



Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

DESIGN AND TECHNOLOGY

0445/13

Paper 1 Product Design

October/November 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, lightweight, stackable, portable, stands by itself, waterproof, place to hang leather. AOVR 1 × 4	4
1(b)	Accept drawings of any two draining methods – through holes, slots, cut away edge, grill, inclined surface. AOVR 2 × 2	4

Question	Answer	Marks
2(a)	Accept any four additional suitable points – attractive colour/shape, has impact, easy to transport, folds up, reflects car brand, easy to access brochures. AOVR 1 × 4	4
2(b)	Accept drawings of any two joining methods – tabs and slots, 'velcro', clips, rings, tape. AOVR 2 × 2	4

Question	Answer	Marks
3(a)	Accept any four additional suitable points – easy to fit torch, does not damage torch, adjustable angle/height, access to switch, stable, foldable. AOVR 1 × 4	4
3(b)	Accept drawings of any two adjusting mechanisms – bolt and wingnut, screw thread, slot, telescopic arm, flexible arm. AOVR 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. 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 [max 6 marks] 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 [max 6 marks]	12

Question	Answer	Marks
1, 2 and 3 (d)	Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each. [max 6 marks]	8
	Selection and justification. 1 + 1 [max 2 marks]	
1, 2 and 3 (e)	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. 1 2–3 4 [max 4 marks]	12
	Dimensions 2 or 3 overall dimensions only Additional detail dimensions 1 1 [max 2 marks]	
	Construction detail A simplistic approach showing little or no detail of construction to be used. Most construction detail may be obvious from overall views or from some annotation. All construction detail will be clear with good annotation and additional detail drawings as necessary. 0–2 3–4 5–6 [max 6 marks]	
1, 2 and 3 (f)	Suitable specific materials stated. 1 + 1	4
	Appropriate reasons for choice. 1 + 1	
1, 2 and 3 (g)	Suitable method described. 1	6
	Good detailed description of: processes tools 0–3 0–2	