



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

DESIGN AND TECHNOLOGY

0445/21

Paper 2 Graphic Products

May/June 2017

MARK SCHEME

Maximum Mark: 50

Published

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This document consists of **5** printed pages.

Section A

Question	Answer	Marks
A1(a)	Side view Right side completed [1] Right side correct (including hidden detail) [1] Plan Outer circle drawn [1] Outer circle correct [1] Two inner circles drawn [1] Both inner circles the correct [1] At least one inner circle drawn with a dashed line [1]	7

Question	Answer	Marks
A2(a)(i)	Vacuum forming / Blow moulding [1] Accept injection moulding	1
A2(a)(ii)	45 degree line drawn [1] Straw drawn [1] Straw the same width as the given bottom part [1] End of straw drawn with break convention [1]	4
A2(c)	The cup is wider at the top than the bottom so the sides of the cup are sloping [1] as result of moulding. Does not slip through a person's hand [1]	2

Question	Answer	Marks
A3(a)	Any Hexagon drawn [1] Hexagon correct [1] Thickness of hexagon shown [1] Thickness of hexagon correct (13/14) [1] At least one circle drawn [1] Two circles correct [1] Thickness of at least one circle correctly shown [1]	7
A3(b)	Sketches [1] and notes/labels [1] clearly show a method of attaching the face to the cup. For example: <i>A clip around the parallel part of the cup</i> <i>Glue / PVA</i> <i>A rubber band</i> <i>Velcro</i> Do not accept answers that pierce the cup.	2
A3(c)	Acceptable answers include: <i>Will appeal [1] to young children [1]</i> <i>Adds interest</i> <i>Looks nicer</i> <i>Can be used for advertising</i>	2 [1 × 2]
	Total:	25

Section B

Question	Answer	Marks
B4(a)(i)	Surface above the given surface Rectangle correct [1] Surface below the given surface Any side completed [1] Width correct [1] Lower Face Outer rectangle completed [1] Rectangle correct (length and width) [1] Any curved corner [1] Curved corner in the correct position (top right) [1] Curved corner to candidate solution [1] 2 × Fold lines correct [1]	9
B4(a)(ii)	Missing glue tab added in the correct position (top) [1] Angled ends of glue tab correct [1]	2
B4(a)(iii)	SH and RU added in any style [1] Consistent height for all letters [1] Consistent spacing for all letters [1]	3
B4(b)	Key stages include: <u>Die cutting Process</u> Blade (shape or cutter) Pressure Cut lines Fold lines Removal of waste material Fully detailed description including most of the key stages [5 or 6] A description including some of the key stages [3 or 4] Limited details including one or two key stages [1 or 2]	6
B4(c)	Sketch shows the apple shape raised or pressed in [1] Notes/label states the shape is raised or pushed in [1]	2
B4(d)	Understanding that the symbol shows it can be recycled [1] Number identifies specific plastic (polystyrene) [1] Enables sorting during recycling [1]	3
	Total:	25

Question	Answer	Marks
B5(a)	A. Front left vertical completed [1] B. Front top added by drawing to VP1 [1] C. Bottom corner of window completed [1] D. Front surface and window lined in correctly [1] E. End right vertical extended [1] F. End triangle added [1] G. Centre of triangle in perspective [1] H. End and triangle lined in correctly [1] I. Right closure upright added [1] J. Closure upright projected to VP1 [1] K. Left closure upright added [1] Circular hole added [1] Circular hole in perspective (ellipse) [1] Some inner detail added [1] Inner detail correct to candidate solution [1] High quality drawing correctly lined in [1]	16
B5(b)(i)	Acceptable answers include: Acetate, cellophane or polypropylene, Polystyrene, PET, HIPS	1
B5(b)(ii)	Tick (✓) to show the award of marks Making Sketch shows marking out and cutting out the shape [1] Tool for cutting (such as scissors) [1] Attaching Sketch shows the plastic sheet is larger than the opening in the package [1] Method of joining the window to the package named (for example, double sided tape or glue) [1]	4
B5(c)(i)	Acceptable answers include: Bar code Product name Recycle after use Made from recycled paper Does not contain nuts Estimated weight [1 × 2]	2
B5(c)(ii)	The hole is cut in the package so it can hang [1] on a rack [1] or handle [1] for lifting [1]	2
	Total:	25