CAMBRIDGE INTERNATIONAL EXAMINATIONS

GCE Advanced Subsidiary Level and GCE Advanced Level

MARK SCHEME for the October/November 2013 series

9705 DESIGN AND TECHNOLOGY

9705/11 Paper 1, maximum raw mark 120

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.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

CAMBRIDGE
International Examinations

Section A

1 (a) (i) Suitable softwood named (1)
e.g. pine, parana pine, spruce, western red cedar

(ii) suitable glue named (1) [2]
e.g. aradite, epoxy resin

(b) (i) Cutting out of part A described (0–2)
Smoothing edges described (0–2)
Details of tools, equipment and safety precautions
(if necessary) (0–2) [6]

(ii) Describing how part B could be made and attached to part A (0–4)
Details of tools, equipment and safety precautions
(if necessary) (0–2) [6]

(iii) Describing how the rotor blades could be made and attached to part A (0–4)
Details of tools, equipment and safety precautions
(if necessary) (0–2) [6]

[Total: 20]

2 (a) Explanation of mallable (0–2) [2]
e.g. material that can undergo a degree of deformation/bending without rupture or cracking

(b) (i) Describing how jig could be made and used (0–4)
Details of tools, equipment and safety precautions
(if necessary) (0–2) [6]

(ii) Describing how the base could be marked out and made (0–4)
Details of tools, equipment and safety precautions
(if necessary) (0–2) [6]

(iii) Describing how the holes could be marked out and drilled (0–4)
Details of tools, equipment and safety precautions
(if necessary) (0–2) [6]

[Total: 20]

3 **(a)** Sketch and notes to explain that 8 cards could be cut from an A2 sheet (0–2) [2]

(b) **(i)** Process described (0–4)
Details of computer equipment/software (0–2) [6]

(ii) Lamination process described (0–4)
Details of tools, equipment and safety precautions (if necessary) (0–2) [6]

(iii) Cutting and folding described (0–2)
Gluing in correct position described (0–3)
At least 2 appropriate tools/safety precautions named (1) [6]

[Total: 20]

Section B

4 **(a)** Explanation of symbol (0–2) [2]
e.g. the e mark indicates that the contents (in grams or litres) is an average quantity

(b) Problem one identified and described (0–2)
Problem two identified and described (0–2) [4]
e.g. bottles will move around in box
side flaps can be seen through plastic window

(c) Explanation of how problem one could be overcome (0–3)
Explanation of how problem two could be overcome (0–3) [6]
e.g. make box smaller, add inserts
reduce size of side flaps or size of plastic window

(d) Situation has been analysed and relevant issues/points identified (0–3)
Explanation of why issues/points are considered relevant (0–3)
Specific examples/evidence used to support conclusions (0–2) [8]

[Total: 20]

5 **(a)** Explanation of symbol (0–2) [2]
e.g. Registered trade mark indicates that the name or symbol has been registered with a national trademark office

(b) Problem one identified and described (0–2)
Problem two identified and described (0–2) [4]
e.g. not a rigid/stable structure, shape of gate will distort
gate is not fixed to gate posts

(c) Explanation of how problem one could be overcome (0–3)
Explanation of how problem two could be overcome (0–3) [6]
e.g. add one or two diagonal members to the gate
add suitable hinges and/or catch to gate

(d) Situation has been analysed and relevant issue/points identified (0–3)
Explanation of why issues/points are considered relevant (0–3)
Specific examples/evidence used to support conclusions (0–2) [8]

[Total: 20]

6 **(a)** Explanation of symbol (0–2) [2]
e.g. Trade Mark, a trade mark is a name or symbol that allows a customer to tell a company or business from its competitors. It cannot be used in any form without permission

(b) Problem one identified and described (0–2)
Problem two identified and described (0–2) [4]
e.g. weak structure, roof does not have enough support
no facilities for public such as seats of more protection from wind, rain etc.

(c) Explanation of how problem one could be overcome (0–3)
Explanation of how problem two could be overcome (0–3) [6]
e.g. adding more support for roof, adding sides, adding seats, adding timetable board

(d) Situation has been analysed and relevant issues/points identified (0–3)
Explanation of why issues/points are considered relevant (0–3)
Specific examples/evidence used to support conclusions (0–2) [8]

[Total: 20]

7 **(a)** One pre-conceived idea presented (0–4)
OR
The development and selection of a range of ideas into a single design proposal which would appear to work but lacks some technical detail (5–8)
OR
The development and selection of a range of ideas into a single design proposal that includes sufficient technical detail to show that the proposed solution would clearly work (9–12)
Clarity and quality of sketching and explanatory notes (0–4)
Evaluation (reasons for selection) (0–4) [20]

(b) As for part **(a)** [20]

(c) As for part **(a)** [20]

(d) The drawing will exhibit a reasonable standard of outcome and show some of the required design features (0–5)
OR
The drawing will exhibit a good standard of outcome and show most of the design features required to make the product function as intended (6–9)
OR
The drawing will be completed to a high standard of outcome and fully show the design features required to make the product function as intended (10-14)

Some use made of colour and tone to enhance the visual impact of the drawing (0–2)
OR
Good use has been made of colour and tone to enhance the visual impact of the drawing (3–4)
OR
Very good use has been made of colour, tone and material representation to enhance the visual impact of the drawing (5–6) [20]

[Total: 80]

8 **(a)** One pre-conceived idea presented (0–4)
OR
The development and selection of a range of ideas into a single design proposal which would appear to work but lacks some technical detail (5–8)
OR
The development and selection of a range of ideas into a single design proposal that includes sufficient technical detail to show that the proposed solution would clearly work (9–12)
Clarity and quality of sketching and explanatory notes (0–4)
Evaluation (reasons for selection) (0–4) [20]

(b) As for part **(a)** [20]

(c) As for part **(a)** [20]

(d) **(i)** The drawing will exhibit a reasonable to good standard of outcome and will some of the required design features (0–5)
OR
The drawing will be completed to a good to high standard of outcome and fully show some of the features required to make the product function as intended (6–10)

Some use has been made of colour and tone to enhance the visual impact of the drawing (0–2)
OR
Good to very good use has been made of colour, tone and material representation to enhance the visual impact of the drawing (3–4) [14]

(ii) The drawing will exhibit a reasonable to good standard of outcome and will show some of the required design features (0–2)
OR
The drawing will be completed to a good to high standard of outcome and fully show the design features required to make the product function as intended (3–4)

Some use has been made of colour and tone to enhance the visual impact of the drawing (0–1)
OR
Good to very good use has been made of colour, tone and material representation to enhance the visual impact of the drawing (2) [6]

[Total: 80]