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**DESIGN AND TECHNOLOGY**

**0445/22**

Paper 2 Graphic Products

**October/November 2017**

MARK SCHEME

Maximum Mark: 50

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**Published**

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This document consists of **4** printed pages.

## Section A

Question	Answer	Marks
A1(a)(i)	Outline of the sheet of paper drawn [1] Outline correct to overlay (148 mm × 105 mm) [1]	2
A1(a)(ii)	Two fold lines added [1] Fold lines correct to overlay or candidate outline of paper [1] Fold lines shown by a recognised convention (label or type of line) [1]	3
A1(a)(iii)	Some thick and thin lines added to the drawing of the table [1] Thick and thin line technique correctly added to the drawing of the table [1]	2
A1(b)	Sketch shows the table raised or indented [1] Notes indicate the drawing has been pushed up or pushed into the paper	2
A2(a)	<b>20 mm circle</b> Any ellipse added [1] Ellipse to correct size [1] Ellipse correct to overlay [1]  <b>50 mm × 30 mm text box</b> Rectangle correct to overlay (size and in isometric) [1]	4
A2(b)	Acceptable answers include: Size [1] Colour [1] Font [1] Typeface [1] Style – underlined, bold, italic... [1] [1] + [1]	Max 2
A3(a)	Top right vertical completed [1] Fold line completed to convention [1] Bottom half of closure correct to overlay [1] Any second slot added [1] Euroslot correct orientation [1] Euroslot correct to overlay [1]	6
A3(b)	Three dimensional bar chart drawn [1] Three bars labelled (small, medium and large) [1] Use of a scale clearly evident (vertical line) [1] Sales correctly plotted to the scale [1]	4

**Section B**

<b>Question</b>	<b>Answer</b>	<b>Marks</b>
B4(a)(i)	Any second ear added to RHS [1] Second ear correct to overlay [1] Vertical and horizontal lines added [1]	<b>3</b>
B4(a)(ii)	Left half of glue tab added to overlay [1] Fold line added [1]  Tail of the correct shape added in the given box [1] Tail touches bottom, left and top edges of given box [1]	<b>4</b>
B4(a)(iii)	Base the correct length [1] Vertical line the correct height [1] Diagonal line correct to candidate solution [1]	<b>3</b>
B4(b)	Development made from five connected surfaces [1] Back a rectangular shape [1] with two ears and a tail box [1] Rectangular base added to the bottom of the back [1] Rectangular front joined to the base [1]  Two triangle shaped surfaces added to the base or front [1] + [1] Two triangles in the correct orientation [1] Five glue tabs added to hold the box together [1] Fold lines labelled or shown using a standard convention [1]  * There are at least two different solutions to this development (net). 1 Folding out from the base (star shape). 2 Long strip with triangles folding out from the base or front (not the back).	<b>10</b>
B4(c)(i)	Shape [1] Memory [1] Alloy [1]	<b>3</b>
B4(c)(ii)	Acceptable answers include: Easy to bend [1] Will return to original shape [1] Safe material [1] [1] + [1]	<b>Max 2</b>

Question	Answer	Marks
B5(a)	<p>Two layers (vertical or horizontal shown) [1]            The best layer clearly has a thin top layer [1], thin bottom layer [1] and thicker middle layer [1]            Middle layer rendered to look like foam [1]</p> <p>Two layers (vertical or horizontal shown) [1]            One layer rendered to look like Styrofoam [1]            Second layer rendered to look like wood and has some grain or matching side and end grain [1] + [1]</p>	<b>9</b>
B5(b)(i)	<p>Acceptable reasons include:            Available in big blocks so no need to stick layers together [1]            Easy to cut to shape [1]            Easy to add surface details [1]            Accept 'Lightweight' [1]            [1] + [1]</p>	<b>Max 2</b>
B5(b)(ii)	<p>Acceptable answers include:            Double sided tape [1]            PVA [1]  <i>Do not accept – contact adhesive, acetate adhesive or hot melt</i></p>	<b>1</b>
B5(c)	<p>Isometric block drawn (regardless of number of layers) [1]            Isometric block has five layers [1]            Overall height correct [1]            Layer one lined in [1]            Layer two rotated [1]            Layer two correct to overlay [1]</p> <p>Layer three completed to overlay [1]            Layer four rotated [1]            Layer four correct to overlay [1]            Layer five completed to overlay [1]</p>	<b>10</b>
B5(d)	<p>Sketches show a method such as labels, drawing, cutting out [1]            Notes or labels name the method [1]            Sketch shows method being used on a block [1]</p>	<b>3</b>