Cambridge IGCSE™ (9–1)

DESIGN AND TECHNOLOGY   **0979/52**

Paper 5 Graphic Products   **October/November 2020**

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 October/November 2020 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 **8** printed pages.

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 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.
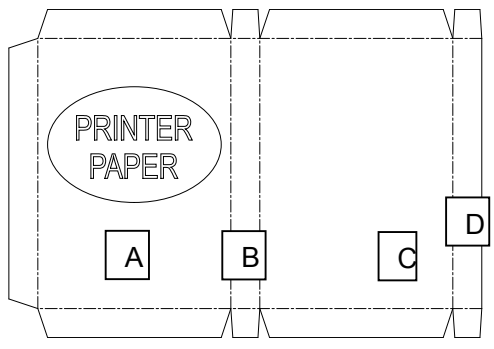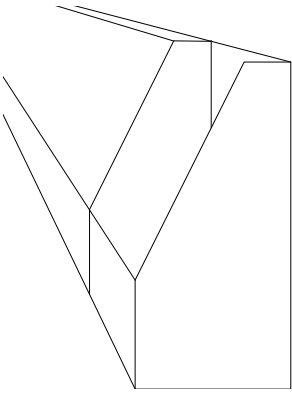

GENERIC MARKING PRINCIPLE 5:

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).
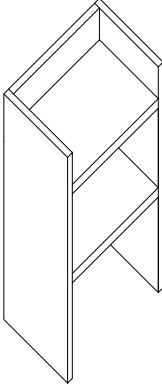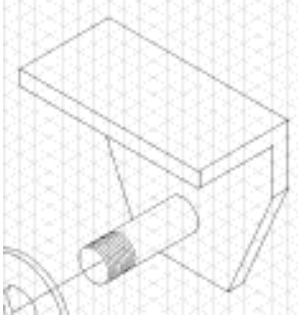

GENERIC MARKING PRINCIPLE 6:

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.
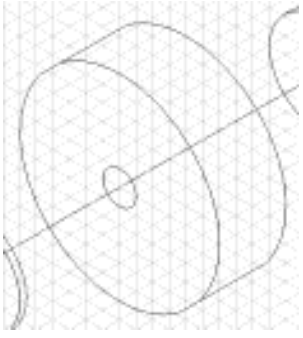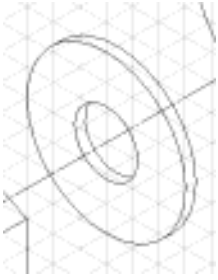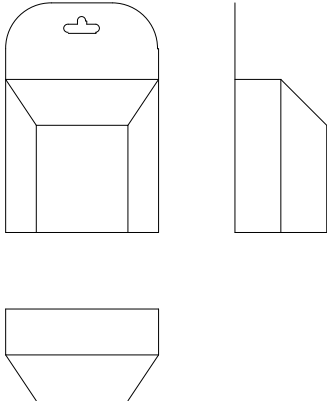

Section A

Question	Answer	Marks
A1(a)	 Front face 'A' 140 × 100 (1) Side face 'B' 15 Wide (1) Back face 'C'100 Wide (1) Side face 'D' 15 Wide (1) Top flap on side 'A' (1) Top and Bottom flaps on side 'B' (1) Top and Bottom flaps on side 'C' (1) Top and Bottom flaps on side 'D' (1) Correct use of dotted/dashed fold lines (1)	9
A1(b)	Major axis 90 mm (1) Minor axis 60 mm (1) Some construction (1) Axis +four or less points plotted (1) Six or more points plotted (1) Ellipse profile correct to overlay (1)	6
A1(c)	'E' in proportion (1) 'P' in proportion (1)	2

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Question	Answer	Marks
A2	Front vertical face completed (1) Top left corner to VP (1) Top right corner to VP (1) Back diagonal edge parallel (1) Back top horizontal line (1) Vertical Inside corner line (1)	**6**

Question	Answer	Marks
A3	Advantages: Can print large numbers quickly/cheap cost per sheet (1) Good quality/sharp images (1)	**2**

Section B

Question	Answer	Marks
B4(a)	 Left side face 'A' 71×40 mm ± 3 (1) 3 mm thickness 'B' to front edge (1) Top shelf 'C' 100 down (1) 3 mm thickness to top shelf (1) Second shelf in correct position 250 down (1) 3 mm thickness to second shelf (1) Right side face 'D' visible (1) 3 mm thickness to side D (1)	8
B4(b)(i)	 Left side edge 'A' 4 sq high – (55) (1) Top face 12 sq $\times$ 6 sq (60×30) (1) Front edge of top face 12 sq $\times$ 1 sq (1) Horiz and vertical thickness lines (1) Diagonal line 'B' in correct position (1)	5

Question	Answer	Marks
B4(b)(ii)	 Front face on CL (1) Face dia 60 mm (12sq × 12sq) (1) Back edge 4 sq (20) wide (1) Back edge parallel to front edge (1) Two straight side edges (1)	**5**
B4(b)(iii)	 Front face on CL (1) Dia 30 mm (6 sq × 6 sq) dia. (1) Outer back edge 0.5 sq wide (1) Drawn parallel to front edge (1) Inner hole – back edge 0.5 sq wide (1)	**5**
B4(c)	Left and right edges dark getting gradually lighter towards centre (1) Shading parallel to edges and within border (1)	**2**

Question	Answer	Marks
B5(a)	 **Plan:** Rectangle 50 × 15 (1) Front face 15 mm from rectangle and projected from front view (1) Two diagonal lines (1) **Front View:** Outer edge of front view 75 × 50 (1) 15mm Radius to corner (1) Front section 35 × 30 (1) In centre (1) Horizontal edge on back board 25 mm below top edge (1) Two diagonal lines linking corners (1) **Side View:** Base line 30 mm and backboard to cand soln (1) Rectangular face 15 wide with horizontal top edge in line with front view/cand soln (1) Vertical front edge in line with front view (1) Diagonal line of front edge to cand soln (1)	**13**
B5(b)	Alternative method shown (1) Method locks flap in place (1) Method securely locks flap in place (1) High quality sketches and notes (1)	**4**
B5(c)(i)	Symbol A – Item can be recycled/Please recycle this item – any reference to recycling (1) Symbol B – Hazardous/dangerous to the environment – any reference to danger and environment , Toxic to environment (1)	**2**
B5(c)(ii)	Quicker because items can be copied/pasted, etc. More accurate because CAD can draw to 0.001 mm accuracy Safer/will last longer because can be saved on disc Easier to share because can be sent via email, etc. Or any other valid answer – Advantage (1) Reason (1)	**2**

Question	Answer		Marks
B5(d)	Pencil, ruler, square,	(1)	4
	Scissors, craft knife, scalpel, stanley knife, cutting mat, safety rule	(1)	
	Ruler, back of knife blade, scissor blade	(1)	
	PVA Glue, Adhesive, double sided tape , glue spreader	(1)	