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International General Certificate of Secondary Education

MARK SCHEME for the May/June 2006 question paper

0445 DESIGN AND TECHNOLOGY

0445/01

Paper 1, maximum raw mark 100

These mark schemes are published as an aid to teachers and students, to indicate the requirements of the examination. They show the basis on which Examiners were initially instructed to award marks. They do not indicate the details of the discussions that took place at an Examiners' meeting before marking began. Any substantial changes to the mark scheme that arose from these discussions will be recorded in the published Report on the Examination.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes must be read in conjunction with the question papers and the Report on the Examination.

The minimum marks in these components needed for various grades were previously published with these mark schemes, but are now instead included in the Report on the Examination for this session.

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

CIE is publishing the mark schemes for the May/June 2006 guestion papers for most IGCSE and GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

| Pá | age 1 | Mark Scheme | | yllab | . · · |
|------------------|--|---|-----------------------|-----------|----------------------|
| | | IGCSE – May/June | 2006 | 0445 | |
| uestion umber | | | Det ma | ail rk | Mark on script |
| | Half c | lete car ar vertical cut -2 horizontal cut -1 y of shading | 1 2 1 | | 4 |
| | | cations to leg to ground | 2 2 | | 4 |
| | Markiı Copin | saw (or similar) ng across g/ fret saw eg calipers | 1 1 1 1 1 | | 5 |
| | Select Plane Mark v | e material datum edge or file datum edge vidth or file to width | 1x | 4 | 4 |
| | Perma Screw Metal Perma Staple | s/Bolts anent | 1 1 1 1 1 | | 5 |
| | Plywo End g | od veneers - 2 or 1 rain - 2 or 1 | 2 2 | | 4 |
| | Level | over edge for 90° up to level of start | 1 1 2 | | 4 |
| | | ation for first support A or B A = 4 er for second B = 7 | | | 3 |
| | | ulleys, chain/sprockets, gears of direction | 2 1 | | 3 |
| | | ood reasons explained ons only without explanation | 2x 1x | | 4 |

| 1 4 | je 2 | Mark Scheme | Sylla | bu ~ | 0 |
|-----------------|--------------------|---|----------------|----------------------|------|
| | | IGCSE – May/June 2006 | 044 | 45 | Dac |
| estion Imber | | | Detail mark | Mark on script | Tman |
| (a) | | any suitable points – little space, stable, correct adjustable angle, folds up, lightweight etc. | 1x4 | 4 | |
| (b) | Accept bolt etc | any suitable flexible joints – hinges, fabric, screw, c. | 2x2 | 4 | |
| (c) | Comm | itable ideas. unication drawings displaying low standard or limited range | | | |
| | of tech Clear c | niques drawings displaying a good standard and a range | 0-2 | | |
| | High q | niques – shading/colour/annotation uality drawings using a wide range of techniques ear annotation and detail | 3-4 5-6 | 6 | |
| | Suitab Simplis | ility stic designs showing outlines only | 0-3 | Ū | |
| | | more detail, sensible solutions that could work te solutions, good fitness for purpose, detailed | 4-6 7-9 | 9 | |
| (d) | Evalua | tion of each of the ideas. At least 3 evaluations up | | 5 | |
| | | rks each. on and justification. (1+1) | 0-6 2 | 6 2 | |
| (e) | Poor lii | y of drawing ne quality, proportions, little detail | 0-3 | | |
| | High st | ine work, use of colour, proportions, some detail andard throughout with a range of techniques that learly all detail | 4-6 7-8 | 8 | |
| | Dimen Const | sions ruction details | 2 | 2 | |
| | constru | listic approach showing little or no detail of uctions to be used onstructional detail may be obvious from overall | 0-3 | | |
| | views o | or with some annotation structional detail will be clear with good annotation | 4-6 | | |
| (5) | | ditional detail drawings as necessary e materials stated. | 7-8 | 8 | |
| (f) | | ns for choice. | 1 3 | 4 | |
| (g) | | e method stated. detailed description of process, including materials | 1 | | |

| Γ | Page 3 | | 3 Mark Scheme | | bu | |
|---|---------------|----------------------|---|-------------|------------------------------|--|
| | | | IGCSE – May/June 2006 | 044 | 45 | |
| | stion 1ber | | | | Mark Mark on script | |
| 2 | (a) | area/c | t any suitable points – Attract attention, represent ountry, looks modern, impression of /movement etc. | 1x4 | 4 | |
| | (b) | | t any suitable methods – tabs and slots, slide into d joining pieces, 'velcro', adhesive tape etc. | 1x4 | 4 | |
| | (c) | Comm Simple | uitable ideas. nunication e drawings displaying low standard or limited range iniques | 0-2 | | |
| | | Clear | drawings displaying a good standard and a range iniques – shading/colour/annotation | 3-4 | | |
| | | High q | uality drawings using a wide range of techniques ear annotation and detail | 5-6 | 6 | |
| | | • | bility stic designs showing outlines only r more detail, sensible solutions that could work | 0-3 4-6 | | |
| | | | ate solutions, good fitness for purpose, detailed | 4-0 7-9 | 9 | |
| | (d) | | ation of each of the ideas. At least 3 evaluations up arks each. | 0-6 | 6 | |
| | | Select | ion and justification. (1+1) | 2 | 2 | |
| | (e) | Poor li Good | y of drawing ne quality, proportions, little detail line work, use of colour, proportions, some detail tandard throughout with a range of tashnigues that | 0-3 4-6 | | |
| | | show of Dimer | tandard throughout with a range of techniques that clearly all detail nsions ruction details | 7-8 2 | 8 2 | |
| | | A simp constr | olistic approach showing little or no detail of uctions to be used | 0-3 | | |
| | | views | constructional detail may be obvious from overall or with some annotation | 4-6 | | |
| | (f) | and ac | Istructional detail will be clear with good annotation Iditional detail drawings as necessary nethods with materials | 7-8 2x2 | 8 4 | |
| | (g) | Good | priate item communication skills clear detail | 2 3 2 | 7 | |

