



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

DESIGN AND TECHNOLOGY

0445/13

Paper 1 Product Design

May/June 2017

MARK SCHEME

Maximum Mark: 50

Published

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This document consists of **3** printed pages.

Question	Answer	Marks
1(a)	Accept any four additional suitable points – easy to access, hygienic, easy to clean, food does not blow away, water does not spill. Accept other valid responses. 1×4	4
1(b)	Accept drawings of any two suitable methods – recess in surface, edge around feeder, cover on feeder, receptacles fixed down/screwed/clipped. Accept other valid responses. 2×2	4

Question	Answer	Marks
2(a)	Accept any four additional suitable points – attractive colour/shape, easy to store, manageable size, easy to hold, easy to open. Accept other valid responses. 1×4	4
2(b)	Accept drawings of any two sealing methods – fold in flap/tab, plastic cap, plug, clip, zip. Accept other valid responses. 2×2	4

Question	Answer	Marks
3(a)	Accept any four additional suitable points – hygienic, easy to clean, easy access for animals, does not scare animals, quiet in use. Accept other valid responses. 1×4	4
3(b)	Accept drawings of any two control methods – flap, sliding door, conveyer belt, buckets, spiral. Accept other valid responses. 2×2	4

Question	Answer	Marks
1, 2 and 3(c)	Any suitable ideas. At least three different ideas for maximum marks. Pro rata if fewer.	
	<p>Communication Simple drawings displaying a low standard or limited range of techniques. 0–2 Clear drawings displaying a good standard and a range of techniques – shading, colour, annotation. 3–4 High quality drawings using a wide range of techniques with clear annotation and detail. 5–6</p>	6
(d)	Suitability Simplistic designs showing outlines only. 0–2 Rather more detail, sensible solutions that could work. 3–4 Accurate solutions, good fitness for purpose, construction detail. 5–6	6
	<p>(d) Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each. 6</p> <p>Selection and justification. 1+1 2</p>	
(e)	<p>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 all detail. 4</p>	4
	<p>Dimensions 2 or 3 overall dimensions only 1 Additional detail dimensions 1</p>	2
	<p>Construction detail A simplistic approach showing little or no detail of construction to be used. 0–2 Most construction detail may be obvious from overall views or from some annotation. 3–4 All construction detail will be clear with good annotation and additional detail drawings as necessary. 5–6</p>	6
(f)	Suitable specific materials stated. 1+1	4
	Appropriate reasons for choice. 1+1	
(g)	Suitable method described. 1	6
	Good detailed description of: processes 0–3 tools 0–2	