

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the May/June 2015 series

0445 DESIGN AND TECHNOLOGY

0445/12

Paper 1 (Product 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.

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- 1 (a) Accept any **four** additional suitable points – easy to move around, easy to access DVDs, DVDs do not fall out, compact, keeps dust off DVDs, easy to see display, has impact, etc. (1×4) [4]
- (b) Accept drawings of any **two** places – on counter, near the entrance, on the wall, near checkout, etc. (2×2) [4]
- 2 (a) Accept any **four** additional suitable points – attractive colour/shape, has impact, invites people to read, includes photos of some products sold, will go through letter boxes easily, etc. (1×4) [4]
- (b) Accept drawings of any **two** features – pop up, window to open, font size/colour, slider, photo of shop, raised products, etc. (2×2) [4]
- 3 (a) Accept any **four** additional suitable points – adjustable in length, takes different sizes and shapes, lightweight to hold, comfortable to hold, easy to store, simple to operate, etc. (1×4) [4]
- (b) Accept drawings of any **two** gripping mechanisms – screw cramps, jaws, levers, flexible rubber clips, spring clips, 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]

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(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 described. (1)
 Good detailed description of: processes (0–3)
 tools. (0–2) **[6]**

[Total: 50]