| | | | | | MAN . | | |
|----|----------------|----------------|--|----------------|------------------------|--|--|
| | Pag | ge 4 | Mark Scheme IGCSE – May/June 2006 | Sylla 044 | <u>bu</u> 45 | | |
| | estion mber | | | Detail mark | Mark Mark script | | |
| | | | | | script | | |
| 13 | (a) | | t any suitable points - little maintenance, safe in djustable, transportable, not damaged by elements | 1x4 | 4 | | |
| | (b) | | t any two suitable systems – screw, bolts/nuts, entre device, wedge etc. | 2x2 | 4 | | |
| | (c) | Comn Simple | uitable ideas. nunication e drawings displaying low standard or limited range nniques | 0-2 | | | |
| | | of tech | drawings displaying a good standard and a range nniques – shading/colour/annotation | 3-4 | | | |
| | | - | uality drawings using a wide range of techniques lear annotation and detail pility | 5-6 | 6 | | |
| | | Rathe | stic designs showing outlines only r more detail, sensible solutions that could work ate solutions, good fitness for purpose, detailed | 0-3 4-6 | | | |
| | | constr | • | 7-9 | 9 | | |
| | (d) | | ation of each of the ideas. At least 3 evaluations up arks each. | 0-6 | 6 | | |
| | | | ion and justification. (1+1) | 2 | 2 | | |
| | (e) | | ty of drawing | | | | |
| | | Good | ine quality, proportions, little detail line work, use of colour, proportions, some detail standard throughout with a range of techniques that | 0-3 4-6 | | | |
| | | show | clearly all detail | 7-8 | 8 | | |
| | | Const | nsions truction details | 2 | 2 | | |
| | | constr | olistic approach showing little or no detail of uctions to be used constructional detail may be obvious from overall | 0-3 | | | |
| | | views | or with some annotation | 4-6 | | | |
| | | | nstructional detail will be clear with good annotation dditional detail drawings as necessary | 7-8 | 8 | | |
| | (f) | | ole materials stated. ons for choice. | 1 3 | 4 | | |
| | (g) | | le method stated. | 1 | | | |
| | | Good | detailed description of process, including materials ocesses (2) and tools (2). | 6 | 7 | | |

| Page 5 Mark Scheme Syllabi iGCSE – May/June 2006 0445 estion Detail Mark Scheme mark or scri (a) Accept any suitable points – stores water and food, easy to clean, good access for birds, does not scare birds, animals cannot climb/get to etc. 1x4 4 (b) Accept any two suitable points – height, overhang, away from high walls/trees, small access to food, materials that animals cannot climb etc. 2x2 4 (c) Any suitable ideas. Communication 3-4 4 (c) Any suitable ideas. Communication 3-4 4 (d) Accept drawings displaying low standard or limited range of techniques – shading/colour/annotation 3-4 4 (d) Evaluation of each of the ideas. At least 3 evaluations up to 2marks each. 0-3 6 6 Suitability Simplistic designs showing ottlines only motors, some detail 4-6 6 6 Selection and justification. (1+1) 2 2 2 2 2 (e) Quality of drawing 2 2 2 2 2 2 <t< th=""><th>Г</th><th colspan="2">Page 5</th><th colspan="2">Mark Scheme</th><th colspan="3">Syllabu</th></t<> | Г | Page 5 | | Mark Scheme | | Syllabu | | |
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| from high walls/trees, small access to food, materials that animals cannot climb etc.2x24(c)Any suitable ideas. Communication Simple drawings displaying low standard or limited range of techniques – shading/colour/annotation High quality drawings using a wide range of techniques – shading/colour/annotation simplistic designs showing outlines only0-2Clear drawings displaying using a wide range of techniques – shading/colour/annotation3-4High quality drawings using a wide range of techniques | 4 | (a) | to clea | an, good access for birds, does not scare birds, | 1x4 | | | |
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| views or with some annotation4-6All constructional detail will be clear with good annotation and additional detail drawings as necessary7-8(f)Suitable materials stated.1 | | | A simp | blistic approach showing little or no detail of | 0-3 | | | |
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| | | | | | 7-8 | 8 | | |
| | | (f) | | | | 4 | | |
| (g) Suitable method stated. 1 Good detailed description of process, including materials | | (g) | | | 1 | | | |
| (2), processes (2) and tools (2). 6 7 | | | | | 6 | 7 | | |