

**CAMBRIDGE INTERNATIONAL EXAMINATIONS**  
International General Certificate of Secondary Education

**MARK SCHEME for the May/June 2014 series**

**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.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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## Section A

- A1 (a) Cab outline (octagon)**  
 Rectangle  $90 \times 45$  (1)  
 On centre line (1)  
 Half diagonal arcs from corners (1)  
 Sides to arcs (1) [4]
- (b) Semi circle**  
 $\varnothing 50$  on correct centre (1) [1]
- (c) Train boiler**  
 horizontal chimney to cab (1)  
 vertical boiler to cab (1) [2]
- (d) Chimney**  
 15 wide (1)  
 Top level with cab (octagon) (1) [2]
- (e) Missing wheel**  
 $\varnothing 30$  (1)  
 Correct position/alignment (1) [2]
- [Total: 11]
- A2 lettering**  
 Accuracy and proportion of:  
**T** (1)  
**R** (1)  
 Spacing (1)  
 Height (1) [4]
- [Total: 4]
- A3 Perspective view (award marks for isometric)**  
 Length to right approx. 140 (1)  
 Length to left approx. 100 (1)  
 Door 40 wide (1)  
 60 high (1)  
 Central on LHS (1)  
 Window 40 wide (1)  
 35 High (1)  
 Central on RHS (1)  
 Min two lines to VP1 (1)  
 Min two lines to VP2 (1) [10]
- [Total: 10]

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## Section B

**B4 (a) Vacuum formed tray**

- Tray shown in isometric (1)
- Tray width 80/82 (1)
- Tray length 160/164 (1)
- Tessellated shape for indent to size (2)
- Tessellated shape 60° ends (2 × 1) (2)
- Indent depth evident (1)
- Indent shape depth 10 (1)

[9]

**(b) Development**

- Two large sides evident (2 × 1) (2)
- Two large sides 80 × 42 (2 × 1) (2)
- Two small sides evident (2 × 1) (2)
- Two small sides 80 × 26 (2 × 1) (2)
- One end evident (1)
- One end 42 × 26 (2 × 1) (2)
- One long glue flap (on 80 side) (1)
- Three glue flaps for end (3 × 1) (3)
- One finger cut-out (1)

[16]

[Total: 25]

**B5 (a) End Elevation**

- Height 100 (1)
- Width 80 (1)
- Three faces evident (1)
- Central face 40 (1)
- Two side face shown 20 (1)
- Height of display surface 30 (1)
- Support flaps shown (1)
- Support flaps correct shape (1)

[8]

**(b) Development**

- Six sides all same width as given (6)
- Two high rectangles next to join (1)
- 3 / 4 from join 80 high side (1)
- Two angled sides evident (2 × 1) (2)
- Angles line 40 high to 100 (1)
- One glue flap on join (correct position) (1)

[12]

**(c) Display surface**

- Hexagon drawn (1)
- Regular hexagon drawn 40 side (1)
- Supporting flaps drawn (1)
- Six regular flaps shown (1)
- Six flaps 30 deep (1)

[5]

[Total: 25]