DESIGN AND TECHNOLOGY

Paper 1  Product Design

May/June 2018
1 hour 15 minutes

Candidates answer on the pre-printed A3 Answer Sheets.

Additional Materials: Standard drawing equipment and coloured pencils.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces on both printed Answer Sheets.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, glue or correction fluid.

DO NOT WRITE IN ANY BARCODES.

Answer one question.
Write/draw your answers in the spaces provided on the Answer Sheets.
You may use a calculator.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.
The total of the marks for this paper is 50.
Design a holder, for a drinks can and a book, that could be attached temporarily to a sunbed.

(a) List four additional points about the function of such a holder that you consider to be important. [4]

(b) Use sketches and notes to show two temporary methods of attachment for such a holder. [4]

(c) Develop and sketch three ideas for the holder. [12]

(d) Evaluate your ideas and justify why you have chosen one idea to develop more fully. [8]

(e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and important dimensions. [12]

(f) Suggest two suitable specific materials for your solution and give reasons for your choice. [4]

(g) Outline a method used to manufacture one part of your solution. [6]
2 It is important that people apply sun cream when spending time in the sun.

Design a point of sale display that would inform customers of the importance of using sun cream. The display should hold 20 bottles of sun cream and fold flat for sending to shops.

(a) List four additional points about the function of such a point of sale display that you consider to be important. [4]

(b) Use sketches and notes to show two methods of strengthening sheet card. [4]

(c) Develop and sketch three different ideas for the point of sale display. [12]

(d) Evaluate your ideas and justify why you have chosen one idea to develop more fully. [8]

(e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and important dimensions. [12]

(f) Suggest two suitable specific materials for your solution and give reasons for your choice. [4]

(g) Outline a method used to manufacture one part of your solution. [6]
3 It is often difficult to keep in the shadow of a sunshade as the position of the sun moves during the day.

Design a device that would move a sunshade as the position of the sun moves during the day.

(a) List four additional points about the function of such a device that you consider to be important. [4]

(b) Use sketches and notes to show two ways of clamping the 40 diameter sunshade pole. [4]

(c) Develop and sketch three ideas for the device. [12]

(d) Evaluate your ideas and justify why you have chosen one idea to develop more fully. [8]

(e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and important dimensions. [12]

(f) Suggest two suitable specific materials for your solution and give reasons for your choice. [4]

(g) Outline a method used to manufacture one part of your solution. [6]