

Cambridge International Examinations Cambridge International General Certificate of Secondary Education

DESIGN AND TECHNOLOGY

Paper 1 Product Design SPECIMEN MARK SCHEME 0445/01 For Examination from 2015

1 hour 15 minutes

MAXIMUM MARK: 50

This document consists of 4 printed pages.



1	(a)	Accept any four additional suitable points – easy to assemble/fold, stable in use, lightweight, easy to transport, comfortable to sit on, etc.	(1 × 4)	[4]
	(b)	Accept drawings of any two suitable pivots or sliding mechanisms – hinges, screw/bolt pivots, rods, pins, rivets, sliders, notches, etc.	(2 × 2)	[4]
	(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 Clear drawings displaying a good standard and a range of techniques – shading/colour/annotation etc. High quality drawings using a wide range of techniques with clear annotation and detail Suitability Simplistic designs showing outlines only Rather more detail, sensible solutions that could work Accurate solutions, good fitness for purpose, construction detail	(0–2) (3–4) (5–6) (0–2) (3–4) (5–6)	[12]
	(d)	Evaluation of each of the ideas. At least three evaluations up to 2 marks each Selection and justification. (1 + 1)	(0–6) (2)	[8]
	(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 Dimensions 2 or 3 overall dimensions only – 1 Additional detail dimensions – 2 Construction details A simplistic approach showing little or no detail of construction to be used Most constructional detail may be obvious from overall views or with some annotation All constructional detail will be clear with good annotation and additional detail drawings as necessary	 (1) (2-3) (4) (2) (0-2) (3-4) (5-6) 	[12]
	(f)	Suitable specific materials stated. (1 + 1) Appropriate reasons for choice. (1 + 1)	(2) (2)	[4]
	(g)	Suitable method stated. Good detailed description of: processes tools.	(1) (0–3) (0–2)	[6]

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2	(a)	Accept any four additional suitable points – compact, secure, weather resistant, easy to carry, access to contents, protects contents, etc.	(1 × 4)	[4]
	(b)	Accept drawings of any two suitable types of handle – cord/rope, ribbon/strap, case type, etc.	(2 × 2)	[4]
	(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 Clear drawings displaying a good standard and a range of techniques – shading/colour/annotation etc. High quality drawings using a wide range of techniques with clear annotation and detail Suitability Simplistic designs showing outlines only Rather more detail, sensible solutions that could work Accurate solutions, good fitness for purpose, construction detail	(0–2) (3–4) (5–6) (0–2) (3–4) (5–6)	[12]
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	(f)	Suitable specific materials stated. (1 + 1) Appropriate reasons for choice. (1 + 1)	(2) (2)	[4]
	(g)	Suitable method stated. Good detailed description of: processes tools.	(1) (0–3) (0–2)	[6]

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(u)	fixing, little maintenance, transportable, creates movement, makes a noise, etc.	(1 × 4)	[4]
(b)	Accept drawings of any two power sources – windmill, solar panels, water power from river/stream, clockwork, battery powered motor, etc.	(2 × 2)	[4]
(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 Clear drawings displaying a good standard and a range of techniques – shading/colour/annotation etc. High quality drawings using a wide range of techniques with clear annotation and detail Suitability Simplistic designs showing outlines only Rather more detail, sensible solutions that could work Accurate solutions, good fitness for purpose, construction detail	(0–2) (3–4) (5–6) (0–2) (3–4) (5–6)	[12]
(d)	Evaluation of each of the ideas. At least three evaluations up to 2 marks each Selection and justification. (1 + 1)	(0–6) (2)	[8]
(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 Dimensions 2 or 3 overall dimensions only – 1 Additional detail dimensions – 2 Construction details A simplistic approach showing little or no detail of construction to be used Most constructional detail may be obvious from overall views or with some annotation All constructional detail will be clear with good annotation and additional detail drawings as necessary	(1) (2–3) (4) (2) (0–2) (3–4) (5–6)	[12]
(f)	Suitable specific materials stated. (1 + 1) Appropriate reasons for choice. (1 + 1)	(2) (2)	[4]
(g)	Suitable method stated. Good detailed description of: processes tools.	(1) (0–3) (0–2)	[6]

(a) Accept any four additional suitable points - weather resistant, firm

[Total: 50]

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