UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS International General Certificate of Secondary Education

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## for the guidance of teachers

## 0445 DESIGN AND TECHNOLOGY

0445/12

Paper 12 (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.

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CIE is publishing the mark schemes for the May/June 2010 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

Page 2	Mark Scheme: T	Mark Scheme: Teachers' version		~	2
	IGCSE – Ma	y/June 2010	0445	No.	
	pt any <b>four</b> additional suita tes can be seen easily, mat		use, easy to remove,	PapaCar (1×	nbrias
	pt drawings of any <b>two</b> pronaterials, rubber, foam, etc.	otection methods – sm	all contact surfaces,	(2 × 2)	Ibrias [4]
rata	suitable ideas. At least <b>thr</b> if fewer. <b>munication</b>	<b>ee different</b> ideas for n	naximum marks. Pro		
Clea	mple drawings displaying a low standard or limited range of techniques ear drawings displaying a good standard and a range of techniques – hading/colour/annotation etc. gh quality drawings using a wide range of techniques with clear annotation ad detail			(0–2) (3–4)	
High and					
Simp Rath	ability listic designs showing outlin er more detail, sensible solu rate solutions, good fitness f	tions that could work	nstruction	(0–2) (3–4) (5–6)	[12]
	uation of each of the ideas. ction and justification.(1 + 1	-	p to 2 marks each	(0–6) (2)	[8]
Poor Goo High	l <b>ity of drawing</b> line quality, proportions, littl d line work, use of colour, pro standard throughout with a	oportions, some detail	that show clearly all	(1) (2–3)	
deta <b>Dim</b> e		nensions only – 1 dimensions – 2		(4) (2)	
A sir	<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			(0–2)	
anno All c	tation onstructional detail will be			(3–4)	1407
deta	l drawings as necessary			(5–6)	[12]
	ble <b>specific</b> materials stated opriate reasons for choice.	d.		(2) (2)	[4]
		ocesses ols.		(1) (3) (2)	[6]

Page 3	Mark Scheme	: Teachers' version	Syllabus 🔪	~	
	IGCSE –	May/June 2010	0445	Da	
mate	Accept any <b>four</b> additional suitable points – attract attention, minimal use of materials, easy to pack, minimal storage space, high-tech appearance, easy to see MP3, cannot see other items, etc.		<b>D</b> anaCar (1 × 4)	nbrio	
• •	Accept any <b>two</b> access methods – tuck-in flaps, lift off top, adhesive surfaces, sliding sections, etc.			(2 × 2)	[4]
rata	Any suitable ideas. At least <b>three different</b> ideas for maximum marks. Pro rata if fewer.				
Simp	<b>Communication</b> 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)	
Suita	Suitability Simplistic designs showing outlines only				
Rath	er more detail, sensible s		truction	(0–2) (3–4) (5–6)	[12]
	uation of each of the idea ction and justification.(1	s. At least 3 evaluations up t + 1)	o 2 marks each	(0–6) (2)	[8]
(e) Qua	ity of drawing				
Poor Good		proportions, some detail		(1) (2–3)	
deta	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			(4)	
Dime				(2)	
				(0–2)	
Most				(3-4)	
All c	onstructional detail will	be clear with good annotat	ion and additional	. ,	[4 C]
deta	l drawings as necessary			(5–6)	[12]
• •	-	ble <b>specific</b> materials stated.		(2)	
Appr	opriate reasons for choic	е.		(2)	[4]
(g) Suita	ble method stated.			(1)	
(0)	Good detailed description of: processes tools.		(3) (2)	[6]	

Pa	age 4	Mark Scheme	e: Teachers' version	Syllabus	2	<u> </u>
		IGCSE –	May/June 2010	0445	De	
(a)	•	-	uitable points – easy to operause, appealing to child, etc.	ate, minimal space,	papaCa. (1 × 1	nbrides
(b)	Accept	any <b>two</b> types of batte	ery – AAA, AA, C, D, PP3, dis	sc type, etc.	(2 × 2)	[4]
(c)	rata if f		three different ideas for ma	aximum marks. Pro		
		Simple drawings displaying a low standard or limited range of techniques Clear drawings displaying a good standard and a range of techniques –				
9   	shading	shading/colour/annotation etc.			(3–4)	
	and de	High quality drawings using a wide range of techniques with clear annotation and detail				
	Suitabi Simplis	ί <b>lity</b> tic designs showing οι	utlines only		(0–2)	
		-	solutions that could work ess for purpose, detailed cons	struction	(3–4) (5–6)	[12]
	7100010				(0 0)	ניבו
(d)		tion of each of the idea on and justification. (1	as. At least 3 evaluations up + 1)	to 2 marks each	(0–6) (2)	[8]
(e)	Quality	of drawing				
. ,	Poor lir Good li	ne quality, proportions, ne work, use of colour	little detail , proportions, some detail ith a range of techniques th	nat show clearly all	(1) (2–3)	
	detail <b>Dimen</b>	-		···· ···· ····· ······················	(4)	
		Additional de	dimensions only – 1 tail dimensions – 2		(2)	
	A simp	• •	g little or no detail of construc		(0–2)	
	Most c annotat		ay be obvious from overall v	views or with some	(3–4)	
		structional detail will rawings as necessary	be clear with good annota	tion and additional	(5–6)	[12]
					(0–0)	ניבו
(f)		e <b>specific</b> materials st			(2)	
	Approp	riate reasons for choic	e.		(2)	[4]
(g)	Suitable	e method stated.			(1)	
,	Good d	etailed description of:	processes tools.		(3) (2)	[6]
					[Tota	l: 50]