**CAMBRIDGE INTERNATIONAL EXAMINATIONS** International General Certificate of Secondary Education

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## 0445 DESIGN AND TECHNOLOGY

0445/22

Paper 2 (Graphic Products), maximum raw mark 50

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 will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2012 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

<ul> <li>(c) Semi-circle to fit (1) [1]</li> <li>(Total: 9]</li> <li>(a) Accuracy and proportion of A (1) U (1) Spacing (1) Height (1) [2]</li> <li>(b) Border evident (1) [2]</li> <li>(c) Border evident (1) [2]</li></ul>	Pag	age 2	Mark Scheme	Syllabus
<ul> <li>(b) Cup Top (1) Bottom (1) Side (1)</li> <li>(c) Semi-circle to fit (1)</li> <li>(c) Semi-circle to fit (1)</li> <li>(for the second second</li></ul>			IGCSE – October/November 2012	0445 730
Top (1) Bottom (1) Side (1) [3] (c) Semi-circle to fit (1) [7] (Total: 9] (c) Semi-circle to fit (1) [7] (Total: 9] (Total: 9] (c) Semi-circle not and proportion of A (1) U (1) Spacing (1) Height (1) [4] (b) Border evident (1) Symmetrical (1) [4] (b) Border evident (1) Symmetrical (1) [4] (Total: 6] (b) Width of Burger 54 (1)1 Semi-circle plots evident (1) Semi-circle plots evident (1) Semi-circle drawn to O/L (1)	1 (a)	Length of 45° line (1 Part octag Regular p	one side (1) 1) gon shape (any size) (1) part octagon (1)	ambrid [5]
<ul> <li>[Total: 9</li> <li>2 (a) Accuracy and proportion of <ul> <li>A (1)</li> <li>U (1)</li> <li>Spacing (1)</li> <li>Height (1)</li> </ul> </li> <li>(b) Border evident (1)</li> <li>Symmetrical (1)</li> <li>[Total: 6</li> </ul> <li>3 (a) Hexagon drawn pictorially (1) <ul> <li>Hexagon is isometric to O/L (1)</li> <li>Depth of hexagon box correct to O/L (1)</li> </ul> </li> <li>(b) Width of Burger 54 (1)1 <ul> <li>Semi-circle plots evident (1)</li> <li>Semi-circle plots evident (1)</li> <li>Semi-circle drawn to O/L (1)</li> </ul> </li>	(b)	Top (1) Bottom (1	)	[3]
<ul> <li>[Total: 9</li> <li>2 (a) Accuracy and proportion of <ul> <li>A (1)</li> <li>U (1)</li> <li>Spacing (1)</li> <li>Height (1)</li> </ul> </li> <li>(b) Border evident (1)</li> <li>Symmetrical (1)</li> <li>[Total: 6</li> </ul> <li>3 (a) Hexagon drawn pictorially (1) <ul> <li>Hexagon is isometric to O/L (1)</li> <li>Depth of hexagon box correct to O/L (1)</li> </ul> </li> <li>(b) Width of Burger 54 (1)1 <ul> <li>Semi-circle plots evident (1)</li> <li>Semi-circle plots evident (1)</li> <li>Semi-circle drawn to O/L (1)</li> </ul> </li>	(c)	Semi-circl	le to fit (1)	[1]
<ul> <li>A (1)</li> <li>U (1)</li> <li>Spacing (1)</li> <li>Height (1)</li> <li>(2)</li> <li>(b) Border evident (1)</li> <li>Symmetrical (1)</li> <li>(2)</li> <li>(1)</li> <li>(2)</li> <li>(2)</li> <li>(1)</li> <li>(2)</li> <li>(1)</li> <li>(1)</li> <li>(2)</li> <li>(2)</li> <li>(2)</li> <li>(2)</li> <li>(3)</li> <li>(3)</li> <li>(4) Hexagon drawn pictorially (1)</li> <li>Hexagon is isometric to O/L (1)</li> <li>(1)</li> <li>(2)</li> <li>(2)</li> <li>(3)</li> <li>(4) Hexagon drawn pictorially (1)</li> <li>Hexagon is isometric to O/L (1)</li> <li>(5) Width of Burger 54 (1)1</li> <li>Semi-circle plots evident (1)</li> <li>Semi-circle drawn to O/L (1)</li> </ul>				[Total: 9]
<ul> <li>(b) Border evident (1) Symmetrical (1)</li> <li>[7 total: 6</li> <li>(a) Hexagon drawn pictorially (1) Hexagon is isometric to O/L (1) Depth of hexagon box correct to O/L (1)</li> <li>(b) Width of Burger 54 (1)1 Semi-circle plots evident (1) Semi-circle drawn to O/L (1)</li> </ul>	2 (a)	A (1) U (1) Spacing (	1)	[4]
<ul> <li>Symmetrical (1)</li> <li>[2]</li> <li>[7] [7] [7]</li> <li>[7] [7] [7]</li> <li>[7] [7] [7] [7]</li> <li>[8] [7] [7] [7]</li> <li>[9] [7] [7] [7] [7]</li> <li>[9] [7] [7] [7] [7] [7]</li> <li>[9] [7] [7] [7] [7] [7] [7]</li> <li>[9] [7] [7] [7] [7] [7] [7] [7] [7] [7] [7</li></ul>		Height (1)	)	[4]
<ul> <li>A3 (a) Hexagon drawn pictorially (1) Hexagon is isometric to O/L (1) Depth of hexagon box correct to O/L (1)</li> <li>(b) Width of Burger 54 (1)1 Semi-circle plots evident (1) Semi-circle drawn to O/L (1)</li> </ul>	(b)			[2]
<ul> <li>Hexagon is isometric to O/L (1) Depth of hexagon box correct to O/L (1)</li> <li>(b) Width of Burger 54 (1)1 Semi-circle plots evident (1) Semi-circle drawn to O/L (1)</li> </ul>				[Total: 6]
Semi-circle plots evident (1) Semi-circle drawn to O/L (1)	3 (a)	Hexagon	is isometric to O/L (1)	[3]
	(b)	Semi-circl Semi-circl Burger filli	le plots evident (1) le drawn to O/L (1) ing 8 thick (1)	[5]
(c) Slot on top face (1) slot 25 x 4 or greater (1) [2	(c)			[2]
				[Total: 10]

