

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

MARK SCHEME for the May/June 2010 question paper
for the guidance of teachers

0445 DESIGN AND TECHNOLOGY

0445/21

Paper 21 (Graphic Products), maximum raw mark 50

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Page 2	Mark Scheme: Teachers' version	Syllabus	Paper
	IGCSE – May/June 2010	0445	21

- A1** Rectangular body 50 × 80 (2)
 Radius to top corners (1)
 R10 radius (1)
 Square column 20 side (1)
 Hexagonal top [any size/irregular] (1)
 Hexagonal top 30 side regular (1)
 Second pump handle (1)
 2 triangles 45° × 90° (1) [9]

[Total: 9]

- A2** Accuracy and proportion of:

- T** (1)
I (1)
O (1)
N (1)
 Spacing (1)
 Height (1) [6]

[Total: 6]

- A3 (a)** Development [net]

- 4 sides (1)
 88 × 54 rectangle (1)
 2 semi-circles R27 (2)
 2 semi-circles R44 (2) [6]

- (b)** Plan

- Correct end folded next (1)
 Top folded down last (1)
 Slot determined (1)
 Straight line slot drawn to size (1) [4]

[Total: 10]

- B4 (a)** Division by construction [evident] (2)

- Verticals 93/94 spacing (1) [3]

- (b)** 75 × 70 rectangle (2)

- Ø20 for head and body (2)
 Body correct height 35 (1)
 Ø8 on hand [1] correct position [1] (2 × 1)
 Shoulder position (1)
 Arm [two parts at an angle] (2)
 Pump same height as man (1)
 Hexagon top to pump (2)
 Pump handle (1)
 Pump handle aligned with hand (1) [15]

Page 3	Mark Scheme: Teachers' version	Syllabus	Paper
	IGCSE – May/June 2010	0445	21

(c) (i) Suitable chart/graph type 0–2 (2)
Data represented accurately 0–2 (2) [4]

(ii) Suitable chart/graph type 0–2 (2)
Data represented correctly (1) [3]

[Total: 25]

B5 (a) (i) Front View

Length of stand 150 (1)
Height of stand 20 (1)
Top of stand to C Line of Ellipse 32 +/-2 (1)
Major axis correct size 40 (1)
Minor axis correct size 24 (half12) (1)
Construction for ellipse (0–2pr) (2)
Curve line quality (0–2pr) (2)
Car body 24 high +/-2 (1)
Rear tail in line with end of stand (1)
Tail fin R30 (1)
R 20 to horizontal evident (1) [13]

(ii) Plan

In projection from *Front View* (1)
Width of stand 60 (1)
Thickness of foamboard 2mm (1)
Wing 20 wide each side (1)
Wing 70 from nose (1)
2 Wings 30 long (1+1) (2) [7]

(b) Symbol

Symbol matching projection (1)
Quality drawing (1) [2]

(c) Joint at A

Slot (1)
Shouldered tab (0–2 pr) (2) [3]

[Total: 25]