

## UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

### MARK SCHEME for the May/June 2006 question paper

#### 0445 DESIGN AND TECHNOLOGY

0445/02

Paper 2, maximum raw mark 60

These mark schemes are published as an aid to teachers and students, to indicate the requirements of the examination. They show the basis on which Examiners were initially instructed to award marks. They do not indicate the details of the discussions that took place at an Examiners' meeting before marking began. Any substantial changes to the mark scheme that arose from these discussions will be recorded in the published *Report on the Examination*.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes must be read in conjunction with the question papers and the *Report on the Examination*.

The minimum marks in these components needed for various grades were previously published with these mark schemes, but are now instead included in the Report on the Examination for this session.

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

CIE is publishing the mark schemes for the May/June 2006 question papers for most IGCSE and GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



Page 1	Mark Scheme	Syllabus	Paper
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Question Number		Breakdown of marks	Marks on script		
1	(a)	R60 quadrant curve complete hull	5 1	6	
	(b)	construction of semi ellipse and outline construction of R85 and line	4+1 2+3	10	
	(c)	mainsail pennant	2 2	4	
	(d)	mast correct width (2) – height (1) ball on top (1)	2+1 1	4	
	(e)	three letters drawn, guidelines, spacing	1+1+1	3	
	(f)	appropriate use of colour	0-3	3	<b>30</b>
2	(a)(i)	top of body 96 x 12	1		
		recess 5 x 30	1		
		Ø60 wheel	1		
		Ø10 shaft position	1		
		swivel 40 high	1		
		swivel standing proud 5 mm	1		
		M10 (1) 20 deep (1)	1+1		
		bolt 25 long	1		
		Hex Head to bolt (any orientation )	1		
	Section line on top of body	1			
	Section line on shaft	1	12		
	(ii)	body 60 x 66	1+1		
wheel Ø60 x 28 wide		1+1			
shaft evident		1+1			
2 x 6 mm gaps		1+1			
roll pin		1			
Ø20 swivel		1	10		
(iii)	wheel protruding from body	1+1			
	R30 curve	1			
	Ø30	1			
	Ø20	1			
	Width 60	1	6		
(b)	symbol match to drawing	1			
	accurate symbol drawn	1	2	<b>30</b>	

Page 2	Mark Scheme	Syllabus	Paper
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Question Number		Breakdown of marks	Marks on script		
3	(a)(i)	Plan length 140 (1) width 95 (1)	1+1	6	30
		elevation height	1		
		thickness of top	1		
		thickness of two sides	1		
		symbol match to projection used	1		
	(ii)	3 verticals correct spacing 3 x 2	6	15	
		2 horizontals correct spacing 2 x 2	4		
		<i>cup C</i>			
		Ø80 to scale(1) accurate circle (1)	1+1		
		Ø40 to scale(1) accurate circle (1)	1+1		
		Correct position on plan	1		
	(iii)	correct projection of Ø80	1	3	
		correct projection of Ø40	1		
		Height of cup C 100 from inner base	1		
(iv)	hole taken from top surface intersection	1	2		
	projected to Ø30 circle +/- 1 mm	1			
(b)	Cut-out or similar in side of tray for thumb		4		
	Size and position	2			
	quality of communication	2			
4	<i>General</i>			30	
	Sketching quality throughout	up to	3		
	approximate scale		1		
	suitable orientation		2		
	3 different roof heights	up to	3		
	3 parts of house in correct position	up to	3		
	<i>Accuracy</i>				
	Garage roof unequal length		1		
	Garage wall height front back different		2		
	Glass bricks in garage wall (16)		1		
	Canopy with post		1+1		
	Roof of canopy continues over single storey		1		
	Mezzanine height		1		
	Roofline of Mezzanine parallel to garage		1		
	Chimney in correct position		1		
	Roof of garage continues over mezzanine		1		
	Single storey correct size		1		
	<i>Detail</i>				
	Brace on post		1		
	2 shutters on large front window		1		
	1 shutter on small front window		1		
	1 shutter on mezzanine		1		
	lower part of door / shutter evident		1		
lower part of window / shutter evident		1			