MARK SCHEME for the October/November 2009 question paper

for the guidance of teachers

0445 DESIGN AND TECHNOLOGY

0445/01

Paper 1 (Common Core), 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.

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| F | Page 2 | Mark Scheme: Teachers' version | Syllabus | Paper | | |
|------|--|---|---|-------------------|--|--|
| | | IGCSE – October/November 2009 | 0445 | 01 | | |
| 1 (a | | ept any four suitable points – stable in use, easy to ess, qualified safety, attract attention, etc. (no repeats of | | × 4) [4] | | |
| (k | | ept drawings of any two suitable joints – dovetail, finge wed, nailed, hinges, etc. | • | × 2) [4] | | |
| (c | rata Con | rata if fewer. Communication | | | | |
| | tech | ole drawings displaying a low standard or limited niques Ir drawings displaying a good standard and a range of t | (0- | -2) | | |
| | | shading/colour/annotation etc. | | | | |
| | ann | n quality drawings using a wide range of techniques otation and detail ability | s with clear (5- | -6) | | |
| | Sim Rati | olistic designs showing outlines only her more detail, sensible solutions that could work urate solutions, good fitness for purpose, detailed constru | (0- (3- uction (5- | , | | |
| (c | eac | uation of each of the ideas. At least 3 evaluations up n oction and justification (1 + 1) | to 2 marks (0- (2) | • | | |
| (e | Poo Goc High all d Dim Con A si used Mos som All c | ensions 2 or 3 overall dimensions only – 1 Additional detail dimensions – 2 struction details mplistic approach showing little or no detail of constru | (4) (2) uction to be (0- ews or with (3- | -3) -2) -4) | | |
| (f | | able specific materials stated ropriate reasons for choice | (2) (2) | | | |
| (g | | e method stated | (1) | 1 | | |
| | | d detailed description of method, including: esses s | (3) (2) | | | |
| | | | | [Total: 50] | | |

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| Pag | je 3 | Mark Scheme: Teachers' version | Syllabus | Paper | |
|-------|---|--|--|---|--|
| | | IGCSE – October/November 2009 | 0445 | 01 | |
| 2 (a) | to carry | any four suitable points – stable when opened, lightw , attract attention, colourful, made from renewable m eats of question) | naterial etc. | × 4) [4] | |
| (b) | - | drawings of any two suitable joining methods ts, clips, elastic, hinges, etc. | | × 2) [4] | |
| (c) | rata if fe Commu Simple techniqu Clear du shading High qu annotat Suitabi Simplist Rather | Inication drawings displaying a low standard or limited ues rawings displaying a good standard and a range of te /colour/annotation etc. Jality drawings using a wide range of techniques ion and detail | range of (0- cchniques – (3- with clear (5- (0- (3- | -2) -4) -6) -2) -4) -6) [12] | |
| (d) | each | ion of each of the ideas. At least 3 evaluations up on and justification (1 + 1) | | -6) [8] | |
| (e) | Poor lin Good lin High sta all detai Dimens Constru A simplused Most co some all All const | of drawing e quality, proportions, little detail ne work, use of colour, proportions, some detail andard throughout with a range of techniques that si isons 2 or 3 overall dimensions only – 1 Additional detail dimensions – 2 uction details istic approach showing little or no detail of constru- onstructional detail may be obvious from overall vie notation structional detail will be clear with good annotation and rawings as necessary | how clearly (4) (2) ction to be (0- ews or with (3- d additional | -3) | |
| (f) | | e specific materials stated riate reasons for choice | (2) (2) | | |
| (g) | | e method stated etailed description of method, including: ses | (1) (3) (2) |) | |

