CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2013 series

0445 DESIGN AND TECHNOLOGY

0445/12 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 should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.



	Page 2		Mark Scheme	Syllabus	Paper
			IGCSE – May/June 2013	0445	12
1	(a)	Accept any four additional suitable points – easy to cl resists water, appropriate height/position, boots easy access/remove, stable in use, etc.		(1 × 4)	[4]
	(b)	rods, i	ot drawings of any two suitable methods – inverted or in vertical/horizontal boxes, on shelves, on slats, in in slots, etc.	(2 × 2)	[4]
	(c)	maxin Comn Simple of tecl Clear techni High o	uitable ideas. At least three different ideas for num marks. Pro rata if fewer. nunication e drawings displaying a low standard or limited range nniques. drawings displaying a good standard and a range of ques – shading/colour/annotation, etc. quality drawings using a wide range of techniques with annotation and detail.	(0–2) (3–4)	
		Rathe Accur	bility istic designs showing outlines only. In more detail, sensible solutions that could work ate solutions, good fitness for purpose, detailed ruction.	(0–2) (3–4) (5–6)	[12]
	(d)	2 mar	ation of each of the ideas. At least 3 evaluations up to ks each. tion and justification. (1+1)	(0–6) (2)	[8]
	(e)	Poor I Good High s show Dimei Const A simple constr Most of views All con	ty of drawing ine quality, proportions, little detail. line work, use of colour, proportions, some detail. standard throughout with a range of techniques that clearly all detail. nsions 2 or 3 overall dimensions only – 1 Additional detail dimensions – 2 truction details plistic approach showing little or no detail of ruction to be used. constructional detail may be obvious from overall or with some annotation. Instructional detail will be clear with good annotation deditional detail drawings as necessary.	(1) (2–3) (4) (2) (0–2) (3–4) (5–6)	[12]
	(f)	Suitah	ole specific materials stated.	(2)	
	(-)		priate reasons for choice.		[<i>\</i> 1
		Whhio	יייים בי ובמסטווס וטו טווטוטב.	(2)	[4]

	Page 3		Mark Scheme	Syllabus	Paper
			IGCSE – May/June 2013	0445	12
	(g)		ole method stated/described. detailed description of: processes; tools.	(1) (3) (2)	[6]
					[Total: 50]
2	(a)	childre	ot any four additional suitable points – appealing to en, colourful, interesting topic, will not tear/damage, d by child, etc.	(1 × 4)	[4]
	(b)		ot any two forms of movement – pop-up, rotating disc ut, slider, hinge, paper spring, etc.	c, (2 × 2)	[4]
	(c)	maxin Com n	uitable ideas. At least three different ideas for num marks. Pro rata if fewer. nunication	۵	
		of tecl	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 Simplistic designs showing outlines only. Rather more detail, sensible solutions that could work. Accurate solutions, good fitness for purpose, detailed construction.	(3–4)		
			th (5–6)		
			(0–2) (3–4)		
			(5–6)	[12]	
	(d)		Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each.		
		Select	tion 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.	(1) (2–3) (4)		
			Dimensions 2 or 3 overall dimensions only – 1		
			Additional detail dimensions – 2 Construction details A simplistic approach showing little or no detail of	(2)	
		constr	construction to be used. Most constructional detail may be obvious from overall		
		views	views or with some annotation.	(3–4)	
		All constructional detail will be clear with good annotation and additional detail drawings as necessary.	(5–6)	[12]	

Page 4		e 4	Mark Scheme	Syllabus	Paper	
			IGCSE – May/June 2013	0445	12	
	(f)	Suitab	ole specific materials stated.	(2)		
		Appro	priate reasons for choice.	(2)	[4]	
	(g)		ole method stated/described. detailed description of: processes;	(1) (3)	[6]	
			tools.	(2)	[6] [Total: 50]	
3	(a)	acces	ot any four additional suitable points – hygienic, easi sible, easy to clean, fits in with garden surroundings ful, anchored to ground, etc.	•	[4]	
	(b)		ot any two safety considerations – falling from height ed fingers/limbs, slipping, location in seats, sharp s, etc.	t, (2 × 2)	[4]	
	(c)	maxin	uitable ideas. At least three different ideas for num marks. Pro rata if fewer. nunication			
		Simple drawings displaying a low standard or limited range of techniques. Clear drawings displaying a good standard and a range of	(0–2)			
	t	techni	techniques – shading/colour/annotation, etc. High quality drawings using a wide range of techniques with clear annotation and detail.	(3–4)		
		•		(5–6)		
		Rathe	stic designs showing outlines only. r more detail, sensible solutions that could work.	(0–2) (3–4)		
		Accurate solutions, good fitness for purpose, detailed construction.	(5–6)	[12]		
	(d)		ation of each of the ideas. At least 3 evaluations up ks each.	to (0-6)		
		Select	tion and justification. (1+1)	(2)	[8]	

Page 5	Mark Scheme	Syllabus	Paper
	IGCSE – May/June 2013	0445	12

(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 2 or 3 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	(1) (2-3) (4) (2) (0-2) (3-4)	1401
	and additional detail drawings as necessary.	(5–6)	[12]
(f)	Suitable specific materials stated. Appropriate reasons for choice.	(2) (2)	[4]
(g)	Suitable method stated/described. Good detailed description of: processes; tools.	(1) (3) (2)	[6]