

Cambridge International AS & A Level

DESIGN & TECHNOLOGY**9705/11**

Paper 1

October/November 2025

MARK SCHEME

Maximum Mark: 100

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 October/November 2025 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

This document consists of **19** 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 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
	Correct point – mark awarded
	Incorrect point – no mark awarded
BOD	Benefit of doubt given – mark(s) awarded
Highlighter	Creditworthy response – highlight key points
REP	Repetition
L0	Marking level achieved
L1	Marking level achieved
L2	Marking level achieved
L3	Marking level achieved
SEEN	Page or response seen by examiner

PUBLISHED

Question	Answer	Marks	Guidance
1(a)(i)	Exemplar answer: Aluminium [1] Accept other non-ferrous metals such as brass.	1	AOVR Do not award the mark if a ferrous metal is named.
1(a)(ii)	Exemplar answer: Plywood [1] Accept other composite materials such as chipboard, engineered wood, MDF, blockboard, GRP, CFRP.	1	AOVR
1(a)(iii)	Exemplar answers: Surface that can resist water and food spills and can easily be wiped clean so that it is hygienic. [1] Tough [1] so that it will not shatter if toys are banged on the tabletop. [1] Available in a wide range of colours [1] so customers can have a choice of the colour top they choose. [1] Available in sheets [1] so there is no need to join to make the top. [1]	2	AOVR
1(b)(i)	Exemplar answers: A stencil [1] is placed in the correct position and paint and a paintbrush used to add the image. [1] Painting by hand after drawing pencil guidelines, drawing on with felt tipped pens using a rule and set square, pyrography, transfers, digital printing... As the scale of production is not stated, accept answers that describe a method of adding the cartoon image to a one-off table or a table produced in quantity.	2	AOVR
1(b)(ii)	Exemplar answer: The child will find the cartoon image attractive [1] so it makes the table more appealing. [1] The cartoon image shows that the table [1] is specifically designed for a child. [1]	2	AOVR

PUBLISHED

Question	Answer	Marks	Guidance
2(a)(i)	Exemplar answer: Shadow [1]	1	
2(a)(ii)	Exemplar answer: Rendering (material representation) [1] Clearly shows the material [1] that the product will be made from. [1]	3	AOVR including: the use of tone and colour
2(b)	Exemplar answers: An orthographic working drawing shows sufficient detail of all the parts of the design [1] to allow planning for manufacture. [1] An orthographic working drawing is drawn to a scale [1] so that sizes can be taken directly from the drawing. [1]	4	AOVR

Question	Answer	Marks	Guidance
3(a)	Exemplar answers: Less likely to get damaged [1] during transportation. [1] Cheaper to transport [1] as takes up less space. [1]	4	AOVR
3(b)(i)	Exemplar answers: Slot fastenings, Velcro, screw fastenings... Method of attaching the corrugated card at corner A [1] or suitable temporary joining method. [2] Quality of sketches and notes. [0 – 2]	4	Quality of sketches: Simple sketches with some notes / labels = 1 High quality sketches with detailed annotations = 2
3(b)(ii)	Exemplar answers: Locating square, slots, groove... Method of attaching the shelf to the support [1] or suitable temporary joining method. [2] Quality of sketches and notes. [0 – 2]	4	Quality of sketches: Simple sketches with some notes / labels = 1 High quality sketches with detailed annotations = 2

PUBLISHED

Question	Answer	Marks	Guidance
3(c)	Exemplar answers: Keep fingers [1] behind the blade of the craft knife. [1] Use a cutting mat [1] to prevent the work slipping. [1]	4	AOVR
3(d)	Exemplar answer: Melamine, paint, varnish... [1] Melamine is available in many different colours and patterns [1] and provides a hard-wearing surface [1] so will not get damaged by products that are put on the shelf. [1]	4	For justification: Feature / property, e.g. range of colours = 1 Reason, e.g. hard wearing = 1 Clearly explained reason / justification, e.g. hard wearing so will not get scratched by the products that are put on the shelf = 2.

Question	Answer	Marks	Guidance
4(a)	Exemplar answers: Allows the shoe rack to fit into different sized spaces in a house, thus increasing the potential market for the product. [1] Allows a different number of shoes to be stored to meet changing family circumstances. [1]	2	AOVR
4(b)	Exemplar answers: A finish needs to be applied to prevent the mild steel rusting [1] and making the shoe rack unsightly or customers dissatisfied with the length of life of the product. [1] A finish needs to be applied to improve the appearance of the shoe rack [1] and if colours are used it gives the customers more choice. [1] Different colour finishes [1] can be applied to give customers a choice. [1]	2	AOVR

