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## **UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS**

**International General Certificate of Secondary Education** 

## MARK SCHEME for the May/June 2011 question paper for the guidance of teachers

## 0445 DESIGN AND TECHNOLOGY

0445/11

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 must be read in conjunction with the question papers and the report on the examination.

• Cambridge will not enter into discussions or correspondence in connection with these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2011 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

| Page 2 |   | Mark Scheme: Teachers' version   | Syllabus  | Paper          |      |
|--------|---|--|-----------|----------------|------|
|        |   | IGCSE – May/June 2011  | 0445      | 11             |      |
| (a)    |   | any <b>four</b> additional suitable points – easy to cl<br>roof, appropriate height, baby cannot fall off, stora |           | (1x4)          | [4]  |
| (b)    | •   | Accept drawings of any <b>two</b> suitable storage systems – shelves, boxes, divisions, hooks, clips, etc.       |           |                |      |
| (c)    | Any su rata if f  |  |           |                |      |
|        | 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 de  | (5-6)  |           |                |      |
|        | Simplistic designs showing outlines only Rather more detail, sensible solutions that could work   |  |           | (0-2)<br>(3-4) |      |
|        |   | te solutions, good fitness for purpose, detailed con   | struction | (5-6)          | [12] |
| (d)    | Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each  |  |           |                |      |
|        | Selection   | on and justification. (1+1)  |           | (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 simp  | (0-2)  |           |                |      |
|        | 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  |  |           |                |      |
| (f)    | Suitable <b>specific</b> materials stated.  |  |           |                |      |
|        | Approp  | (2)  | [4]       |                |      |
| (g)    |   | e method stated.   |           | (1)            |      |
|        | Good d  | letailed description of: processes tools.  |           | (3)<br>(2)     | [6]  |

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[Total: 50]

| Page 3  |     | Mark Scheme: Teachers' version  |  | Syllabus  | Paper   |                                       |                         |      |
|---------|-----|---|--|---|---|---------------------------------------|-------------------------|------|
| i age o |     | •   |  | - May/June 2011 0445  |   | 11                                    | •                       |      |
| 2       | (a) | Accept any <b>four</b> additional suitable points – appeal to pupils, compact, colourful, include NEW TERM, lightweight, items located well, etc.   |  | (1x4)   | [4]   |                                       |                         |      |
|         | (b) | Accept any <b>two</b> viewing systems – flap, clear sheet 'window', opening, grill, gauze, vacuum 'bubble', etc.  |  |   |   | (2x2)                                 | [4]                     |      |
|         | (c) | Any suitable ideas. At least <b>three different</b> 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 –  |  |   |   | (0-2)                                 |                         |      |
|         |     | shading /colour/annotation etc<br>High quality drawings using a wide range of techniques with clear   |  |   |   | . (3-4)                               |                         |      |
|         |     | annotation and detail  Suitability  |  | (5-6)   |   |                                       |                         |      |
|         |     | Simplis<br>Rather   | stic desig   | •   | nes only<br>utions that could work<br>for purpose, detailed con           | struction                             | (0-2)<br>(3-4)<br>(5-6) | [12] |
|         | (d) | Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each  |  | (0-6)   |   |                                       |                         |      |
|         |     | Selecti   | on and j   | ustification. (1+1  | )   |                                       | (2)                     | [8]  |
|         | (e) | Poor ling Good ling High strategy detail Dimen  Constitute A simp Most contain All contains the | ine work tandard sions ruction listic app onstruct tion astruction | y, proportions, lit, use of colour, p throughout with 2 or 3 overall dir Additional detail details broach showing litional detail may | roportions, some detail<br>a range of techniques the<br>mensions only - 1 | ction to be used<br>iews or with some | (4)<br>(2)<br>(0-2)     | [12] |
|         | (f) | Suitable <b>specific</b> materials stated.  Appropriate reasons for choice.   |  | (2)<br>(2)  | [4]   |                                       |                         |      |
|         | (g) |   |  | d stated.<br>description of:  | processes tools.  |                                       | (1)<br>(3)<br>(2)       | [6]  |

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[Total: 50]

|   | Page 4 |   | Mark Scheme: Teachers' version  |  | Syllabus         | Paper                               |      |  |
|---|--------|---|---|--|------------------|-------------------------------------|------|--|
|   |        |   | IGCSE – N   | May/June 2011  |                  |                                     | 11   |  |
| 3 | (a)    | Accept any <b>four</b> additional suitable points – will not tip over, east to clean, hygienic, no harm to pets, easy to fill, adjustable timing, food easily accessible, etc.  |   |  |                  | (1x4)                               | [4]  |  |
|   | (b)    | Accept any <b>two</b> power sources – clockwork, battery power, rubber motor, low voltage supply/motor, solar power, etc.(similar batteries but different sizes 2 + 1)  |   |  |                  |                                     | [4]  |  |
|   | (c)    | Any suitable ideas. At least <b>three different</b> ideas for maximum marks. Pro rata if fewer. <b>Communication</b> 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 |   |  |                  | (0-2)<br>(3-4)                      |      |  |
|   |        | annota Suitab Simplis Rather  | ation and detail  | ·  |                  | (5-6)<br>(0-2)<br>(3-4)<br>(5-6)    | [12] |  |
|   | (d)    | Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each Selection and justification. (1+1)   |   | (0-6)<br>(2)   | [8]              |                                     |      |  |
|   | (e)    | Poor li<br>Good I<br>High si<br>detail<br>Dimen<br>Const<br>A simp<br>Most of   | tandard throughout with<br>asions 2 or 3 overall of<br>Additional details<br>ruction details<br>blistic approach showing<br>constructional detail may | little detail proportions, some detail a a range of techniques that dimensions only - 1 ail dimensions - 2 g little or no detail of construct y be obvious from overall vice | ction to be used | (1)<br>(2-3)<br>(4)<br>(2)<br>(0-2) |      |  |
|   |        | annotation All constructional detail will be clear with good annotation and additional detail drawings as necessary   |   |  | (3-4)<br>(5-6)   | [12]                                |      |  |
|   | (f)    |   | uitable <b>specific</b> materials stated. opropriate reasons for choice.  |  |                  |                                     | [4]  |  |
|   | (g)    |   | le method stated.<br>detailed description of:   | processes<br>tools.  |                  | (1)<br>(3)<br>(2)                   | [6]  |  |

[Total: 50]