UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS International General Certificate of Secondary Education

## MARK SCHEME for the October/November 2011 question paper

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## for the guidance of teachers

## 0445 DESIGN AND TECHNOLOGY

0445/13

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.

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

Cambridge is publishing the mark schemes for the October/November 2011 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



<ul> <li>(b) Accept drawings of any two suitable folding/adjusting/dismantling methods – hinging, sliding, slotting together, dowels, screws, KD fittings, etc.</li> <li>(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 – 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 (d) Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each Selection and justification (1+1) (e) Quality of drawing Poor line quality, proportions, little detail (1) </li> </ul>	13  x4) [4 2x2) [4 2x2) [4 0-2) 3-4) 5-6) [12
furniture, storage for tools and paints, lightweight, comfortable to carry, etc.       (1         (b)       Accept drawings of any two suitable folding/adjusting/dismantling methods – hinging, sliding, slotting together, dowels, screws, KD fittings, etc.       (2         (c)       Any suitable ideas. At least three different ideas for maximum marks. Pro rata if fewer       (2         Communication       Simple drawings displaying a low standard or limited range of techniques – shading/colour/annotation etc.       (3         High quality drawings using a wide range of techniques with clear annotation and detail       (5         Suitability       (1         Simplistic designs showing outlines only       (0         Rather more detail, sensible solutions that could work       (3         Accurate solutions, good fitness for purpose, detailed construction       (5         (d)       Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each Selection and justification (1+1)       (2         (e)       Quality of drawing       (1         (f)       Good line work, use of colour, proportions, some detail       (1	2x2) [4 0-2) 3-4) 5-6) 3-2) 3-4)
hinging, sliding, slotting together, dowels, screws, KD fittings, etc.       (2         (c)       Any suitable ideas. At least three different ideas for maximum marks. Pro rata if fewer       (2         Communication       Simple drawings displaying a low standard or limited range of techniques       (0         Clear drawings displaying a good standard and a range of techniques – shading/colour/annotation etc.       (3         High quality drawings using a wide range of techniques with clear annotation and detail       (5         Suitability       (0         Rather more detail, sensible solutions that could work       (3         Accurate solutions, good fitness for purpose, detailed construction       (5         (d)       Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each       (0         Selection and justification (1+1)       (2         (e)       Quality of drawing       (1         Poor line quality, proportions, little detail       (1         Good line work, use of colour, proportions, some detail       (2	)2) 34) 56) 32) 34)
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High quality drawings using a wide range of techniques with clear annotation and detail       (5         Suitability       Simplistic designs showing outlines only       (0         Rather more detail, sensible solutions that could work       (3         Accurate solutions, good fitness for purpose, detailed construction       (5         (d)       Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each       (0         Selection and justification (1+1)       (2         (e)       Quality of drawing       (1         Poor line quality, proportions, little detail       (1         Good line work, use of colour, proportions, some detail       (2	5–6) )–2) 3–4)
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Selection and justification (1+1)       (2         (e)       Quality of drawing         Poor line quality, proportions, little detail       (1         Good line work, use of colour, proportions, some detail       (2	, , [12
<ul> <li>(e) Quality of drawing</li> <li>Poor line quality, proportions, little detail</li> <li>Good line work, use of colour, proportions, some detail</li> <li>(2)</li> </ul>	)—6)
Poor line quality, proportions, little detail (1 Good line work, use of colour, proportions, some detail (2	2) [8
Good line work, use of colour, proportions, some detail (2	
	2–3)
(4 detail <b>Dimensions</b> 2 or 3 overall dimensions only – 1	)
Additional detail dimensions – 2 (2 Construction details	2)
A simplistic approach showing little or no detail of construction to be used (0	)—2)
Most constructional detail may be obvious from overall views or with some (3	3–4)
All constructional detail will be clear with good annotation and additional detail drawings as necessary	5–6) [12
(f) Suitable <b>specific</b> materials stated (2	2)
Appropriate reasons for choice (2	2) [4
(g) Suitable method stated (1	
Good detailed description of: processes (3 tools (2	
	3)

Pa	ige 3	Mark Scheme: Teachers' version	Syllabus	Paper	
		IGCSE – October/November 2011	0445	13	
2 (a)		ccept any <b>four</b> additional suitable points – lightweight, easy to carry, strong indles, easily assembled, easy to clean, ventilation for pet, etc.			
(b)	Accept any <b>two</b> strengthening methods – corrugation, folding, ridges, additional tape, etc.				[4]
(c)	rata if fewer <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				
	Rather	<b>lity</b> tic designs showing outlines only more detail, sensible solutions that could work e solutions, good fitness for purpose, detailed const	ruction	(0–2) (3–4) (5–6)	[12]
(d)	Evaluat	ion of each of the ideas. At least 3 evaluations up to	o 2 marks each	(0–6)	
	Selectio	on and justification (1+1)		(2)	[8]
(e)	Poor lin Good lii	of drawing e quality, proportions, little detail ne work, use of colour, proportions, some detail		(1) (2–3)	
	High standard throughout with a range of techniques that show clearly all detailDimensions2 or 3 overall dimensions only – 1		(4)		
	Constr	Additional detail dimensions – 2 uction details		(2)	
	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		(0–2)		
		(3–4) (5–6)	[12]		
(f)	Suitable	e <b>specific</b> materials stated		(2)	
	Approp	riate reasons for choice		(2)	[4]
(g)		e method stated etailed description of: processes tools		(1) (3) (2)	[6]
					l: 50]

	Page 4		Mark Scheme: Teachers' version	Syllabus	Paper	
L			IGCSE – October/November 2011	0445	13	
3	(a)	damage	any <b>four</b> additional suitable points – lightweight, e to fruit, accepts various fruit shapes and able to hold, etc.		(1x4)	[4]
	(b)		any <b>two</b> adjustment systems – sliding in or on, tul loosen, wing nuts, etc.	be in tube, twist to	(2x2)	[4]
	(c)	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				
		shading	lear drawings displaying a good standard and a range of techniques – hading/colour/annotation etc.			
	High qua and deta		ality drawings using a wide range of techniques with clear annotation	(5–6)		
		Suitabi	lity		(0 0)	
		•	tic designs showing outlines only more detail, sensible solutions that could work		(0–2) (3–4)	
			e solutions, good fitness for purpose, detailed const	truction	(5–6)	[12]
	(d)	d) Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each				
		Selectio	on and justification (1+1)		(2)	[8]
	(e)	-	of drawing		<i></i>	
	Poor line quality, proportions, little detail Good line work, use of colour, proportions, some detail High standard throughout with a range of techniques tha		at show clearly all	(1) (2–3)		
		detail		,	(4)	
			Additional detail dimensions – 2		(2)	
		A simpl	uction details istic approach showing little or no detail of construct		(0–2)	
		Most co annotat	onstructional detail may be obvious from overall v ion	iews or with some	(3–4)	
			structional detail will be clear with good annotat rawings as necessary	ion and additional	(5–6)	[12]
					(0-0)	ניבן
	(f)	Suitable	e specific materials stated		(2)	
		Approp	riate reasons for choice		(2)	[4]
	(g)		e method stated		(1)	
		G000 0	etailed description of: processes tools		(3) (2)	[6]
					[Toto	1. 501