

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

**MARK SCHEME for the October/November 2010 question paper
for the guidance of teachers**

0445 DESIGN AND TECHNOLOGY

0445/23

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.

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A1	Centre circle to size \varnothing 40	(1)	
	Outside hex any size	(1)	
	Outside hex correct size 50 side	(1)	
	Diagonals evident	(1)	
	6 petals	(1)	
	6 petals to correct size of O/L	(1)	
	Stem	(1)	
	Leaf : R35 quadrant	(1)	
	Chord	(1)	[9]
			[Total: 9]
A2	Complete rectangle to size 160 long	(1)	
	Accuracy and proportion of:		
	E	(1)	
	R	(1)	
	S	(1)	
	Spacing	(1)	
	Height	(1)	[6]
			[Total: 6]
A3 (a)	Curved top	(1)	
	Two arcs (similar size to given)	(1)	
	Two arcs symmetrical & constructed	(1)	[3]
(b)	Plan +/- 1 mm		
	Base correct – 80 square	(1)	
	Neck – 40 square hidden detail	(1)	
	3 squares concentric	(1)	
	Petal top – 58 square	(1)	[4]
	Side view		
	Length of long side 80	(1)	
	Length of petal 20	(1)	
	Overall height 93 +/-2	(1)	[3]
			[Total: 10]
B4 (a)	<i>Plan and F. E</i>		
	Plan length 92.5	(1)	
	Plan width 92.5	(1)	
	Thickness top 2mm	(1)	
	Thickness sides 2mm	(1)	
	Thickness bottom 2mm	(1)	[5]

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- (b) *Centre positions of 4 holes*
 2 verticals – correct spaces (4)
 2 horizontals – correct spaces (4)
- Plant pot in position on plan*
 A circle representing top of plant pot (1)
 Ø70 to scale (1)
- A circle representing bottom of plant pot (1)
 Ø46 circle (Ø50 – thickness) to scale (1)
- Correct position on plan (1) [13]
- (c) *Plant pot in position on front elevation*
 Ø70 projected (1)
 Ø50 projected (1)
 Height 50 from top base to p/ll top (1) [3]
- (d) *The correct size hole needed in top*
 Size Ø33 +/- 2mm (Ø66 to scale) (1)
 In one of 3 spare positions (1)
 Evidence of projection 0–2 pr (2) [4]

[Total: 25]

- B5 (a) *Pie chart***
 Circle drawn (1)
 Divided into 5 (1)
 Correct divisions
 750/900/450/1200/300
 75° / 90° / 45° / 120° / 30° (max4) (4)
 2 largest sectors – clear labels (2) [8]
- (b) *Two dimensional chart*
 Appropriate method (e.g. bar) (1)
 Suitable scale selected (1)
 Information correctly plotted ×5 (5)
 Labels evident (1)
 Colour enhancement (1) [9]
- (c) *2009 figures for annual report*
 Symbol to match garden plants pr 1–2 (2)
 Symbol to match cut flowers pr 1–2 (2)
 Garden plants larger than cut flowers (1)
 Garden plants approx 2.5 × larger than cut flowers (1)
 Labels evident (1)
 Colour enhancement (1) [8]

[Total: 25]