MARK SCHEME for the May/June 2015 series

0445 DESIGN AND TECHNOLOGY

0445/23

Paper 2 (Graphics 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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Page 2		2	Mark Scheme		Paper
			Cambridge IGCSE – May/June 2015	0445	23
			Section A		
A1	(a)	(i)	Plan Circle added [1] Circle correct to overlay [1] Rectangle added for the left arm [1] Rectangle correct to overlay [1]		[4]
		(ii)	Front View Right arm peg/hole correct to overlay (ignore type of line) [1] Leg peg/hole correct to overlay (ignore type of line) [1] All lines dashed regardless of size or position [1]		[3]
		(iii)	Two concentric circles added [1] Truncated cone matches the concentric circles [1] Circles and truncated cone in correct positions and orientation for t (cone on right) [1]	hird angle pr	ojection [3]
A2	(a)		ne tonal shading adding to the circle [1] ading makes the circle appear spherical (high and low light) [1]		[2]
	(b)	As	etches and <u>notes (</u> or labels and arrows) show understanding that: tencil is a sheet of material with cut out shapes for the letters [1] en or pencil is put into the cut out shapes and the letter drawn [1]		[2]
A3	(a)	Fla Top	me drawn to the right [1] t added to the right side of the dome and left side of cuboidal chamb added to the cuboid shape [1] ping side added to the left of the cuboid shape [1]	er [1]	[4]
	(b)	Thr • • •	ee features of the former described. Tick (✓) to identify each feature Sloping sides (draft) [1] Smooth surface finish [1] Strength to withstand suction [1] Correct shape [1] Quality of materials Heatproof former etc.	e. For examp	le: [3]
	(c)	(i)	Triangular shape drawn [1] Arrows added to the triangular shape [1]		[2]
		(ii)	Typical answers: It is better for the environment [1] because fewer trees need to be a Better for the environment [1] because less landfill is required [1] It is better for the image of the company [1] as it makes them appear friendly [1]		[2]

Cambridge IGCSE – May/June 20150445Section B	23
Section B	
B4 (a) (i) Any circle drawn [1] Circle of the correct size (Ø30) [1] Circle position (on the given Centre line) [1]	[3]
 (ii) Any triangle drawn [1] Equilateral triangle drawn [1] Equilateral triangle of correct size drawn (side 30 mm) [1] Triangle position (on the given Centre line) [1] 	
Triangle in the correct orientation [1]	[5]
 (iii) Any Hexagon drawn [1] Regular hexagon drawn [1] Regular hexagon of the correct size drawn (side 20 mm) [1] Hexagon position (on the given Centre line) [1] 	[5]
Hexagon in the correct orientation [1]	[5]
 (b) Circle drawn [1] Circle divided into any four sectors [1] One mark for each sector correct to overlay 	(1 × 3)
Appropriate identification used (at least three sectors) [1] Appropriate labels for sales used (at least three sectors) [1]	[7]
	[,]
(c) (i) Aided, Aid or Assisted [1]	
(c) (i) Aided, Aid or Assisted [1] Design [1]	[2]
 (ii) Tick (✓) to identify the following stages: Highlight or Right click on image [1] Menu –Copy [1] Cursor to new page / program [1] Menu –Paste / click to position [1] (or alternative methods of copying and pasting) 	[3]
[To	tal: 25]

Page 4	Mark Scheme		Paper				
	Cambridge IGCSE – May/June 2015	0445	23				
Section B							
B5 (a) (i)	Card or paper [1] Expanded polystyrene [1] or polystyrene foam (Do not accept 'foam')		[2]				
(ii)	Scalpel, blade, craft knife or Stanley knife [1] (Do not accept 'knife') Steel rule, Safety rule [1] (Do not accept 'rule')		[2]				
(iii)	Example [1] Justification [1] e.g: Easy to cut / so shapes can be made easily Has a smooth surface / that you can print pictures on Rigid / so easy to slot pieces together Has thickness / so easy to pick up (Do not accept 'cheap')		[2]				
En Ev	y enlarged cross [1] larged cross has four correct elements (to overlay) idence of a V.P. (1) ojection lines from V.P. to enlarged cross	,	4 × 1) 4 × 1) [10]				
Le Wi *H *In Inr *So Rig	ometric drawing [1] ngth (70 mm) allow if isometric incorrect [1] dth (70 mm) only if isometric correct [1] eight (10) [1] ner square drawn to top surface [1] ner square correct to overlay [1] ome depth drawn to the inner square [1] ght side depth of inner square correct to overlay [1] ft side depth of inner square correct to overlay [1]		[9]				
* m	narks can be awarded for non-isometric 3D solutions	[Tota	l: 25]				