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| (a) Accept any four suitable points – lightweight, easy to clean, easy to empty, insects/animals cannot escape, cannot damage insects, etc. (no repeats of question) (1 × 4) [r (b) Accept any two remote control systems – radio, infra red, bowden cable, linkages, string, etc. (c) Any suitable ideas. At least 3 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. High quality drawings using a wide range of techniques with clear annotation and detail Simplistic designs showing outlines only Rather more detail, sensible solutions that could work Accurate solutions, good fitness for purpose, detailed construction (d) Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each seach subtification (1 + 1) (e) Quality of drawing Poor line quality, proportions, little detail Good line work, use of colour, proportions, some detail (1) Dimensions 2 or 3 overall dimensions only – 1 Additional detail dimensions – 2 (c) Constructional detail may be obvious from overall views or with some annotation and additional detail dimensions – 2 (c) Suitable specific materials stated (2) [r (f) Suitable specific materials stated (2) [r (g) Suitable method stated (2) [r (g) Suitable method stated (2) [r | Pa | ge 4 | Mark Scheme: Teachers' version IGCSE – October/November 2009 | Syllabus 0445 | Paper 01 | |
|---|-------|--|---|---|--------------------------|--|
| (b) Accept any two remote control systems – radio, infra red, bowden cable, linkages, string, etc. (c) Any suitable ideas. At least 3 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. High quality drawings using a wide range of techniques with clear annotation and detail Simplistic designs showing outlines only (0-2) Rather more detail, sensible solutions that could work (3-4) Accurate solutions, good fitness for purpose, detailed construction (5-6) Suitability Poor line quality, proportions, little detail Good line work, use of colour, proportions, some detail (1) Good line work, use of colour, proportions, some 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 Dimensions 2 or 3 overall dimensions only – 1 Additional detail dimensions - 2 (2) Construction details A simplistic approach showing little or no detail of construction to be used (3-4) All constructional detail will be clear with good annotation and additional detail drawings as necessary (6-6) (7) Suitable specific materials stated (2) (2) (3) | 3 (a) | empty, | any four suitable points – lightweight, easy to clea insects/animals cannot escape, cannot damage insec | an, easy to cts, etc. (no | | |
| rata if fewer. Communication Simple drawings displaying a good standard and a 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 (0–2) Rather more detail, sensible solutions that could work (3–4) Accurate solutions, good fitness for purpose, detailed construction (5–6) (d) Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each | (b) | Accept | any two remote control systems – radio, infra red, bov | vden cable, | , <u> </u> | |
| each Selection and justification (1 + 1)(0-6) (2)(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(1) (2-3)Dimensions2 or 3 overall dimensions only – 1 Additional detail dimensions – 2(4)Dimensions2 or 3 overall dimensions only – 1 Additional detail dimensions – 2(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(3-4)(f)Suitable specific materials stated | (c) | rata if fe Commu Simple techniq Clear d shading High q annotat Suitabi Simplis Rather | ewer. unication drawings displaying a low standard or limited ues rawings displaying a good standard and a range of te /colour/annotation etc. uality drawings using a wide range of techniques ion and detail lity tic designs showing outlines only more detail, sensible solutions that could work | range of (0- cchniques – (3- with clear (5- (0- (3- | -4) -6) -2) -4) | |
| 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 (4) Additional detail dimensions - 2 (2) Construction details (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) [7] (f) Suitable specific materials stated Appropriate reasons for choice (2) [4] (g) Suitable method stated Good detailed description of method, including: Processes (3) | (d) | each | | (0- | , | |
| Appropriate reasons for choice (2) [4] (g) Suitable method stated Good detailed description of method, including: Processes (1) (3) | (e) | Poor lin Good lin High st all deta Dimens Constr A simp used Most co some a All cons | e quality, proportions, little detail ne work, use of colour, proportions, some detail andard throughout with a range of techniques that st il sions 2 or 3 overall dimensions only – 1 Additional detail dimensions – 2 uction details listic approach showing little or no detail of constru- constructional detail may be obvious from overall vie nnotation structional detail will be clear with good annotation and | how clearly (4) (2) ction to be (0- ews or with (3- d additional | -3)) -2) -4) | |
| Good detailed description of method, including: Processes (3) | (f) | | | | | |
| | (g) | Good d Process | etailed description of method, including: | (3) (2) |) | |

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