Cambridge IGCSE™

DESIGN AND TECHNOLOGY	**0445/53**
Paper 5 Graphic Products	**May/June 2020**
MARK SCHEME	
Maximum Mark: 50	

Published

Students did not sit exam papers in the June 2020 series due to the Covid-19 global pandemic.

This mark scheme is published to support teachers and students and should be read together with the question paper. It shows the requirements of the exam. The answer column of the mark scheme shows the proposed basis on which Examiners would award marks for this exam. Where appropriate, this column also provides the most likely acceptable alternative responses expected from students. Examiners usually review the mark scheme after they have seen student responses and update the mark scheme if appropriate. In the June series, Examiners were unable to consider the acceptability of alternative responses, as there were no student responses to consider.

Mark schemes should usually be read together with the Principal Examiner Report for Teachers. However, because students did not sit exam papers, there is no Principal Examiner Report for Teachers for the June 2020 series.

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

Cambridge International is publishing the mark schemes for the June 2020 series for most Cambridge IGCSE™ and Cambridge International A & AS Level components, and some Cambridge O Level components.

This document consists of **6** 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.

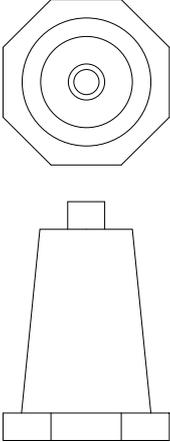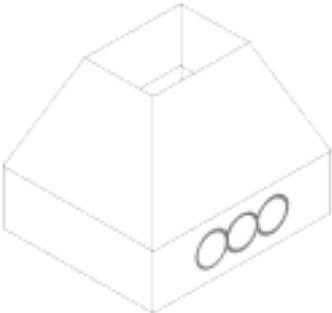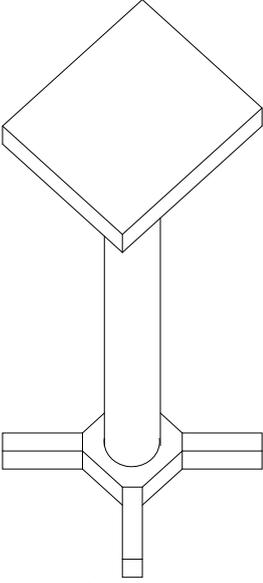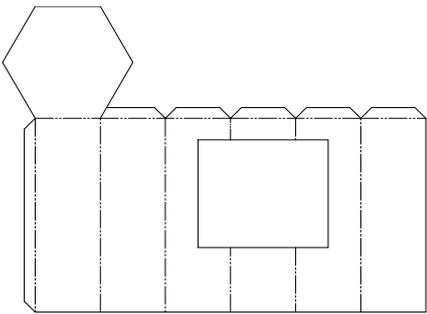| GENERIC MARKING PRINCIPLE 1: |
| --- |
| Marks must be awarded in line with: the specific content of the mark scheme or the generic level descriptors for the question the specific skills defined in the mark scheme or in the generic level descriptors for the question the standard of response required 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 View: Rectangular outline of base 90 × 15 (1) Top face of cone 50 mm and in centre (1) Base of cone 70 mm wide and in centre (1) Two sloping lines from top to bottom of cone (1) Two vertical edges of octagon added to base correct to plan view (1)	**5**
A1(b)	Plan: Outside square 90 × 90 constructed (1) central to centre circles (1) Four quarter-circles (one from each corner) intersecting in centre (1) Four 45° lines from arc and square intersections forming octagon (1) Top circle of cone R50 in centre (1) Bottom circle of cone R70 in centre (1)	**6**
A2	 Right side bottom edge 130 mm long (1) × 40 mm high (1) Left side bottom edge 110 mm long (1) × 40 mm high (1) Top right side edge 70 mm in correct position (1) Top left side edge 50 mm in correct position (1) Two back edges to make top rectangle (1) Diagonal to left side (1) Diagonal to right side (1) Inner corner detail (1) Inner horizontal edge detail (1)	**11**

Question	Answer	Marks
A3(i)	The colour changes (1) when temperature goes up or down / changes (1)	**2**
A3(ii)	Use a more decorative design / apply varnish / foil / emboss the design Or any other suitable method (1)	**1**

Section B

Question	Answer	Marks
B4(a)	Left edge of table surface added (1) 7 mm below top (1) Right edge of table surface added (1) 7 mm below top (1) Central leg circle in middle of top (1) ø20 (1) Bottom circle of leg ø20 added (1) 97 mm below top face (1) Base level with bottom of leg 30 mm square (1) Three corners angled at 45% (1) 5 mm × 5 mm (1) Outer rectangle for leg ends 70 × 70 (1) Three legs drawn at correct position and width of corner angles (1) Depth 8 mm added to base (1) Depth added to legs (1)	15
B4(b)(i)	Shading to the outer edge in suitable colour (1) Grain lines shown (1) Grain lines follow length of the 4 frame sections (1) End grain shown on two front ends (1)	4
B4(b)(ii)	Shading makes panel look like glass (1) Bottom corners of glass panel / frame shown (1)	2
B4(c)	Choose size of table (1) Choose wood type (1) Diamond shape (1) Make payment (1)	4

Question	Answer	Marks
B5(a)	 Six sides 90 × 30 (6) Hexagon lid (can be above any of the rectangles) : Two arcs scribed to find centre (1) Circle R30 drawn (1) Six arcs scribed (1) Hexagon correct (1) Cut out 60 wide (1) × 50 high (1) Five flaps added to tops of each rectangle or each edge of hexagon (1) Fold lines shown in correct positions (1)	14
B5(b)(i)	Any two from: Font style changed (1) to a more attractive font (1) Font colour changed (1) to a brighter / different colour (1) Font size changed (1) to make letters easier to read / stand out (1) Text effect added (1) such as glow, shadow, highlight (1) Underline / italics or any other valid text effect (1) with description of alteration (1)	4
B5(b)(ii)	Flexography, gravure, Lithography, offset lithography	1
B5(c)(i)	Styrofoam Foamboard Corrugated card Polystyrene sheet / High impact polystyrene sheet (HIPS) ABS (Acrylonitrile-Butadiene-Styrene) Polyester PETG (Polyethleneterephtalate Glycol)	1
B5(c)(ii)	Method named (1) Description of method (1)	2
B5(d)	Method shown (1) Method holds the inner section and sleeve together without adhesive (1) Method shown will work and can be opened / closed easily (1)	3