MARK SCHEME for the October/November 2013 series

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.

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Cambridge is publishing the mark schemes for the October/November 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

A1 (a) *Back and shoulder*
Line at 60º (1)
R10 shoulder to touch (1) [2]

(b) *Arm*
upper arm 12 wide from shoulder (1)
lower arm 12 wide with semi circle (1)
R6 elbow on Centre line (1) [3]

(c) *Oven casing*
Hexagon shape (1)
Hexagon regular and 30 side (1) [2]

(d) *Oven*
semi-circle shown (1)
semi-circle R 26 on centre line (1) [2]

[Total 9]

A2 (a) *Lettering*
Accuracy and proportion of:
S (1)
A (1)
Spacing (1)
Height (1) [4]

(b) *Signboard outline*
Border evident (1)
Repeat radius to give Symmetry (1) [2]

[Total 6]

A3 80 square base (1)
60 high back (1)
Lid added vertically (1)
Tapers correct at 20 × 20 (1)
Insert shown (1)
Insert shown 30 high (1)
Circle in insert evident (1)
Circle shown Ø50 in isometric (1)
Construction for circle evident (1)
Inner of box evident through hole (1) [10]

[Total 10]

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B4 (a) *Development*
7 connected sides (1)
6 extra sides shown to O/L PR (6)
2 sides with sloping edge (1)
Sides have slopes in correct orientation (1)
2 × fold-out flaps at 90º to slope (1)
Fold-out flaps 15 wide with radius ends (1)
Lid length 85 ± 2 (1)
20 deep front (1)
50 deep back (1)
Lid flap 20 deep (1) **[15]**

(b) *Arrow-tabs and slots*
Arrow-tab drawn correctly (3)
Slot size to match (1)
Min 4 arrow-tabs shown 4 × 1 (4) **[8]**

(c) Halving slots/tabs or similar 0–2 PR (2) **[2]**

[Total 25]

B5 (a) *Pie chart*
Circle (1)
6 divisions (1)
2 × correct 1 mark
3 × correct 2 marks
4/5 correct 3 marks (3)
Labels on correct segment (1)
Quantity correct (1) **[7]**

(b) (i) *Bar chart*
Three seasons correctly referenced (1)
Rise and fall chart (spring to autumn) (1)
To approximate scale (1) **[3]**

(b) (ii) *Three dimensional bar chart*
3D (1)

Spring
Three blocks 3D PR (3)
Correct value to scale PR (3)
Labels added and correct to value (1)

Summer
Three blocks 3D PR (3)
Correct value to scale PR (3)
Labels added and correct to value (1) **[15]**

[Total 25]