Cambridge Assessment International Education

Cambridge IGCSE™ (9–1)

DESIGN AND TECHNOLOGY (9–1) **0979/52**

Paper 5 Graphic Products **May/June 2022**

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 2022 series for most Cambridge IGCSE, Cambridge International A and AS Level and Cambridge Pre-U components, and some Cambridge O Level components.

This document consists of **6** printed pages.

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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 descriptors 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 gra mmar 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).

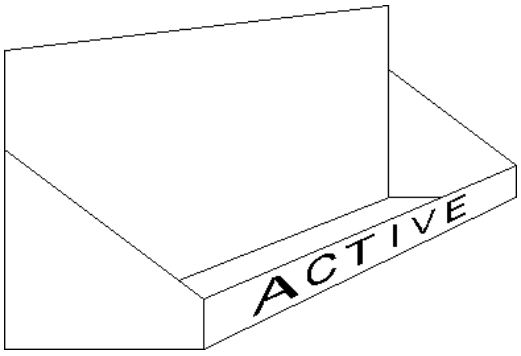
GENERIC MARKING PRINCIPLE 6:

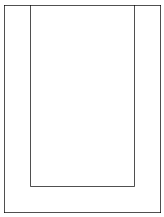
Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

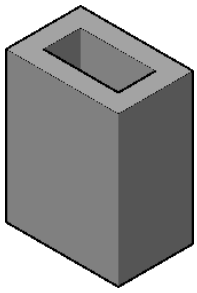
Section A

Question	Answer	Marks
A1(a)	Circle Ø180 [1] on given centre lines [1]	**2**
A1(b)	Any hexagon drawn [1] Any regular hexagon [1] Hexagon correct to overlay [1]	**3**
A1(c)	Any octagon drawn [1] Any regular octagon [1] Octagon correct to overlay [1]	**3**
A1(d)	Any triangles drawn [1] Any isosceles triangle drawn [1] One isosceles triangle drawn correct to overlay [1] Two isosceles triangles drawn correct to overlay [1]	**4**
A1(e)	Both letters added in correct orientation with existing [1] Letters to appropriate size and proportion [1]	**2**
A2(a)	Outer circle of bottle drawn to correct diameter [1] Lid circle drawn to correct diameter [1] Neck of bottle drawn to correct diameter [1] Neck circle shown as hidden detail [1] Circles drawn on given centres [1]	**5**
A2(b)	Two horizontal lines from anywhere on label across bottle [1] Two lines from correct corners of label [1]	**2**
A3(a)	Overall length of label 232 mm [1] One side longer than other side by 20 mm [1] Correct width 20 mm [1]	**3**
A3(b)	20 mm glue area identified at **one** end only [1]	**1**

Section B

Question	Answer	Marks
B4(a)	Base: 50 mm long [1] 30 mm wide [1] Front: 30 mm long [1] 10 mm high [1] Two cut-outs (one each end) [1] Cut outs correct size (5 mm × 2 mm) [1] Sides: 50 mm long [1] 20 mm high at one end [1] 10 mm high at other end [1] Two cut-outs (one each end in correct orientation) [1] Cut out on long end correct size (10 mm × 2 mm) [1] Cut out on short end correct size (5 mm × 2 mm) [1]	**12**
B4(b)(i)	Acrylic, Polystyrene. Allow Perspex, HIPS, PVC or AOVR	**1**
B4(b)(ii)	Laser cutter	**1**
B4(b)(iii)	Use of **heat** to soften the plastic along folds [1] Use of a **former or mould** to shape the plastic correctly [1]	**2**
B4(c)	 End view: Side width 40 mm [1] Back height 60 mm [1] Diagonal line meets backboard at correct height [1] Line to VP from top of backboard [1] Line to VP from bottom of backboard [1] Line to VP from top end of diagonal [1] Far end: Horizontal base line from bottom given corner [1] Vertical line from intersection [1] Diagonal line between intersections [1]	**9**

Question	Answer	Marks
B5(a)	 Left side face 60 mm wide [1] × 40 mm high [1] Right side face 80 mm long [1] × 40 mm high [1] Left side angled face 15 mm high [1] Left side angle edge line correct to overlay [1] Right side angle edge line correct to overlay [1] Centre line of angled face correct to overlay [1] Two back edges of top face correct to candidate solution [1] Base line of handle in centre of top [1] Top line of handle 20 mm above base [1] Top line of handle 20 mm shorter than base line (10 mm each end) [1] Two angles lines from base line to top line [1]	**13**
B5(b)(i)	Image could be searched for on the internet / created in a graphics program/ scanned in [1] Image then copied and pasted / downloaded / saved onto computer [1]	**2**
B5(b)(ii)	Lots of images are already available on the internet to use [1] which saves time as you don't have to create one yourself [1] Images can be modified and altered [1] to make them fit your exact needs [1] Images can easily be saved / stored [1] then sent to others electronically [1]	**2**
B5(c)	 Width 60 mm [1] Height 80 mm [1] 10 mm width to sides and base [1] Top horizontal line shown [1] Hatching added to candidate solution [1]	**5**

Question	Answer	Marks
B5(d)	 Shading / tone (light, medium, dark) / styrofoam texture added to outer faces [1] Inside faces shaded darker than outside [1] High quality rendering [1]	**3**