fall off the pole, easily noticeable [1 × 4]	4	Each specification point – 1 mark No repeats from question – sign for a park, warns people of dangers/must not swim in lakes, fasten to a post and not use words to show the warning Only accept unqualified answers if relevant to this specific design problem, not generic answers such as safe, strong, nice, aesthetic, durable, cheap... Acceptable one word answers: weatherproof, eye catching, colourful, lightweight... Any other valid response
2(b)	Accept drawings of any two methods of conveying a message without the use of words: use of images, use of colour, flashing LEDs, animation, sound [2 × 2]	4	Maximum of 2 marks for each drawing: Method – 1 mark Clear drawing – 1 mark Any other valid response
2(c)	Any three suitable ideas. Award up to 6 marks for communication of ideas using the 'Communication of ideas' table. Award up to 6 marks for suitable designs using the 'Suitable designs' table.	12	At least three different ideas for maximum marks. Pro rata if fewer.
2(d)	Award up to 6 marks for evaluation of the ideas: Evaluation [2 × 3] e.g. Advantage + disadvantage explained for each idea Selection [1] Justification – not single words, or generic terms such as the best, meets the specification or most suitable [1]	8	Simple descriptions or repeats of same points for each idea not rewarded. Specific not generic justification. Award maximum marks if only either advantage or disadvantage given for each as long as includes sophisticated reasoning.

Question	Answer	Marks	Guidance
2(e)	Award up to 4 marks for quality of drawing using the 'Quality of drawing' table. Award up to 2 marks for dimensions: 2 or 3 overall dimensions only – 1 mark Additional detail dimensions – 1 mark Award up to 6 marks for construction detail using the 'Construction details' table.	12	Additional detail dimensions might show thickness of materials, diameters, etc.
2(f)	Accept any two suitable specific materials. [1 × 2] Accept any appropriate reason for choice of each material [1 × 2]	4	Each suitable specific material – 1 mark Generic terms such as wood, metal, plastic not accepted. Appropriate reason for each material – 1 mark Materials must be appropriate for the design shown in (e)
2(g)	Accept any suitable manufacturing process. [1 × 1]	1	Process must be appropriate for design in (e) .
	Award up to 3 marks for description of process.	3	Detailed description for 3 marks
	Award up to 2 marks for names of tools, equipment or machines used.	2	Basic marking out tools, such as pencil or rule, or just drawings of tools/equipment = 1 mark only

PUBLISHED

Question	Answer	Marks	Guidance
OR			
3(a)	Accept any four additional specification points – easy to understand/operate, colourful as it is to be used by children, robust to prevent it being damaged, weatherproof, make a noise when in a horizontal position etc. [1 × 4]	4	Each specification point - 1 mark No repeats from question - used in parks, entertain children, used with a see saw, indicate when seesaw level (horizontal) and temporarily attach to a see saw Only accept unqualified answers if relevant to this specific design problem, not safe, nice, fun, strong, aesthetic, durable, cheap... Acceptable one word answers: weatherproof, eye catching, colourful, lightweight... Any other valid response
3(b)	Accept drawings of any two methods of detecting or sensing a change in angle of a horizontal surface - mercury switch, ball bearing, roller, slider, pendulum, plumb line/bob, spirit level 'bubble' [2 × 2]	4	Maximum of 2 marks for each drawing: Method – 1 mark Clear drawing – 1 mark Any other valid response
3(c)	Any three suitable ideas. Award up to 6 marks for communication of ideas using the 'Communication of ideas' table. Award up to 6 marks for suitable designs using the 'Suitable designs' table.	12	At least three different ideas for maximum marks. Pro rata if fewer.
3(d)	Award up to 6 marks for evaluation of the ideas: Evaluation [2 × 3] e.g. Advantage + disadvantage explained for each idea Selection [1] Justification – not single words, or generic terms such as the best, meets the specification or most suitable [1]	8	Simple descriptions or repeats of same points for each idea not rewarded. Specific not generic justification. Award maximum marks if only either advantage or disadvantage given for each as long as includes sophisticated reasoning.

PUBLISHED

Question	Answer	Marks	Guidance
3(e)	Award up to 4 marks for quality of drawing using the 'Quality of drawing' table. Award up to 2 marks for dimensions: 2 or 3 overall dimensions only – 1 mark Additional detail dimensions – 1 mark Award up to 6 marks for construction detail using the 'Construction details' table.	12	Additional detail dimensions might show thickness of materials, diameters, etc.
3(f)	Accept any two suitable specific materials. [1 × 2] Accept any appropriate reason for choice of each material [1 × 2]	4	Each suitable specific material – 1 mark Generic terms such as wood, metal, plastic not accepted. Appropriate reason for each material – 1 mark Materials must be appropriate for the design shown in (e)
3(g)	Accept any suitable manufacturing process. [1 × 1]	1	Process must be appropriate for design in (e) .
	Award up to 3 marks for description of process.	3	Detailed description for 3 marks
	Award up to 2 marks for names of tools, equipment or machines used.	2	Basic marking out tools, such as pencil or rule, or just drawings of tools/equipment = 1 mark only