

# **Design and Technology**

General Certificate of Secondary Education **1955/03**

Graphic Products Paper 3

## **Mark Scheme for June 2010**

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Any enquiries about publications should be addressed to:

OCR Publications  
PO Box 5050  
Annesley  
NOTTINGHAM  
NG15 0DL

Telephone: 0870 770 6622  
Facsimile: 01223 552610  
E-mail: [publications@ocr.org.uk](mailto:publications@ocr.org.uk)

Tolerance is +/- 2mm on all questions

<b>1</b>	<b>(a)</b>	Horizontal line added in the correct position	1	
		Vertical line added in the correct position	1	
		<b>Two</b> fold lines added in the correct positions	1	
		Fold line convention used for at least <b>one</b> line	1	
		The word TRAIN added (must be upper case)	1	
		The word TRAIN in correct position and orientation	1	<b>[6]</b>
	<b>(b)</b>	Safety rule or metal rule	1	
		Stanley knife, craft knife, rotary cutter or scalpel	1	<b>[2]</b>
	<b>(c)</b>	Pictorial sketch shows card with one end folded	1	
		Pictorial sketch shows both ends folded	1	<b>[2]</b>
			<b>Total</b>	<b>[10]</b>

<b>2</b>	<b>(a)</b>	Any three sectors correct (3 x 1 marks)	3	
		Car - 135 degrees Bus - 120 degrees Train - 60 degrees Other - 45 degrees		
		Labels or key identifies the 4 sectors	1	<b>[4]</b>
	<b>(b)</b>	<b>Exemplar answers</b>		
		Reduces pollution, traffic congestion, global warming or parking problems	1	<b>[1]</b>
		Do not accept answers to do with personal fitness		
	<b>(c)</b>	Footprint used in the idea	1	
		The word 'Work' added (misspelt no mark)	1	
		The word 'Work' added in the style of the font shown	1	<b>[3]</b>
	<b>(d)</b>	<b>Exemplar answers (2 x 1 mark)</b>		
		Rectangular shapes fit together to produce the minimum amount of waste	1	
		Cheaper to print	1	
		Easier to print		
		Quicker to print		
		Tessellate		
		Easier to store or distribute		<b>[2]</b>

**Total [10]**

3	(a)	Height of front view	1	
		Two vertical lines on front view	1	
		Plan width projected from front view	1	
		Plan depth (correct to candidate front view)	1	<b>[4]</b>
	(b)	Sketch and notes show how the card stand folds flat	1	<b>[1]</b>
	(c)	(i)		
		Four surfaces required to make the square base	1	
		Larger rectangle surface required to make the diagonal piece (must be at one end)	1	
		Fold lines and <b>two</b> glue tabs shown. At least 2 surfaces of the development (net) must be drawn	1	<b>[3]</b>
	(ii)	<b>Exemplar answer</b>		
		The modified card stand is a more stable/stronger/more rigid/will not squash/cannot be compressed/ (1) because of triangulation or the extra piece supports the structure (1)	2	<b>[2]</b>
			<b>Total [10]</b>	

**4 (a) Photograph**

Photograph taken (1), method of importing into the computer system (1) and resized and/or positioned on the electronic template (1) 3

**Laminating**

Printout positioned in a pouch (1) and passed through the machine/sealed (1) 2 **[5]**

**(b)** The identity card is usually no larger than 85mm x 54mm because this is a size that people can easily carry, place in pocket or wallet/purse. 1 **[1]**

**(c) (i) Advantage to the card holder - exemplar answer**

Personal details such as name, DoB and address not visible if the card is left lying around, less risk of identity theft. 1

**(ii) Advantage to the company - exemplar answer**

Magnetic strip can be 'read' to track attendance, whereabouts of employees, personal details can be changed/stored electronically, control access, security etc 1 **[2]**

**(d)** Logo based upon the letters AK (using the grid) – accept single lines 1

Sketch of a high quality logo - design based upon a good drawing of the outline shape of the letters utilising the grid, with consistency of style or size or thickness. Must be some evidence of thickness to letters. 1 **[2]**

**Total [10]**

5	(a)	(i)	The self adhesive sign can easily be stuck to most surfaces without the need for additional materials/ easier or quicker to attach to surfaces	1	[3]
		(ii)	Sketch shows a rounded corner/edge or shape e.g. ellipse	1	
		(iii)	Green and white colours have been chosen because they give a good contrast, green is associated with 'go' or 'safe', or standard colours.for safe conditions.	1	
	(b)	(i)	Corriflute has been chosen because it is a lightweight material or waterproof (for use outside) or can easily have a message printed on it. Can easily be folded along the flutes. Not just strong or rigid or stable.	1	[1]
		(ii)	Named method e.g. plastic fasteners Velcro, bifurcated rivets or nuts and bolts. Not screws or split pins.	1	[2]
			Sketch clearly indicates that the joining method is temporary	1	
	(c)	(i)	Clear understanding that biodegradable means the material will rot away, will not cause a pollution problem or is more environmentally friendly/green.	1	[4]
		(ii)	Clear understanding of slot for the tape	1	
			Notes and/or sketches show how tape rolls	1	
			Method of cutting clearly shown on the packaging	1	
					<b>Total [10]</b>

**OCR (Oxford Cambridge and RSA Examinations)**  
**1 Hills Road**  
**Cambridge**  
**CB1 2EU**

**OCR Customer Contact Centre**

**14 – 19 Qualifications (General)**

Telephone: 01223 553998

Facsimile: 01223 552627

Email: [general.qualifications@ocr.org.uk](mailto:general.qualifications@ocr.org.uk)

**[www.ocr.org.uk](http://www.ocr.org.uk)**

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**OCR (Oxford Cambridge and RSA Examinations)**  
**Head office**  
**Telephone: 01223 552552**  
**Facsimile: 01223 552553**