## UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

**International General Certificate of Secondary Education** 

## MARK SCHEME for the May/June 2011 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.

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

Cambridge is publishing the mark schemes for the May/June 2011 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 – I	May/June 2011	0445	12	
(a)			suitable points – easy to cle nt, baby cannot fall off, storac		(1x4)	[4
(b)	Accept drawings of any <b>two</b> suitable storage systems – shelves, boxes, divisions, hooks, clips, etc.			(2x2)	[4	
(c)	Any suitable ideas. At least <b>three different</b> ideas for maximum marks. Pro rata if fewer.					
	Simple	Communication 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				(3-4)	
					(5-6)	
	Rather	tic designs showing ou more detail, sensible s	utlines only solutions that could work ss for purpose, detailed cons	struction	(0-2) (3-4) (5-6)	[12
(d)	Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each			(0-6)		
	Selection	on and justification. (1	+1)		(2)	[8
(e)	•	of drawing ne quality, proportions,	little detail		(1)	
	Good line work, use of colour, proportions, some detail High standard throughout with a range of techniques that show clearly all				(2-3)	
	detail <b>Dimen</b> :	sions 2 or 3 overall	dimensions only - 1		(4)	
	Constr		ail dimensions - 2		(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				(0-2)	
					(3-4)	
		rawings as necessary	se clear man gees anness		(5-6)	[12
(f)	Suitable	e <b>specific</b> materials st	ated.		(2)	
	Approp	riate reasons for choic	e.		(2)	[4
(g)		e method stated. etailed description of:			(1)	

Mark Scheme: Teachers' version

**Syllabus** 

**Paper** 

Page 2

[Total: 50]

	IGCSE – May/June 2011	0445	12		
		IGCSE – May/June 2011 0445		12	
	any <b>four</b> additional suitable points – appeul, include NEW TERM, lightweight, items loca		(1x4)	[4]	
•	Accept any <b>two</b> viewing systems – flap, clear sheet 'window', opening, grill, gauze, vacuum 'bubble', etc.			[4]	
-	Any suitable ideas. At least <b>three different</b> ideas for maximum marks. Pro rata if fewer.				
Simple Clear shadin	Communication 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				
	(5-6)				
Simplis Rather	stic designs showing outlines only more detail, sensible solutions that could worl		(0-2) (3-4) (5-6)	[12]	
Evalua	tion of each of the ideas. At least 3 evaluation	ns up to 2 marks each	(0-6)		
Selecti	on and justification. (1+1)		(2)	[8]	
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					
Dimen	sions 2 or 3 overall dimensions only - 1 Additional detail dimensions - 2		(2)		
A simp Most c	(0-2)				
All cor	structional detail will be clear with good an	notation and additional	(3-4) (5-6)	[12]	
Suitable <b>specific</b> materials stated.			(2)		
Approp	oriate reasons for choice.		(2)	[4]	
			(1) (3) (2)	[6]	
	Accept gauze, Any surata if f Comm Simple Clear or shading High or annota Suitab Simplis Rather Accura Evalua Selecti  Quality Poor ling Good ling High sidetail Dimen  Construct A simp Most or annota All condetail or suitable Approprints Suitable Approprints	Accept any two viewing systems – flap, clear sheet gauze, vacuum 'bubble', etc.  Any suitable ideas. At least three different ideas for rata if fewer.  Communication  Simple drawings displaying a low standard or limited Clear drawings displaying a good standard and a shading /colour/annotation etc High quality drawings using a wide range of annotation and detail  Suitability  Simplistic designs showing outlines only Rather more detail, sensible solutions that could work Accurate solutions, good fitness for purpose, detailed Evaluation of each of the ideas. At least 3 evaluation Selection and justification. (1+1)  Quality of drawing Poor line quality, proportions, little detail Good line work, use of colour, proportions, some detail bine standard throughout with a range of technique detail  Dimensions 2 or 3 overall dimensions only -1  Additional detail dimensions - 2  Construction details  A simplistic approach showing little or no detail of conduct constructional detail may be obvious from over annotation  All constructional detail will be clear with good and detail drawings as necessary  Suitable specific materials stated.  Appropriate reasons for choice.  Suitable method stated.  Good detailed description of: processes	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 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  Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each Selection and justification. (1+1)  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  Suitable specific materials stated. Appropriate reasons for choice.  Suitable method stated. Good detailed description of: processes	Accept any <b>two</b> viewing systems – flap, clear sheet 'window', opening, grill, gauze, vacuum 'bubble', etc. (2x2)  Any suitable ideas. At least <b>three different</b> ideas for maximum marks. Pro rata if fewer.  Communication  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  Suitability  Simplistic designs showing outlines only Rather more detail, sensible solutions that could work (3-4) Accurate solutions, good fitness for purpose, detailed construction (5-6)  Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each (0-6) Selection and justification. (1+1) (2)  Quality of drawing Poor line quality, proportions, little detail Good line work, use of colour, proportions, some 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 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 (5-6)  Suitable specific materials stated. (2) Appropriate reasons for choice. (2)  Suitable method stated. (1) Good detailed description of: processes	

Mark Scheme: Teachers' version

**Syllabus** 

**Paper** 

Page 3

[Total: 50]

	Page 4		Mark Scheme: Teachers' version		Syllabus	Paper	
			IGCSE – May/June 2011 0445		12		
3	(a)	Accept any <b>four</b> additional suitable points – will not tip over, east to clean, hygienic, no harm to pets, easy to fill, adjustable timing, food easily accessible, etc.				(1x4)	[4]
	(b)	Accept any <b>two</b> power sources – clockwork, battery power, rubber motor, low voltage supply/motor, solar power, etc.(similar batteries but different sizes 2 + 1)				(2x2)	[4]
	(c)	Any suitable ideas. At least <b>three different</b> ideas for maximum marks. Pro 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				(3-4) (5-6)	
		Rather	stic designs showing outli r more detail, sensible sol		struction	(0-2) (3-4) (5-6)	[12]
	(d)		ation of each of the ideas. ion and justification. (1+1	At least 3 evaluations up	to 2 marks each	(0-6) (2)	[8]
	(e)	Poor li Good I High s detail Dimen Const A simp Most co annota All con	Additional detail  ruction details  blistic approach showing liconstructional detail may bation	roportions, some detail range of techniques that someons only - 1	ction to be used ws or with some	(1) (2-3) (4) (2) (0-2) (3-4) (5-6)	[12]
	(f)		le <b>specific</b> materials state priate reasons for choice.	ed.		(2) (2)	[4]
	(g)		le method stated. detailed description of:	processes tools.		(1) (3) (2)	[6]

[Total: 50]