PUBLISHED

Question	Answer	Marks	Guidance																					
4(c)(i)	This question has a total of 8 marks. Instructions on how to mark this question follow on below. Process = 6 marks HandS = 2 marks Mark the response using the two grids below. Process <table><tr><td>L3</td><td>Sketches and notes fully describe all the stages in an appropriate making process. All the stages in the making process are in the correct order and all the tools and equipment required are correctly named.</td><td>5–6</td></tr><tr><td>L2</td><td>Sketches and notes describe most of the stages in an appropriate making process. Some stages in the making process may be in the incorrect order and some tools and equipment may be missing.</td><td>3–4</td></tr><tr><td>L1</td><td>Sketches and notes mention some stages in a making process and some tools or equipment. The making process may not be entirely appropriate to the task.</td><td>1–2</td></tr><tr><td>L0</td><td>No creditable response.</td><td>0</td></tr></table> HandS <table><tr><td>L2</td><td>Consideration of health and safety precautions specific to the task.</td><td>2</td></tr><tr><td>L1</td><td>Some generic consideration of health and safety.</td><td>1</td></tr><tr><td>L0</td><td>No consideration of health and safety.</td><td>0</td></tr></table>	L3	Sketches and notes fully describe all the stages in an appropriate making process. All the stages in the making process are in the correct order and all the tools and equipment required are correctly named.	5–6	L2	Sketches and notes describe most of the stages in an appropriate making process. Some stages in the making process may be in the incorrect order and some tools and equipment may be missing.	3–4	L1	Sketches and notes mention some stages in a making process and some tools or equipment. The making process may not be entirely appropriate to the task.	1–2	L0	No creditable response.	0	L2	Consideration of health and safety precautions specific to the task.	2	L1	Some generic consideration of health and safety.	1	L0	No consideration of health and safety.	0	8	
L3	Sketches and notes fully describe all the stages in an appropriate making process. All the stages in the making process are in the correct order and all the tools and equipment required are correctly named.	5–6																						
L2	Sketches and notes describe most of the stages in an appropriate making process. Some stages in the making process may be in the incorrect order and some tools and equipment may be missing.	3–4																						
L1	Sketches and notes mention some stages in a making process and some tools or equipment. The making process may not be entirely appropriate to the task.	1–2																						
L0	No creditable response.	0																						
L2	Consideration of health and safety precautions specific to the task.	2																						
L1	Some generic consideration of health and safety.	1																						
L0	No consideration of health and safety.	0																						

PUBLISHED

Question	Answer	Marks	Guidance
4(c)(i)	Responses may involve: • brazing • welding • screw fasteners • push fittings		

PUBLISHED

Question	Answer	Marks	Guidance																					
4(c)(ii)	This question has a total of 8 marks. Instructions on how to mark this question follow on below. Process = 6 marks HandS = 2 marks Mark the response using the two grids below. Process <table><tr><td>L3</td><td>Sketches and notes fully describe all the stages in an appropriate making process. All the stages in the making process are in the correct order and all the tools and equipment required are correctly named.</td><td>5–6</td></tr><tr><td>L2</td><td>Sketches and notes describe most of the stages in an appropriate making process. Some stages in the making process may be in the incorrect order and some tools and equipment may be missing.</td><td>3–4</td></tr><tr><td>L1</td><td>Sketches and notes mention some stages in a making process and some tools or equipment. The making process may not be entirely appropriate to the task.</td><td>1–2</td></tr><tr><td>L0</td><td>No creditable response.</td><td>0</td></tr></table> HandS <table><tr><td>L2</td><td>Consideration of health and safety precautions specific to the task.</td><td>2</td></tr><tr><td>L1</td><td>Some generic consideration of health and safety.</td><td>1</td></tr><tr><td>L0</td><td>No consideration of health and safety.</td><td>0</td></tr></table>	L3	Sketches and notes fully describe all the stages in an appropriate making process. All the stages in the making process are in the correct order and all the tools and equipment required are correctly named.	5–6	L2	Sketches and notes describe most of the stages in an appropriate making process. Some stages in the making process may be in the incorrect order and some tools and equipment may be missing.	3–4	L1	Sketches and notes mention some stages in a making process and some tools or equipment. The making process may not be entirely appropriate to the task.	1–2	L0	No creditable response.	0	L2	Consideration of health and safety precautions specific to the task.	2	L1	Some generic consideration of health and safety.	1	L0	No consideration of health and safety.	0	8	
L3	Sketches and notes fully describe all the stages in an appropriate making process. All the stages in the making process are in the correct order and all the tools and equipment required are correctly named.	5–6																						
L2	Sketches and notes describe most of the stages in an appropriate making process. Some stages in the making process may be in the incorrect order and some tools and equipment may be missing.	3–4																						
L1	Sketches and notes mention some stages in a making process and some tools or equipment. The making process may not be entirely appropriate to the task.	1–2																						
L0	No creditable response.	0																						
L2	Consideration of health and safety precautions specific to the task.	2																						
L1	Some generic consideration of health and safety.	1																						
L0	No consideration of health and safety.	0																						

