



DESIGN AND TECHNOLOGY

0445/11

Paper 1 Product Design

October/November 2017

MARK SCHEME

Maximum Mark: 50

Published

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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| Question | Answer | Marks |
|----------|--|-------|
| 1(a) | Accept any four additional suitable points – easy to access, lightweight, stackable, minimal size to carry, points covered, stands by itself. AOVR 1 × 4 | 4 |
| 1(b) | Accept drawings of any two securing methods – in holes, slots, clips, rubber bands, grooves. AOVR 2 × 2 | 4 |

| Question | Answer | Marks |
|----------|---|-------|
| 2(a) | Accept any four additional suitable points – attractive colour/shape, has impact, easy/comfortable to carry, specific sport, weatherproof. AOVR 1 × 4 | 4 |
| 2(b) | Accept drawings of any two school aspects – model of building, includes school crest, local landmark, local industry. AOVR 2 × 2 | 4 |

| Question | Answer | Marks |
|----------|---|-------|
| 3(a) | Accept any four additional suitable points – seen from wide angle, seen in bright / dull light, large numbers, above head height, specific display type. AOVR 1 × 4 | 4 |
| 3(b) | Accept drawings of any two number displays – electronic display, LED display, flashing lights, analogue display, cards AOVR 2 × 2 | 4 |

| Question | Answer | Marks |
|-------------------|---|-------|
| 1, 2 and 3 (c) | <p>Any suitable ideas. At least three different ideas for maximum marks. Pro rata if fewer.</p> <p>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. 3–4 High quality drawings using a wide range of techniques with clear annotation and detail. 5–6 [max 6 marks]</p> <p>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 [max 6 marks]</p> | 12 |

| Question | Answer | Marks |
|-------------------|---|-----------|
| 1, 2 and 3 (d) | Evaluation of each of the ideas. At least 3 evaluations up to 2 marks each. [max 6 marks] | 8 |
| | Selection and justification. 1+1 [max 2 marks] | |
| 1, 2 and 3 (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 4 [max 4 marks] | 12 |
| | Dimensions 2 or 3 overall dimensions only Additional detail dimensions 1 1 [max 2 marks] | |
| | Construction detail A simplistic approach showing little or no detail of construction to be used. Most construction detail may be obvious from overall views or from some annotation. All construction detail will be clear with good annotation and additional detail drawings as necessary. 0–2 3–4 5–6 [max 6 marks] | |
| 1, 2 and 3 (f) | Suitable specific materials stated. 1+1 | 4 |
| | Appropriate reasons for choice. 1+1 | |
| 1, 2 and 3 (g) | Suitable method described. 1 | 6 |
| | Good detailed description of: processes tools 0–3 0–2 | |