CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the October/November 2015 series

0445 DESIGN AND TECHNOLOGY

0445/13

Paper 1 (Product 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.

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P	age 2		Syllabus	Pap					
		Cambridge IGCSE – October/November 2015	0445	13	5				
1	(a)	Accept any four additional suitable points – lightweight, easy to transport to bats/balls, balls cannot get squashed; surface of bats protected, com							
	(b)	Accept drawings of any two ways of locating balls – in recess, holes, cl	ips, slot, tu	be, etc 2 × 2	[4]				
2	(a)	Accept any four additional suitable points – attractive colour/shape/layo popular sport, low energy consumption, weather proof if outside, etc.	out, simple	wordin 1 × 4	ig, [4]				
	(b)	Accept drawings of any two movement methods – sliders, hinged portion rotation, cams, cranks, etc.	on, any forr	n of 2 × 2	[4]				
3	(a)	Accept any four additional suitable points – does not hurt golfer when r resistant, minimal power use, quiet in use, does not damage ball, can b distance, etc.			[4]				
	(b)	Accept drawings of any two return methods – fired by spring/elastic/arn belt/chain, etc.	n, tube, chu	ute, 2 × 2	[4]				
Qu	estio	ns 1, 2 and 3							
	(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 technique Clear drawings displaying a good standard and a range of techniques –		0–2					
		shading/colour/annotation etc. High quality drawings using a wide range of techniques with clear anno	tation and o	3–4 detail 5–6					
		Suitability Simplistic designs showing outlines only Rather more detail, sensible solutions that could work Accurate solutions, good fitness for purpose, construction detail		0–2 3–4 5–6	[12]				
	(d)	Evaluation of each of the ideas. At least three evaluations up to 2 mark Selection and justification (1+1)	s each	0–6 2	[8]				

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age 3	3 Mark Scheme	Syllabus	Pape	
	Cambridge IGCSE – October/November 2015	0445	13	
(e) (Quality of drawing			
• •	Poor line quality, proportions, little detail		1	
	Good line work, use of colour, proportions, some detail		2–3	
	High standard throughout with a range of techniques that show clearly a	all detail	4	
	Dimensions			
:	2 or 3 overall dimensions only – 1			
1	Additional detail dimensions – 1		2	
	Construction details			
	A simplistic approach showing little or no detail of construction to be use	ed	0–2	
	Most constructional detail may be obvious from overall views or with sor			
	······································		3–4	
	All constructional detail will be clear with good annotation and additiona	l detail drav	wings a	as
I	necessary		5–6	[1
(f)	Suitable specific materials stated (1 + 1)		2 2	
	Appropriate reasons for choice $(1 + 1)$		2	
,	Suitable method described		1	
	Good detailed description of: processes		0–3 0–2	
	tools		0–2	
				[5