

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
International General Certificate of Secondary Education

**MARK SCHEME for the May/June 2011 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 (a)** Any right-angled triangle (1)  
80 × 80 – 20 from deck (1) [2]
- (b)** Any quadrant (1)  
R40 (1)  
Two missing lines from hull (1+1) [4]
- (c)** Any hexagon (1)  
Regular hexagon 90 A/C (1)  
Centre 48 from mast (1) [3]
- [Total: 9]**
- A2 (a)** Missing lines (1) [1]
- (b)** Accuracy and proportion of:  
**R** (2)  
**T** (1)  
Spacing (1)  
Height (1) [5]
- [Total: 6]**
- A3 (a)** 80 × 80 square base (1)  
Height of base 60 (1)  
20 SQ hole (1)  
Square hole central to side (1)  
Ø80 cylinder top (1)  
90 high cylinder (or crate) (1)  
Ø80 touching sides of base (1) [7]
- (b)** Tone applied (1)  
Tone shown different on min 2 faces (2) [3]
- [Total: 10]**
- B4 (a)** *Development*  
Six connected surfaces (1)  
5 extra surfaces to O/L tolerance +/- 3mm on 73 slope to lid allow for error c/f (5)  
three further glue tabs  
(on 70 long sides) 3 × 1 (3)  
glue tabs 9 wide (1)  
glue tabs angled ends (1)
- 3 fold in flaps with radius ends (3)  
Fold lines (4 × 1) (4)  
Coin slot size 30 × 5 (1)  
Coin slot centrally on lid (1)  
Coin slot correct orientation (1) [21]

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- (b) Sketch: – suitable method  
Slot on lid etc (1)  
Extra tab etc (1)

Notes:  
Evident (1)  
Good (1)

[4]

**[Total: 25]**

**B5 (a) Full size view**

- Outer rectangle 240 length + 120 width (1)  
Mast correct 10 wide (1)  
Mast correct position 140 from RHS (1)  
Mast protruding (1)

Burgee:  
80 tall (1)  
40 × 80 rectangle to R of mast (1)  
20 × 80 rectangle to L of mast (1)  
semi-circle R40 on centre line (1)  
2 fold lines shown (2 × 1) (2)  
Two 'wings' 20 long (2 × 1) (2)

Semi-ellipse  
Major axis 120 (60 shown) (1)  
Minor axis 60 (1)  
On centre lines given (1)  
Construction Pr 0–2 (2)  
Accurate outline to construction (1)

[18]

**(b) Plan view**

- Bends at correct position (2 × 1) (2)  
Sides 70 & 100 shown. (1)

[3]

**(c) Joining**

- Additional card + joint Pr 0–2 (2)  
Notes Pr 0–2 (2)

[4]

**[Total: 25]**