CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the October/November 2014 series

0445 DESIGN AND TECHNOLOGY

0445/13 Paper 1 (Design), 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, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2014 series for most Cambridge IGCSE®, Cambridge International A and AS Level components and some Cambridge O Level components.

CAMBRIDGE
International Examinations

1 (a) Accept any **four** additional suitable points – easy to move around, easy to clean, lightweight, easy access to tools, easy to store, protects sharp tools, etc. 1×4 [4]

(b) Accept drawings of any **two** holding methods – holes, slots, spring clips, elastic bands, recesses, tubes, etc. 2×2 [4]

2 (a) Accept any **four** additional suitable points – hygienic issues, no contamination, moisture management, easy opening, clear labelling, stacking requirements, recycle, etc. 1×4 [4]

(b) Accept drawings of any **two** manufacturing methods – any shape of 'box', part card/plastic systems, development, vacuum form, etc. 2×2 [4]

3 (a) Accept any **four** additional suitable points – easy to use from front, stable in use, computer 'style', lockable at any height, freestanding, fix any screen, etc. 1×4 [4]

(b) Accept drawings of any **two** adjustment methods – ratchet, rack and pinion, counter balance, worm gear, pivot/lever, telescopic, sliders, etc. 2×2 [4]

Questions 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 etc.	3–4
High quality drawings using a wide range of techniques with clear annotation and detail	5–6

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 [12]

(d) Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each 0–6
Selection and justification $(1 + 1)$ 2 [8]

(e) 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	

Dimensions

2 or 3 overall dimensions only (1)		
Additional detail dimensions (1)	2	

Construction details

A simplistic approach showing little or no detail of construction to be used	0–2	
Most constructional detail may be obvious from overall views or with some annotation	3–4	
All constructional detail will be clear with good annotation and additional detail drawings as necessary	5–6	[12]

(f)

Suitable **specific** materials stated (1 + 1)	2	
Appropriate reasons for choice (1 + 1)	2	[4]

(g)

Suitable method stated	1	
Good detailed description of: processes	0–3	
tools	0–2	[6]

[50]