**CAMBRIDGE INTERNATIONAL EXAMINATIONS** International General Certificate of Secondary Education

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## 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 🔪	S.	N.	
		IGCSE – October/November 2012	0445	Da,		
(a)	•	ccept any <b>four</b> additional suitable points – easy to open, cannot catch gers, large working area, correct height for sitting, matches bedroom, c.				
(b)	Accept o pivots, b	(1x4) (2x2)	[4]			
(c)	Any suita rata if fev					
	<b>Commu</b> Simple d	(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					
	annotatio	(5-6)				
	Rather m	<b>ty</b> c designs showing outlines only nore detail, sensible solutions that could work solutions, good fitness for purpose, detailed construct	ction	(0-2) (3-4)		
(d)	Evaluatio	(5-6)	[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 sh	now clearly all	(1) (2-3) (4)		
		<b>ons</b> erall dimensions only (1) al detail dimensions (2)		(2)		
	Constru A simplis	(0-2)				
	Most cor annotation All const	(3-4)				
	detail dra	(5-6)	[12]			
(f)	Suitable	(2)				
	Appropri	ate reasons for choice. (1+1)		(2)	[4]	
(g)		method described. tailed description of: processes tools.		(1) (3) (2)	[6]	
				(2)	[6]	

	3	Mark Scheme Syll		Synabus 📲	A 0.		
		IGCSE – (	October/November 2	2012	0445	123	
						1	an
	Accept any <b>four</b> additional suitable points – appeal to pupils, compact, stable on desk, team colours, football theme, list items to hold, etc.					(1x4)	Drig
• •	Accept drawings of any <b>two</b> joining methods - glue tabs, slide-in corner sections, slots, Velcro, staples, tape, etc.					MM, Papac (1x4) (2x2)	[4]
• • •	Any suitable ideas. At least <b>three different</b> ideas for maximum marks. Pro rata if fewer.						
Sin	<b>Communication</b> Simple drawings displaying a low standard or limited range of techniques					(0-2)	
sha	Clear drawings displaying a good standard and a range of techniques – shading /colour/annotation etc				(3-4)		
•	High quality drawings using a wide range of techniques with clear annotation and detail					(5-6)	
	Suitability						
	Simplistic designs showing outlines only Rather more detail, sensible solutions that could work					(0-2) (3-4)	
	Accurate solutions, good fitness for purpose, detailed construction					(5-6)	[12]
<b>(d)</b> Eva	Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each						
Sel	Selection and justification. (1+1)					(0-6) (2)	[8]
(e) Qu	ality of	f drawing					
		quality, proportion work_use of colo	ns, little detail our, proportions, som	no detail		(1) (2-3)	
		-	with a range of tech		show clearly all		
det	detail					(4)	
	nensio	-					
		rall dimensions o detail dimensior	• • • •			(2)	
			10 (2)			(~)	
	<b>Construction details</b> A simplistic approach showing little or no detail of construction to be used						
Мо	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					(0-2)	
						(3-4)	
						(5-6)	[12]
<b>(f)</b> Sui	Suitable <b>specific</b> materials stated. (1+1)						
Apr	propria	te reasons for ch	oice. (1+1)			(2)	[4]
(0)		nethod described				(1)	
	od deta	ailed description	of: processes			(3)	
Go			tools.			(2)	[6]

Page 4		Mark Scheme Syllabus		Syllabus 🔻	a.	N.	
		IGCSE – C	October/Novemb	er 2012	0445	103	
						1	an
	Accept any <b>four</b> additional suitable points – clearly visible to others, easy to fit to bicycle, safe to operate, lightweight, weather proof, etc.					MM, Papar (1x4) (2x2)	ibridg
	Accept any <b>one</b> mechanical device and <b>one</b> electronic system – moving/semaphore arm, sliding pointer, flashing lights, moving LEDs, etc.						[4]
	Any suitable ideas. At least <b>three different</b> ideas for maximum marks. Pro rata if fewer.						
Con	nmunicati	on					
	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					(3-4)	
-	High quality drawings using a wide range of techniques with clear annotation and detail					(5.6)	
		uetall				(5-6)	
	Suitability Simplistic designs showing outlines only					(0-2)	
Rath	Rather more detail, sensible solutions that could work						
Acc	Accurate solutions, good fitness for purpose, detailed construction						[12]
<b>d)</b> Eva	Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each						
Sele	Selection and justification. (1+1)						[8]
Poo Goo Higł	<b>Quality of drawing</b> 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)	
Dim	ensions						
2 or	2 or 3 overall dimensions only (1) Additional detail dimensions (2)					(2)	
	<b>Construction details</b> 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					(3-4)	
						(5-6)	[12]
<b>f)</b> Suit	Suitable <b>specific</b> materials stated. (1+1)						
Арр	ropriate rea	asons for cho	oice. (1+1)			(2)	[4]
<b>g)</b> Suit	Suitable method described.					(1)	
			of: processes			. ,	
Goo	u detalleu	uescription c	tools.			(3) (2)	[6]