UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS International General Certificate of Secondary Education

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for the guidance of teachers

0445 DESIGN AND TECHNOLOGY

0445/11

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 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 May/June 2012 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

Pag	e 2 Mark Scheme: Teachers' version IGCSE – May/June 2012	Syllabus 0445	
(-)	· · · · ·	°C,	X
(a)	Accept any four additional suitable points – easy to cle water, appropriate height/position, items easy to acce	ean, resists	36.
	matches bathroom, etc.	(1x4)	190
(b)	Accept drawings of any two suitable places - on shelf,	on wall, on	
	window ledge, in drawer, etc.	(2x2)	[4]
(c)	Any suitable ideas. At least three different ideas for	r maximum	
	marks. Pro rata if fewer. Communication		
	Simple drawings displaying a low standard or limite	d range of	
	techniques	(0-2)	
	Clear drawings displaying a good standard and a techniques – shading /colour/annotation etc	a range of (3-4)	
	High quality drawings using a wide range of technique	s with clear	
	annotation and detail Suitability	(5-6)	
	Simplistic designs showing outlines only	(0-2)	
	Rather more detail, sensible solutions that could work	(3-4)	[40]
	Accurate solutions, good fitness for purpose, detailed co	Instruction (5-6)	[12]
(d)	Evaluation of each of the ideas. At least 3 evaluatio	ns up to 2	
	marks each Selection and justification. (1+1)	(0-6)	[8]
	Selection and Justification. (1+1)	(2)	[0]
(e)	Quality of drawing		
	Poor line quality, proportions, little detail Good line work, use of colour, proportions, some detail	(1) (2-3)	
	High standard throughout with a range of techniques		
	clearly all detail	(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 con be used		
	Most constructional detail may be obvious from overa	(0-2) all views or	
	with some annotation	(3-4)	
	All constructional detail will be clear with good anno additional detail drawings as necessary	otation and (5-6)	[12]
	additional detail drawings as necessary	(0-0)	ניבן
(f)	Suitable specific materials stated.	(2)	F 4 1
	Appropriate reasons for choice.	(2)	[4]
(g)	Suitable method stated.	(1)	
	Good detailed description of: processes tools.	(3) (2)	[6]
		[Total	: 50]

Page	3 Mark Scheme: Teachers' version	Syllabus	X
	IGCSE – May/June 2012	0445	20
(a)	Accept any four additional suitable points – appealing to simple instructions, reflect issue, can be folded, easily as sturdy for children's play, etc.		ambridg
(b)	Accept any four environmental issues – water conswasting energy, loss of forests, pollution, use of finite carbon footprint, etc.	servation, reserves, (2x2)	[4]
(c)	Any suitable ideas. At least three different ideas for marks. Pro rata if fewer. Communication Simple drawings displaying a low standard or limited techniques Clear drawings displaying a good standard and a techniques – shading /colour/annotation etc High quality drawings using a wide range of techniques annotation and detail	range of (0-2) range of (3-4)	
	Suitability Simplistic designs showing outlines only Rather more detail, sensible solutions that could work Accurate solutions, good fitness for purpose, detailed cons	(0-2) (3-4)	[12]
(d)	Evaluation of each of the ideas. At least 3 evaluations marks each Selection and justification. (1+1)	s up to 2 (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 to 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 constructional detail may be obvious from overall with some annotation All constructional detail will be clear with good annota additional detail drawings as necessary 	(4) (2) truction to (0-2) views or (3-4)	[12]
(f)	Suitable specific materials stated. Appropriate reasons for choice.	(2) (2)	[4]
(g)	Suitable method stated. Good detailed description of: processes tools.	(1) (3) (2)	[6]

		Syllabus	~
	IGCSE – May/June 2012	0445	°C
revo	ept any four additional suitable points – will no blving, easy to clean, hygienic, adjustable, fo essible, handle keeps cool, etc.	ot tip over, ood easily (1x4)	Da Cambridge
· ·	ept any two mechanisms – clockwork, electr et/wheel turning handle, vertical/horizontal rotating s	ric motors, pit, etc. (2x2)	[4]
mar Cor	suitable ideas. At least three different ideas for ks. Pro rata if fewer. nmunication		
tech	ple drawings displaying a low standard or limited nniques ar drawings displaying a good standard and a	(0-2)	
Higl ann	nniques – shading /colour/annotation etc h quality drawings using a wide range of techniques otation and detail tability	(3-4) s with clear (5-6)	
Sim Rat	plistic designs showing outlines only her more detail, sensible solutions that could work urate solutions, good fitness for purpose, detailed co	(0-2) (3-4) onstruction (5-6)	[12]
mar	luation of each of the ideas. At least 3 evaluation ks each	. (0-6)	101
Sele	ection and justification. (1+1)	(2)	[8]
(e) Qua	ality of drawing		
Poc	r line quality, proportions, little detail	(1)	
Hig	od line work, use of colour, proportions, some detail h standard throughout with a range of techniques		
	arly all detail tensions 2 or 3 overall dimensions only - 1	(4)	
Cor	Additional detail dimensions - 2	(2)	
A s	implistic approach showing little or no detail of con- used	struction to (0-2)	
	et constructional detail may be obvious from overa	· · ·	
All	constructional detail will be clear with good anno itional detail drawings as necessary	()	[12]
	able specific materials stated. propriate reasons for choice.	(2) (2)	[4]
	able method stated.	(1)	
(a) Sun			
(0)	od detailed description of: processes tools.	(3) (2)	[6]