IGCSE – October/November 2012(a) F.E.Width 122 (61) (1)Height of container 80 (40) (1)Handle 110 (55) above container (1)Finger slot correct size 78 x 20 (39 x 10) (1)Two tapered sides $2 \times 1$ (2)Tenon of divider (1)(b) PlanExternal square 122 x 122 (61 x 61) (1)Four spaces evident (1)Four spaces 52 x 52 (26 x 26) (1)Card walls shown 3 mm thick (1)	Syllabus 0445 0445
Width 122 (61) (1) Height of container 80 (40) (1) Handle 110 (55) above container (1) Finger slot correct size 78 x 20 (39 x 10) (1) Two tapered sides 2 x 1 (2) Tenon of divider (1) (b) <i>Plan</i> External square 122 x 122 (61 x 61) (1) Four spaces evident (1) Four spaces 52 x 52 (26 x 26) (1)	Canopril [7
External square $122 \times 122 (61 \times 61) (1)$ Four spaces evident (1) Four spaces $52 \times 52 (26 \times 26) (1)$	
Hidden detail to show finger hole (1)	[{
<ul> <li>(c) E.E.</li> <li>Width 122 (61) (1)</li> <li>Height projected from F.E. (to cand soln) (1)</li> <li>Handle projected from F.E. (to cand soln) (1)</li> <li>Hidden detail to finger slot (1)</li> </ul>	[4
(d) Drink Bottle Two concentric circles evident (1) Ø26 circle in location <b>D</b> on plan (1) Ø10 circle in location <b>D</b> on plan (1) Ø26 – 100 mm (50) high on F.E. (1) angle Ø26 to Ø10 on F.E. (1) Ø10 to 75 high on F.E. (1) Candidate solution projected to E.E. (1) Hidden detail of bottle shape on F.E. (1) Hidden detail of bottle shape on E.E. (1)	[{

[Total: 25]

Page 4	Mark Scheme	Syllabus Syllabus
	IGCSE – October/November 2012	0445
<b>5 (a)</b> 5 main	nanels (1)	Syllabus 0445 3
	panel 100 wide (1)	16.
		1
	0 deep (1)	
Two fla	ps to base min 10 wide (2 x 1) (2)	[3]
Back 1	20 tall rectangle (1)	
	$g wings (2 \times 1) (2)$	
OUT ad	dded to R/H wing (1)	[4]
Ellinco	shape evident (1)	
	ixis 50 (25 to scale) (1)	
	evidence of construction (1)	
	construction shown (1)	
Profile	to candidate plots (1)	[5]
Two sid	des 40 x 70 (2 x 1) (2)	
	ps added to 70 long (2 x 1) (2)	
4 x mai	n fold lines correctly shown (4 x 1) (4)	[8]
<i></i>		
(b) Tab ev		
	ident (1) g possible? (1)	[3]
LOOKIN		[5]
		[Total: 25]