

**UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS**  
International General Certificate of Secondary Education

**MARK SCHEME for the October/November 2007 question paper**

**0445 DESIGN AND TECHNOLOGY**

**0445/02**

Paper 2 (Communication), 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.

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.

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Breakdown  
of marks

<b>A1</b>	Rear Wheel $\varnothing 60$	1	
	Rectangular engine 100 x 40	1	
	Square tractor cab 64 side	2	
	Semi-circular roof of cab $\varnothing 64$	2	
	Diamond chimney 50 x 30	2	
	Equilateral triangle 35 side	1	[9]
<b>A2</b>	Accuracy and Proportion of:		
	<b>A</b>	1	
	<b>N</b>	1	
	<b>C</b>	1	
	<b>E</b>	1	
	Height	1	
	Spacing	1	[6]
<b>A3 (a)</b>	(i) Measurement to correct scale 500 long or 250 wide or 125 high	1	
	(ii) Symbol correct way round (1) Quality drawing in projection (1)	2	[3]
<b>(b)</b>	Length 100	1	
	Width 50	1	
	Height 25	1	
	Correct orientation	1	[4]
<b>(c)</b>	Means of location (1)/able to stack (1) Quality sketch and notes	2 1	[3]

**[Section A Total: 25]**

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	Breakdown of marks	
<b>B4 (a) Semi ellipse:</b>		
Correct width	1	
Correct height	1	
Construction (PR 1–2)	2	
Accuracy of outline	1	[5]
<b>(b) Cup and Straw:</b>		
Base (1) and side angle (1)	2	
Straw upright angle (1) + crank (1)	2	
Overall height of straw	1	[5]
<b>(c) Semi-octagon:</b>		
Correct number of sides	1	
Evidence of square (1)		
Construction of one side (1)	2	
Correct length of one constructed side	1	
Accuracy of outline	1	[5]
<b>(d) Burger pictogram:</b>		
Two R10 – arcs (1) construction (1)	2	
Straight lines to R10 arcs 1+1	2	
Complete rectangle filling end	1	[5]
<b>(e) Direction arrow:</b>		
Vanishing point evident	1	
Overall height projected	1	
Overall height correct	1	
Angles correct	1	
Arrow stem correct thickness	1	[5]

**[Total: 25]**

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Breakdown  
of marks**B5 (a) EV**

Two sides to hexagon	1	
1st angle projection	1	
In line from plan	1	
Overall height	1	
Angle of top 45°	1	

**PLAN**

Hexagon correct size to scale	1	
Correct orientation	1	
Circle drawn for window	1	
Fin – height (1) width (1)	2	[10]

**(b) Development sides**

Six sides same width as given	1	
Joint correct position ( two sides to left )	1	
Two long sides (1) angle correct (1)	2	
Two short sides (1) angle correct (1)	2	
One tall rectangle 110 high	1	[7]

**Development top**

True length from EV for hexagon lid	1	
Hex width plotted from Plan	1	
Construction of ellipse evident from Plan	1	
Ellipse drawn to reference points	1	[4]

**(c) Sketch of support**

Tail fin correct size/proportion	1	
Satisfies brief	1	
Attaches without glue	1	
Quality of sketch (0–1) no notes	1	[4]

**[Total: 25]**