Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

DESIGN AND TECHNOLOGY **0445/22**

Paper 2 Graphic Products **May/June 2017**

MARK SCHEME

Maximum Mark: 50

Published

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

Question	Answer	Marks
A1(a)	**End view** Second wheel added [1] Second wheel correct [1] Two horizontal lines added [1] Two horizontal lines correct [1] **Plan** One mark for each line correctly projected down from the side view [1 × 2]	**6**
A2(a)	Paper fastener or similar fastening method drawn (must allow the strips to rotate) [1] Component correctly named e.g. paper fastener [1]	**2**
A2(b)	Arc drawn from Y – X [1] Arc drawn to show the second upright rotated to the horizontal position [1] At least three positions for A plotted [1] Path of point P correct [1]	**4**
A3(a)	Isometric axis used [1] Length [1] Height [1] *Side of car correct* [1] Any two wheels added [1] Wheels correct [1] *Thickness of foam board added* [1] *Incorrect size drawings can score a maximum of 5 marks*	**7**
A3(b)	Acceptable reasons include: Easy to cut [1] Rigid [1] Can draw windows on the side [1] One mark for each acceptable reason	**2**
A3(c)	**Find** – internet search engine (for example, Google) [1] and search instruction (for example, image of car) [1] **Capture** – right click on image [1] and copy (and paste) [1] Accept similar answers using different methods.	**4**
	Total:	**25**

Question	Answer	Marks
B4(a)(i)	Left triangle added [1] Left triangle correct [1] Right triangle added [1] Right triangle correct [1] Base triangle, attached to right triangle [1] Base triangle correct [1] Some evidence of fold lines and cut lines shown.[1] All fold lines and cut lines correct [1]	**8**
B4(a)(ii)	Glue tab added to the base triangle [1] Base glue tab correct [1] Two glue tabs added to the top of the development (net) [1] Side glue tab on RH sloping side [1]	**4**
B4(a)(iii)	ICE and Y added in any style [1] Consistent height for all letters [1] Consistent spacing for all letters [1]	**3**
B4(b)	Key stages include: <u>Lithography process</u> Original image Scanning Colour separation Printing plates CYMK Printing of colours Registration/alignment of colours Fully detailed description including most of the key stages [5 or 6] A description including some of the key stages [3 or 4] Limited details including one or two key stages [1 or 2]	**6**
B4(c)	Appropriate colour named (red) [1] Red is used because strawberries are red [1] Accept other colour choices that are justified	**2**
B4(d)	Any symbol drawn [1] Symbol correctly named (recycling, put wrapper in bin…) [1]	**2**
	Total:	**25**

Question	Answer	Marks
B5(a)	a. Right side completed by adding a vertical [1] b. Right side longer than the given left side [1] c. Top completed by adding a line to VP1 [1] and a line to VP2 [1] Top strip added [1] Top strip added in good proportion and in perspective [1] Bottom strip added [1] Bottom strip added in good proportion and in perspective [1] Two diagonal lines added [1 × **2**] Semi-circle added to front strip [1] Semi-circle added in perspective [1] Three inner detail lines added [1 × **3**]	**15**
B5(b)	The clear plastic cover can be produced by vacuum forming **or** folding clear plastic sheet **or** fabrication. **Example:** **Key Stages for Vacuum forming** Naming the process (vacuum forming) Former Heat Suction Remove from mould Trim Fully detailed description including most of the key stages [5 or 6] A description including some of the key stages [3 or 4] Limited details including one or two key stages [1 or 2]	**6**
B5(c)	Semi circle added [1] Semi circle with a cut line [1] Two horizontal lines added [1] Evidence of rectangular hole in fold-down flap [1]	**4**
	Total:	**25**