9705 DESIGN AND TECHNOLOGY

9705/12 Paper 12 (Written 1), maximum raw mark 120

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1 (a) Drawing shows layers of wood
   Notes identify thin layers of wood or veneers (1) [2]

   (b) (i) Making of template described (0–2)
   Use of template described (0–2)
   Details of tools and equipment (0–2) [6]

   (ii) Appropriate method of cutting out sides described (0–2)
   Appropriate methods of cutting out slots and smoothing edges described (0–2)
   Details of tools / equipment / safety (0–2) [6]

   (iii) Application of first coat of varnish described (0–2)
   Sanding and application of second coat or cleaning of equipment described (0–2)
   Details of tools / equipment / safety (0–2) [6]

   [Total: 20]

2 (a) Suitable metal named e.g. aluminium (1)
   Suitable reason given e.g. weather resistant (1) [2]

   (b) (i) Pattern making described (0–4)
   Details of tools / equipment / safety (0–2) [6]

   (ii) Casting process described (0–4)
   Details of tools / equipment / safety (0–2) [6]

   (iii) Suitable method of hinging described (0–4)
   Details of tools / equipment / safety (0–2) [6]

   [Total: 20]

3 (a) Drawing showing outer layers and corrugations (1)
   Notes explaining outer layers glue to corrugations or similar (1) [2]

   (b) Method joins corners but not securely (0–2)
   OR
   An appropriate secure joining method described (0–4)
   Notes used to clearly describe appropriate joining method (0–2) [6]

   (c) Appropriate scale (1)
   Base (1)
   Each side correctly drawn and positioned 4 × 1 (4) [6]

   (d) Some understanding of embossing (0–2)
   OR
   Good understanding of embossing (0–4)
   Details of tools / equipment / safety (0–2) [6]

   [Total: 20]
Section B

4 (a) Appropriate use shown – fitting is screwed to two pieces to join them at right angles
(0–2) [2]

(b) Problem 1 described
Problem 2 described
e.g. Problems related to parts missing
Poor instructions, not have correct equipment etc.
(0–2) [4]

(c) Explanation of how problem 1 could be overcome
Explanation of how problem 2 could be overcome
e.g. Provide quality control checks at the packaging stage
Better instructions particularly visual ones
Provide basic tools required for assemble with instructions for use
(0–3) [6]

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

[Total: 20]

5 (a) Appropriate explanation – relating to adjusting height and / or angle of chair
(0–2) [2]

(b) Problem 1 described
Problem 2 described
e.g. Related to monitor being too high
Poor access to keyboard
Chair and / or person’s legs will not fit under desk
(0–2) [4]

(c) Explanation of how problem 1 could be overcome
Explanation of how problem 2 could be overcome
e.g. how the position of some of the shelves could be altered and possibly some shelves removed.
(0–3) [6]

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

[Total: 20]

6 (a) Appropriate explanation related to protecting surface and / or giving it a shiny finish
(0–2) [2]

(b) Problem 1 described
Problem 2 described
e.g. Unstable weight at front would tip this design over
The part of the design holding the phone would fold flat
Difficult to see or take out phone
(0–2) [4]
(c) Explanation of how problem 1 could be overcome
   
   e.g. Making the bottom of the supporting strut angled rather than horizontal
   
   Adding a diagonal strut to the front part of the design
   
   Removing part of front, replacing with see through material [6]

(d) Situation has been analysed and relevant issues / points have been identified
   
   Explanation of why these issues / points are considered relevant [0–2] [8]

   [Total: 20]

Section C

7 (a) One pre-conceived idea presented [0–3]
    
    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 [4–7]
    
    OR
    
    The development and selection of a range of ideas into a single design proposal that includes sufficient technical details to show that the proposed solution would clearly work [8–10]

    Clarity and quality of sketching and explanatory notes [0–3]
    
    Evaluation (reasons for selection) [0–3] [16]

(b) As for part (a) [16]

(c) As for part (a) [16]

(d) As for part (a) [16]

(e) The drawing will exhibit a reasonable standard of outcome and show some of the required design features [0–3]
    
    OR
    
    The drawing will exhibit a good standard of outcome and show most of the design features required to make a product function as intended [4–7]
    
    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 [8–10]

    Some use 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] [16]

[Total: 80]

Question 8 and 9 as for Question 7

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