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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2009 question paper for the guidance of teachers

0445 DESIGN AND TECHNOLOGY

0445/01

Paper 1 (Design), 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 must be read in conjunction with the question papers and the report on the examination.

• CIE will not enter into discussions or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the May/June 2009 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

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	IGCSE – May/June 2009	0445	100-

1

(a)	Accept any four additional suitable points – accessible, stable in use, easy to refill, roll does not pull off easily, allow roll to rotate, hygienic, portable, etc.	1 × 4	Abridge
(b)	Accept drawings of any two positions – on work surface, on the wall, in a cupboard/drawer, etc.	2 × 2	[4]
(c)	Any suitable ideas. At least three different ideas for maximum marks. Pro rata if fewer. Communication Simple drawings displaying a low standard or limited range of techniques	0–2	
	Clear drawings displaying a good standard and a range of techniques – shading/colour/annotation etc. High quality drawings using a wide range of techniques with clear annotation and detail Suitability	3–4	
		5–6	
	Simplistic designs showing outlines only Rather more detail, sensible solutions that could work Accurate solutions, good fitness for purpose, detailed construction	0–2 3–4 5–6	[12]
(d)	Evaluation of each of the ideas. At least three evaluations up to 2 marks each.	0–6	
	Selection and justification. (1+1)	2	[8]
(e)	Quality of drawing		
	Poor line quality, proportions, little detail Good line work, use of colour, proportions, some detail High standard throughout with a range of techniques that show clearly all detail Dimensions two or three overall dimensions only – 1 Additional detail dimensions – 2 Construction details A simplistic approach showing little or no detail of construction to be used Most constructional detail may be obvious from overall views or with some annotation All constructional detail will be clear with good annotation and additional detail drawings as necessary	1 2–3	
		4	
		2	
		0–2	
		3–4	
		5–6	[12]
(f)	Suitable specific materials stated. At least two. Appropriate reasons for choice. At least two.	2 2	[4]
(g)	Suitable method stated. Detailed description of process, including: processes and tools .	1 3 2	[6]
		[Tatal	I. EA1

[Total: 50]

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	Page 3		Mark Scheme: Teachers' version	Syllabus	To.	er
			IGCSE – May/June 2009	0445	Son	
2	(a)	•	any four additional suitable points – stable in use, a real produce, all round view, easy to move, etc.	ittract attention,	AdhaCa.	hbridge.
	(b)	•	any two movement methods – rotation, electric/clocum, solenoid, etc.	kwork motors,	2 × 2	[4]
	(c)	Pro rata	table ideas. At least three different ideas for maxim a if fewer. unication	num marks.		
			drawings displaying a low standard or limited range	lying a low standard or limited range of techniques		
		shading	rawings displaying a good standard and a range of t //colour/annotation etc. ality drawings using a wide range of techniques witl	·	3–4	
		and det	ail	i ciear amilotation	5–6	
		Simplist	tic designs showing outlines only		0–2	
			more detail, sensible solutions that could work		3–4	F4.01
		Accurat	e solutions, good fitness for purpose, detailed const	ruction	5–6	[12]
	(d)	Evaluat each.	ion of each of the ideas. At least three evaluations	up to 2 marks	0–6	
			on and justification. (1+1)		2	[8]
	(e)	Poor lin	of drawing e quality, proportions, little detail ne work, use of colour, proportions, some detail		1 2–3	

Good line work, use of colour, proportions, some detail
High standard throughout with a range of techniques that show clearly all detail

Dimensions two or three overall dimensions only – 1

Additional detail dimensions – 2

Construction details

A simplistic approach showing little or no detail of construction to be used Most constructional detail may be obvious from overall views or with some annotation

All constructional detail will be clear with good annotation and additional detail drawings as necessary

(f) Suitable **specific** materials stated. At least **two**. Appropriate reasons for choice. At least **two**.

(g) Suitable method stated.

Detailed description of process, including: processes and tools.

[Total: 50]

4

2

0-2

3-4

5–6

2

2

1

3

2

[12]

[4]

[6]

			IGCSE – May/June 2009	0445	2000	
3	(a)	Accept any four additional suitable points – lightweight, easy to operate, no bending down, picks up different shapes, single handed use, etc.		1×4	nbridge	
	(b)	Accept dowels,	any two suitable flexible joints – hinges, pins, bolts/ etc.		2 × 2	[4]
	(c)	Any suitable ideas. At least three different ideas for maximum marks. Pro rata if fewer. Communication Simple drawings displaying a low standard or limited range of techniques			0–2	
		Clear drawings displaying a good standard and a range of techniques –				
		shading/colour/annotation etc. High quality drawings using a wide range of techniques with clear annotation and detail Suitability		3–4		
				5–6		
		Simplist	tic designs showing outlines only		0–2	
			more detail, sensible solutions that could work		3–4	F4.01
		Accurat	e solutions, good fitness for purpose, detailed cons	truction	5–6	[12]
	(d)	Evaluat each.	ion of each of the ideas. At least three evaluations	up to 2 marks	0–6	
			on and justification. (1+1)		2	[8]
	(e)	Quality	of drawing			
			e quality, proportions, little detail		1	
		Good line work, use of colour, proportions, some detail High standard throughout with a range of techniques that show clearly all detail Dimensions two or three overall dimensions only – 1	2–3			
			now clearly all	4		
			Additional detail dimensions – 2 uction details		2	
		A simpl	istic approach showing little or no detail of construct enstructional detail may be obvious from overall view		0–2	
		annotat			3–4	
			rawings as necessary	and additional	5–6	[12]

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Syllabus

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(f)

(g)

Suitable **specific** materials stated. At least **two**.

Detailed description of process, including: processes

Appropriate reasons for choice. At least two.

Suitable method stated.

and tools.

[Total: 50]

[4]

[6]

2

2

1

3

2