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Cambridge International General Certificate of Secondary Education

DESIGN AND TECHNOLOGY **0445/23**

Paper 2 Graphic Products **October/November 2016**

MARK SCHEME

Maximum Mark: 50

Published

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A1 (a) FRAGILE

Outer box completed in isometric and in good proportion [1]
Word FRAGILE added (any size or style) [1]
Word FRAGILE added in isometric and in good proportion [1]

Arrow

Arrow added to correct surface [1]
Isometric arrow added in the same style as shown on the front view (not a single line arrow) [1]
Isometric arrow to overlay [1]

[6]

(b) Front

Horizontal line added [1]
Vertical line added [1]

End

Outer box completed to overlay [1]
Sloping line added (lower line matches front and higher point in approximate position) [1]

[4]

A2 (a) Acceptable reasons include:
Resists moisture [1]
Easy to apply [1]
Does not require glue to fix to the box [1]
Smooth flat surface for printing on [1]
Available in a range of colours [1]

[2]

(b) Some understanding that an inner liner is required or the top and bottom of the box need to be different sizes [1]

Sketched and notes/labels clearly communicate the design for a lift off lid [1] Liner has 2 sides correct length or 4 sides

[2]

A3 (a) (i) Planometric drawing of 'X' pieces completed (any size and thickness) [1] - T shape [0]
Width and height of the surfaces match the given surface [1]
Thickness shown [1]
Corrugations added to the top edges [1]

[4]

(ii) Two slots drawn on the centre line [1]
*Both slots of a consistent width [1]
*Both slots half the height of the material [1]

*Slots can be on the top or bottom surface but not sides

[3]

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(b) Three bars of a consistent width drawn [1]
Accurate scale plotted on the vertical axis [1]
Labels on the horizontal axis [1]
Data correctly plotted to scale shown [1]

[4]

[Total: 25]

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Section B

B4 (a) Base

1 Top line of right side of base extended (to VP1) [1]
2 Top line of left side of base drawn from VP1 [1]
3 Vertical corner of base completed [1]
4 Right side top edge of base added [1]
5 Left side back edge of base added [1]

Upright

6 Bottom edge drawn from VP1 [1]
7 Top edge of upright drawn from VP1 [1]
8 Left upright added to candidate solution [1]

Shelf

9 Top front edge completed to VP1 [1]
Bottom front edge completed (to VP1) [1]
10 Underside back edge drawn [1]
Underside back edge drawn to VP1[1]
11 Vertical end to shelf [1]
12 Underside drawn to VP2 [1]

Drawing correctly lined I [1]

[15]

(b) (i) Three layers shown [1]
Top and bottom layers labelled as card or paper [1]
Middle layer labelled as foam (or polystyrene) [1]

[3]

(ii) Acceptable answers include:
Easy to cut [1]
Lightweight [1]
Smooth flat surface for printing on [1]
Rigid [1]
Available in a range of colours [1]
Can be written on [1]

[2]

(c) (i) Stanley knife or craft knife or scalpel [1] – do not accept 'Knife'
Safety / steel rule or metal straight edge [1]

[2]

(ii) Notes and sketch show:
Understanding that a stencil is a sheet with letters cut out [1]
Stencil positioned against the foam board [1]
Pencil, pen or stippling brush, air brush, spray can used to apply the letters [1]

[3]

[Total: 25]

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B5 (a) Backing Card

Corner 1 of backing card (original) drawn to VP1 [1]
Corner 2 of backing card (original) drawn to VP [1]
Any top and bottom line of backing card drawn [1]
Top and bottom line of backing card drawn parallel [1]
Right hand upright of backing card shown vertical [1]

Blister

Any four lines of blister rectangle (back) completed [1]
Four lines of blister rectangle p// in pair 1 to rect back [1]
p// in pair 2 to rect back [1]
Any top rectangle drawn [1]
Top rectangle smaller than backing rectangle [1]
Four sloping lines 4×1 [4]

[14]

(b) Key stages in lithography include:
Original image [1]
Digital image [1]
Colour separation [1]
Plate preparation [1]
CYMK plates [1 × 4]
Registration [1]
Separate printing of each colour [1]

Any 5 from 7 for [5] marks

Sequence [1]
Quality of communication [1]

Tick (✓) to show each stage

[7]

(c) The flange is required so that the blister and card backing can be joined together [1] with glue, staple or double-sided tape [1]

[2]

(d) *Modification* allows the blister package to hang on a rack
Sketch [1]
Notes [1]

[2]

[Total: 25]

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