WAN. Dalla

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2009 question paper for the guidance of teachers

0445 DESIGN AND TECHNOLOGY

0445/01

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.

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

CIE is publishing the mark schemes for the May/June 2009 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 | er er |
|--------|--------------------------------|----------|-------|
| | IGCSE – May/June 2009 | 0445 | 100- |

1

| (a) | Accept any four additional suitable points – accessible, stable in use, easy to refill, roll does not pull off easily, allow roll to rotate, hygienic, portable, etc. | 1 × 4 | Abridge |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|---------|
| (b) | Accept drawings of any two positions – on work surface, on the wall, in a cupboard/drawer, 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, detailed construction | 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 two or three 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. At least two . Appropriate reasons for choice. At least two . | 2 2 | [4] |
| (g) | Suitable method stated. Detailed description of process, including: processes and tools . | 1 3 2 | [6] |

[Total: 50]

| Page 3 | | e 3 | Mark Scheme: Teachers' version | Syllabus | 0 | r |
|--------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------------|--------|
| | | | IGCSE – May/June 2009 | 0445 | 200 | |
| 2 | (a) | Accept any four additional suitable points – stable in use, attract attention, include real produce, all round view, easy to move, etc. | | | 1×4 | Morida |
| | (b) | • | any two movement methods – rotation, electric/clocum, solenoid, etc. | | 2 × 2 | [4] |
| | (c) | Pro rata if fewer. Communication | | | 0–2 | |
| | | 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 | | | 3–4 5–6 | |
| | | Rather | lity tic designs showing outlines only more detail, sensible solutions that could work te solutions, good fitness for purpose, detailed cons | truction | 0–2 3–4 5–6 | [12] |
| | (d) | each. | ion of each of the ideas. At least three evaluations on and justification. (1+1) | up to 2 marks | 0–6 2 | [8] |
| | (e) | Poor lin Good lin High sta detail Dimens Constru A simpli | e quality, proportions, little detail ne work, use of colour, proportions, some detail andard throughout with a range of techniques that s sions two or three overall dimensions only – 1 Additional detail dimensions – 2 uction details istic approach showing little or no detail of construct onstructional detail may be obvious from overall view | tion to be used | 1 2-3 4 2 0-2 | |
| | | All cons | ion structional detail will be clear with good annotation a rawings as necessary | and additional | 3–4 5–6 | [12] |

(f)

(g)

Suitable **specific** materials stated. At least **two**. Appropriate reasons for choice. At least two.

Detailed description of process, including: processes

Suitable method stated.

and tools.

[Total: 50]

[4]

[6]

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| | Page 4 | | Mark Scheme: Teachers' version Syllabu | | * D. | er |
|------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------|------------|------|
| | | <u> </u> | IGCSE – May/June 2009 | 0445 | 80 | |
| 3 | (a) | Accept | any four additional suitable points – lightweight, ea | sy to operate, no | , Ca | Mb. |
| • | (4) | bending down, picks up different shapes, single handed use, etc. | | | Dana Ca | Tage |
| | (b) | b) Accept any two suitable flexible joints – hinges, pins, bolts/nuts, rivets, dowels, 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 | | | 0–2 | |
| | | | | · | 3–4 | |
| | and detail Suitability | | 5–6 | | | |
| | Simplistic designs showing outlines only | | 0–2 | | | |
| | | | more detail, sensible solutions that could work e solutions, good fitness for purpose, detailed cons | | 3–4 5–6 | [12] |
| | (d) | each. | ion of each of the ideas. At least three evaluations on and justification. (1+1) | up to 2 marks | 0–6 2 | [8] |
| (e) Quality of drawing | | Quality | of drawing | | | |
| | (0) | - | e quality, proportions, little detail | | 1 | |
| | | Good lir | ne work, use of colour, proportions, some detail | | 2–3 | |
| | | • | andard throughout with a range of techniques that s | how clearly all | 4 | |
| | | detail Dimens | sions two or three overall dimensions only – 1 Additional detail dimensions – 2 | | 4 2 | |
| | | Constr | uction details | | | |
| | | • | istic approach showing little or no detail of construct Instructional detail may be obvious from overall view | | 0–2 | |
| | | annotat | • | | 3–4 | |
| | | | rawings as necessary | a additional | 5–6 | [12] |
| | (f) | | specific materials stated. At least two. | | 2 | |
| | | Appropi | riate reasons for choice. At least two . | | 2 | [4] |

(g)

Suitable method stated.

and **tools**.

Detailed description of process, including: processes

[Total: 50]

[6]

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