UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2007 question paper

0445 DESIGN AND TECHNOLOGY

0445/02 Paper 2 (Graphic Products), maximum raw mark 50

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International Examinations

A1	Ø46 circle		[1]	
	35 × 45 rectangle		[1]	
	52 side equilateral triangle		[1]	
	octagon 22 side		[1]	
	hexagon 30 side		[1]	**[5]**
	circle		[1]	
	rectangle		[1]	
	equilateral triangle		[1]	
	hexagon		[1]	**[4]**
A2	Accuracy and Proportion of:			
	L		[1]	
	E		[1]	
	T		[1]	
	S		[1]	
	Height		[1]	
	Spacing		[1]	**[6]**
A3	**(a)** Overall height 141 ± 2mm		[1]	
	regular octagon		[1]	
	cuts to square		[1]	
	evidence of plots for clock		[1]	
	elliptical clock face drawn		[1]	
	base and tower in proportion		[1]	
	slope base to tower		[1]	**[7]**
	(b) One direction shadow		[1]	
	Graduation		[1]	
	Quality of reality		[1]	**[3]**

[Total Section A: 25]

B4 (a) on given centre lines

(i) Rocket body & nose cone:

Nose cone	[1]	
Ø20 tube	[1]	
Ø20 / Ø30 disc	[1]	
Ø30 tube	[1]	
Solid line to base of Ø30 tube	[1]	**[5]**

Tail fins:

Height	[1]	
Width	[1]	
Angle	[1]	
Construction of ellipse	[1]	
Outline of ellipse	[1]	**[5]**

(ii) Plan:

Circle evident	[1]	
4 fins at 90° (4x1)	[4]	**[5]**

(iii) Pentagonal base:

Disc of Ø100	[1]	
Construction evident (Pr 1-2)	[2]	
Regular pentagon (Pr 1-2)	[2]	**[5]**

(b) Tail fin joint:

Method of joining two fins (cross halving) (Pr 1-2)	[2]	
Method of joining fins to Ø30 tube (Pr 1-2)	[2]	
Notes	[1]	**[5]**

[Total: 25]

B5 (a) EV

Overall height to hexagon	[1]	
Top evident	[1]	
Inset of top in hidden detail	[1]	
Hidden detail of hole in top	[1]	
Base evident	[1]	
Inset of base in hidden detail	[1]	
Projected in line from plan	[1]	

PLAN

Hexagon correct size to scale	[1]	
Regular hexagon	[1]	
Circle drawn for hole in top	[1]	**[10]**

(b) Development sides:

Six sides all same width as given (6×1)	[6]	
Two regular hexagons (2×1)	[2]	
Hex with Ø60 hole	[1]	
One end only	[1]	
Fold in spacers (2×2)	[4]	
One flap	[1]	**[15]**

[Total: 25]