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

0445/22   Paper 22 (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 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]

(c) **(i)** Suitable chart/graph type 0–2 (2)
Data represented accurately 0–2 (2)

(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]