PUBLISHED

Question	Answer	Marks	Guidance
4(c)(ii)	Responses may involve: • screw fasteners • push fittings		

Question	Answer	Marks	Guidance
5(a)(i)	Exemplar answer: If a customer arrives at the shop and it is closed [1], they can still purchase drinks and snacks / vendor can still make profit or provide a service. [1]	2	AOVR
5(a)(ii)	Exemplar answers: Cashless payments mean that no money is kept in the machine [1] and so it cannot be stolen. [1] To give an alternative method of payment [1] for users who may not be carrying cash to be able to still purchase items. [1]	2	AOVR
5(a)(iii)	Exemplar answers: The front is made from a clear polymer so that customers can see the drinks and snacks [1] but they cannot be removed / stolen. [1] Clear polymer is relatively inexpensive [1] and can easily be processed (cutting, moulding...) during manufacture. [1]	2	AOVR
5(b)(i)	Exemplar answer: As the spiral turns in a rotary motion [1] the snacks move along in a linear motion and then drop down. [1]	2	
5(b)(ii)	Exemplar answer: Sketches and notes show the can rolling along [1] a channel and dropping into the collection point. [1]	2	AOVR

PUBLISHED

Question	Answer	Marks	Guidance
5(c)(i)	Exemplar answers: Sketches and notes show the shape of the insert is determined by the product that goes in it. For example, the hole for cans is round, flaps could be added to accommodate different size items and stop things blowing out / overflowing, rounded corners so people will not cut their hand, able to drop items in and they will funnel down to the hole, liquids will funnel into the hole so more hygienic, opening not so prominent to avoid spread of disease... [0–3]	3	AOVR
5(c)(ii)	Exemplar answers: Sketches and notes show how the colour of the insert is determined by the product that is meant to go in it. For example, the colours of the holes match the sign to show the items going inside, green shows mixed recycling, colours attract people's attention which promotes better recycling of items, can be used to establish classifications for recycling throughout a region / country, by putting the right items in the right bin the user is helping to make new products like glass jars, cardboard boxes, compost, colour helps prevent contamination of recycling materials by mixing materials... [0–3]	3	AOVR
5(d)	Exemplar answers: Low enough [1] for young children / people in wheelchairs or mobility scooter to put waste [1] into the bin. Lettering / images [1] large enough for people with poor eyesight / do not understand written text to see. [1] Providing a secure place for society's / local residents' [1] waste, reducing littering and preventing air pollution. [1]	4	AOVR

PUBLISHED

Question	Answer	Marks	Guidance
6	Use the level descriptions in Tables A1 and A2 to mark candidates' responses to this question. Responses may include some of the following ideas, but all valid material must be credited. • Understanding that a more inclusive product is adapted for users with specific needs. • Examples of suitable products could be mobile phones, televisions, fire alarms, devices for making announcements in public places... • Understanding of the specific needs of a person with a hearing impairment, unable to hear sounds or voices in specific situations. • Modifications to the product to accommodate the impairment such as devices that increase the volume, convert sound to text, vibrating devices, personal headphones, sign language...	12	The answer can be structured as freehand sketches with annotations.

PUBLISHED

Generic level descriptions mark schemes Use **Tables A1** and **A2** to give marks for each candidate response for **Question 6**.

Table A1 AO2 Application and communication

Candidates should be able to:

- Apply knowledge, understanding and skills in a variety of contexts (AO2a)
- Communicate knowledge and understanding using sketches, notes and a range of graphical techniques, including conventions and specialist vocabulary (AO2b).

Level	Description	Marks
Level 3	• The modification shows application of accurate relevant knowledge. (AO2a) • The modification shows a clear application of the given context. (AO2a) • The modification is communicated with precision and clarity. (AO2b) • Sketches have detailed correct annotations, including appropriate conventions and specialist vocabulary. (AO2b)	5–6
Level 2	• The modification shows application of some relevant knowledge. (AO2a) • The modification may not be wholly relevant to the context. (AO2a) • The modification is communicated. (AO2b) • Sketches have appropriate annotations, with some conventions and specialist vocabulary. (AO2b)	3–4
Level 1	• The modification shows application of limited relevant knowledge. (AO2a) • The modification shows a basic understanding of the given context. (AO2a) • The modification is partially communicated. (AO2b) • The sketches have some annotations, with limited specialist vocabulary and conventions. (AO2b)	1–2
Level 0	• No creditable response.	0

Table A2 AO4 Analysis and evaluation

Candidates should be able to:

