UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2010 question paper for the guidance of teachers

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 must be read in conjunction with the question papers and the report on the examination.

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

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

	Page 2		Mark Scheme: Teachers' version	Syllabus	Paper	
			IGCSE – October/November 2010	0445	12	
1	(a)		any four additional suitable points – easy access un by legs, take person's weight, tools easily accessed		(1 × 4)	[4]
	· ,		ccept drawings of any two methods of movement – small wheels, astors, skis, rollers etc		(2 × 2)	[4]
	(c)	Pro rata Commo	a if fewer u <mark>nication</mark> drawings displaying a low standard or limited range			
		shading High qu	n/colour/annotation etc rality drawings using a wide range of techniques with ion and detail		(3–4) (5–6)	
		Suitabi	ity		` ,	
		Rather	tic designs showing outlines only more detail, sensible solutions that could work ee solutions, good fitness for purpose, detailed const	truction	(0–2) (3–4) (5–6)	[12]
	(d)		ion of each of the ideas. At least 3 evaluations up to on and justification. (1 + 1)	o 2 marks each.	(0–6) (2)	[8]
	(e)	Poor lin Good lin High sta detail	of drawing e quality, proportions, little detail ne work, use of colour, proportions, some detail andard throughout with a range of techniques that s	how clearly all	(1) (2–3) (4)	
		Dimensions 2 or 3 overall dimensions only – 1 Additional detail dimensions – 2		(2)		
		Construction details A simplistic approach showing little or no detail of construction to be use Most constructional detail may be abusing from example views or with a			(0-2)	
		annotat	Most constructional detail may be obvious from overall views or with some annotation All constructional detail will be clear with good appotation and additional		(3–4)	
		All constructional detail will be clear with good annotation and additional detail drawings as necessary				[12]
	(f)		e specific materials stated (1 + 1) riate reasons for choice (1 + 1)		(2) (2)	[4]
	(g)	Suitable method stated			(1)	
		Process Tools	detailed description of method, including: sees	(3) (2)	[6]	

Mark Scheme: Teachers' version

Syllabus

Paper

Page 2

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		1000E October/November 2010 0440	12	
2	(a)	Accept any four additional suitable points – attracts attention, colourful, surprises when catalogue opened, skiing theme, simple design etc		
	/L\			[4]
	(b)	Accept drawings of any two types of mechanism – sliding parts, slots, pivots, fold out, etc		[4]
	(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	(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	(0–2) (3–4) (5–6)	[12]
	(d)	Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each. Selection and justification (1 + 1)	(0–6) (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 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 and additional detail drawings as necessary	(1) (2-3) (4) (2) (0-2) (3-4) (5-6)	[12]
	(f)	Suitable specific materials stated (1 + 1) Appropriate reasons for choice (1 + 1)	(2) (2)	[4]
	(g)	Suitable method stated		
	,	Good detailed description of method, including: Processes Tools	(1) (3) (2)	[6]

Mark Scheme: Teachers' version

IGCSE - October/November 2010

Syllabus

0445

Paper

12

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	Page 4		Mark Scheme: Teachers' version	Syllabus	Paper 12	
			IGCSE – October/November 2010	0445		
3	(a)		any four additional suitable points – easy to set up, r, large holding tank, linked to main supply, does no		(1 × 4)	[4]
	` '		accept any two control methods – mechanical valve, switched pump, olding cistern, gate etc		(2 × 2)	[4]
	(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 rawings displaying a good standard and a range of	•	(0–2)	
		shading/colour/annotation et		·	(3–4)	
			ion and detail		(5–6)	
		Simplist Rather	tic designs showing outlines only more detail, sensible solutions that could work se solutions, good fitness for purpose, detailed cons	truction	(0–2) (3–4) (5–6)	[12]
	(d)		ion of each of the ideas. At least 3 evaluations up ton and justification (1 + 1)	o 2 marks each.	(0–6) (2)	[8]
	(e)	Poor lin Good lii	of drawing le quality, proportions, little detail le work, use of colour, proportions, some detail le andard throughout with a range of techniques that s	how clearly all	(1) (2–3) (4)	
		Dimens	Additional detail dimensions – 2		(2)	
		A simpl	uction details istic approach showing little or no detail of construct		(0-2)	
		annotat			(3–4)	
			constructional detail will be clear with good annotation and additional tail drawings as necessary		(5–6)	[12]
	(f)		e specific materials stated (1 + 1) riate reasons for choice (1 + 1)		(2) (2)	[4]
	(g)	Suitable method stated		(1)		
		Good detailed description of method, including: Processes Tools	(3) (2)	[6]		

[Total: 50]