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CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2012 series

0445 DESIGN AND TECHNOLOGY

0445/11 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 October/November 2012 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

Page 2		Mark Scheme	Syllabus	20	r
	_	IGCSE – October/November 2012	0445	Day	
(a)	Accept any four additional suitable points – easy to open, cannot catch fingers, large working area, correct height for sitting, matches bedroom, etc.				mbridge
(b)	Accept drawings of any two suitable folding methods – hinges, screw/bolt pivots, brackets, rods, pins, sliders, etc.			(2x2)	[4]
(c)	Any suita				
	Simple d Clear dra shading High qu	Communication Simple drawings displaying a low standard or limited range of techniques 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			
	Simplisti Rather m	Suitability Simplistic designs showing outlines only Rather more detail, sensible solutions that could work Accurate solutions, good fitness for purpose, detailed construction			
(d)	Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each				[12]
	Selection	(0-6) (2)	[8]		
(e)	Poor line Good line	of drawing e quality, proportions, little detail e work, use of colour, proportions, some detail ndard throughout with a range of techniques that	show clearly all	(1) (2-3) (4)	
		i ons rerall dimensions only (1) al detail dimensions (2)		(2)	
	A simplis Most cor	ction details stic approach showing little or no detail of construction structional detail may be obvious from overall view		(0-2)	
	annotation All constructional detail will be clear with good annotation and additional detail drawings as necessary				
					[12]
(f)	Suitable	specific materials stated. (1+1)		(2)	
	Appropri	ate reasons for choice. (1+1)		(2)	[4]
(g)		method described. tailed description of: processes tools.		(1) (3) (2)	[6]

[Total: 50]

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Pa	age 3	Mark Scheme	Syllabus	.0	1
		IGCSE – October/November 2012	0445	100	
(a)	Accept any four additional suitable points – appeal to pupils, compact, stable on desk, team colours, football theme, list items to hold, etc.				Cambride
(b)	Accept drawings of any two joining methods - glue tabs, slide-in corner sections, slots, Velcro, staples, tape, etc.				[4]
(c)	Any suit	able ideas. At least three different ideas for maxin wer.	num marks. Pro		
	Communication Simple drawings displaying a low standard or limited range of techniques 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			(0-2) (3-4) (5-6)	
	Rather n	ity c designs showing outlines only nore detail, sensible solutions that could work e solutions, good fitness for purpose, detailed constr	ruction	(0-2) (3-4) (5-6)	[12]
(d)	Evaluation	on of each of the ideas. At least 3 evaluations up to	2 marks each	(0-6)	
	Selection	n and justification. (1+1)		(2)	[8]
(e)	Poor line Good lin	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 a detail		(1) (2-3) (4)	
	Addition	verall dimensions only (1) al detail dimensions (2)		(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			(0-2)	
	annotation All constructional detail will be clear with good annotation and additional		(3-4)	[40]	
	uetali dra	awings as necessary		(5-6)	[12]
(f)	Suitable	specific materials stated. (1+1)		(2)	
	Appropri	ate reasons for choice. (1+1)		(2)	[4]
(g)		method described. tailed description of: processes tools.		(1) (3) (2)	[6]

[Total: 50]

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Pa	age 4		Mark Scheme		Syllabus	.0	V
		IGCSE -	October/Novem	ber 2012	0445	200	,
(a)	Accept any four additional suitable points – clearly visible to others, easy to fit to bicycle, safe to operate, lightweight, weather proof, etc.				(1x4)	9	
(b)	Accept any one mechanical device and one electronic system – moving/semaphore arm, sliding pointer, flashing lights, moving LEDs, etc.				(2x2)		
(c)	Any suitable ideas. At least three different ideas for maximum marks. Pro rata if fewer.						
	•	lrawings displayiı	ng a low standard		•	(0-2)	
	shading High qu	/colour/annotatio ality drawings	g a good standa n etc using a wide r	_	·	(3-4)	
		on and detail				(5-6)	
	Suitabili Simplisti	i ty c designs showir	ng outlines only			(0-2)	
	Rather n	nore detail, sensi	ble solutions that			(3-4)	
	Accurate	solutions, good	fitness for purpos	se, detailed consti	ruction	(5-6)	
(d)	Evaluation	on of each of the	ideas. At least 3	evaluations up to	2 marks each	(0-6)	
	Selection	n and justification	n. (1+1)			(2)	
(e)	Poor line Good lin		ons, little detail blour, proportions, It with a range of		show clearly all	(1) (2-3) (4)	
		i ons erall dimensions al detail dimensio				(2)	
	A simplis	• •	owing little or no d			(0-2)	
	annotation		il may be obvious	irom overall viev	ws or with some	(3-4)	
		tructional detail s awings as necess	will be clear with sary	good annotation	and additional	(5-6)	
(f)	Suitable	specific materia	als stated. (1+1)			(2)	
	Appropri	ate reasons for c	choice. (1+1)			(2)	
(g)		method describe tailed descriptior				(1) (3) (2)	

[Total: 50]

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