- Analyse, evaluate and compare products (AO4a)
- Identify and/or propose how to improve and/or modify products (AO4b)
- Analyse wider issues in design and technology (including cultural, economic, environmental and social factors). (AO4d)

Level	Description	Marks
Level 3	• The modification is based on thorough and detailed analysis, evaluation and/or comprehensive comparison of products. (AO4a) • The modification is appropriate and fully functions as intended. (AO4b) • The modification shows a thorough analysis of a broad range of wider issues in design and technology. (AO4d) • The modification successfully meets the needs of the user(s)/context. (AO4d)	5–6
Level 2	• The modification is based on an analysis, evaluation and/or comparison of products. (AO4a) • The modification is appropriate and mostly functions as intended. (AO4b) • The modification shows some evidence of analysis of a few wider issues in design and technology. (AO4d) • The modification mostly meets the needs of the user(s)/context. (AO4d)	3–4
Level 1	• The modification shows little or incomplete analysis, evaluation and/or comparison of products. (AO4a) • The modification is mostly appropriate and partially functions as intended. (AO4b) • The modification shows little or incomplete analysis of any wider issues in design and technology. (AO4d) • The modification meets the needs of the user(s)/context in a limited way. (AO4d)	1–2
Level 0	• No creditable response.	0

PUBLISHED

Question	Answer	Marks	Guidance
7	Use the level descriptions in Tables B1 and B2 to mark candidates' responses to this question. Responses may include some of the following ideas, but all valid material must be credited. • Reference to strategies for improving the impact products have on the environment, such as reuse, reduce, recycle, repair and recover. • Examples of how products can be designed to be reused, e.g. shopping bags, water bottles... • Examples of how products can be designed to reduce the amount of material used, e.g. vacuum formed products that use ribs to provide structural strength rather than material thickness... • Examples of how products can be made from recycled materials, e.g. paper, packaging, plastic mouldings... • Examples of how products can be designed to be repaired if an individual part fails e.g. electronic products, car wind screens... • Examples of how products can be designed so that materials can be recovered and used for a new purpose, e.g. labelling of different materials, products designed so that it is easy to separate different materials... • Understanding that products designed with the environment in mind can be very attractive to customers who care about the environment, so sales may increase. • Understanding that products designed with the environment in mind can attract tax and other financial advantages in certain countries. • Understanding that designers and manufacturers have a responsibility to care for the environment.	12	The answer must be structured in paragraphs with whole sentences.

PUBLISHED

Question	Answer	Marks	Guidance
7	• Understanding of the consequences of designing and manufacturing products that do not consider the environment, e.g. litter, pollution, rising sea levels, damage to nature... • Use of colours and symbols to indicate that products are considered environmentally friendly. • Growth of legislation to ensure products are designed with care for the environment in mind.		

PUBLISHED

Use **Tables B1** and **B2** to give marks for each candidate response for **Question 7**.

Table B1 AO1 Knowledge and understanding

Candidates should be able to:

- Demonstrate knowledge and understanding of the impact of design and technology on society (including cultural, economic, environmental and social factors) (AO1c).

Level	Description	Marks
Level 3	• The response thoroughly demonstrates accurate and relevant knowledge of the topic. (AO1c) • The response shows thorough understanding of the impact on society and uses relevant examples and supporting evidence. (AO1c)	5–6
Level 2	• The response includes some accurate and relevant knowledge of the topic. (AO1c) • The response shows some understanding of the impact on society and includes examples and supporting evidence some of which may be relevant to the topic. (AO1c)	3–4
Level 1	• The response shows limited knowledge of the topic and some points may not be relevant. (AO1c) • The response shows limited understanding of the impact on society. There may be limited use of examples and supporting evidence may be of limited relevance. (AO1c)	1–2
Level 0	• No creditable response.	0

Table B2 AO4 Analysis and evaluation

Candidates should be able to:

- Analyse, evaluate and compare products (AO4a)
- Analyse wider issues in design and technology (including cultural, economic, environmental and social factors) (AO4d)

Level	Description	Marks
Level 3	• The response thoroughly analyses, evaluates and/or compares products with relevant and detailed supporting evidence. (AO4a) • Detailed discussion of more than two wider issues in design and technology. The analysis is well supported with relevant and detailed information. (AO4d)	5–6
Level 2	• The response analyses, evaluates and/or compares products with supporting evidence which is not always relevant. (AO4a) • Discussion of at least two wider issues in design and technology. The analysis is supported with relevant information. (AO4d)	3–4
Level 1	• The response shows little or incomplete analysis, evaluation and/or comparison of products. (AO4a) • Description of at least one wider issue in design and technology. The description is supported with limited relevant information. (AO4d)	1–2
Level 0	• No creditable response.	0