



Cambridge International AS & A Level

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DESIGN & TECHNOLOGY

9705/32

Paper 3 A Level Written Paper

October/November 2025

2 hours 30 minutes

You must answer on the question paper.

You will need: Standard drawing equipment
Coloured pencils
Calculator

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- You may use a pencil or coloured pencils for any sketches, drawings or rough working.
- You may use 30°/60° and 45° set squares, a pencil compass and templates/guides if appropriate for any sketches or drawings.

INFORMATION

- The total mark for this paper is 100.
- The number of marks for each question or part question is shown in brackets [].
- All dimensions are in millimetres, unless otherwise stated.

This document has **16** pages. Any blank pages are indicated.

Answer **all** questions.

- 1 Fig. 1.1 shows details of a holder for business cards.

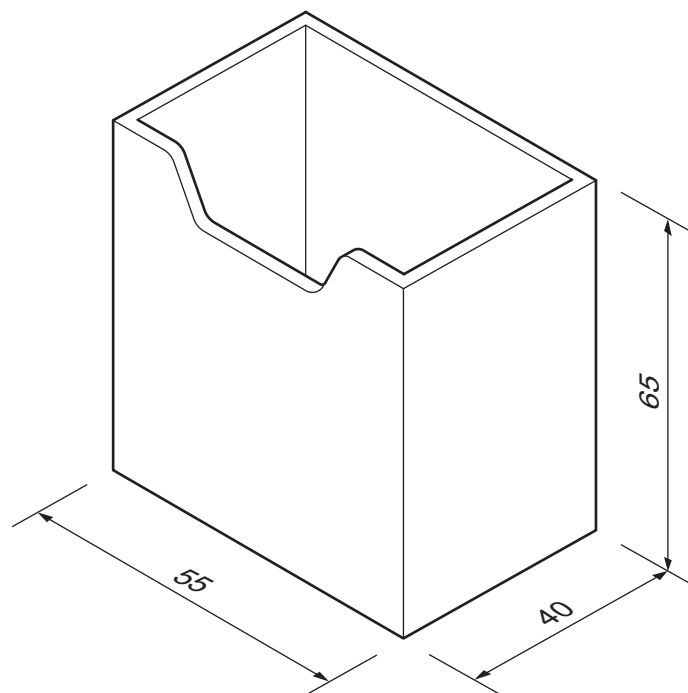


Fig. 1.1

- (a) State a suitable material for the holder shown in Fig. 1.1.

Give **two** reasons to justify your choice.

Material

Reason 1

.....

Reason 2

.....

[3]



- (b) Use sketches and notes to show how you would make **one** holder as shown in Fig. 1.1 in a school workshop.

In your response, you should give details of any tools and equipment you would use.



- (c) Use sketches and notes to describe the changes which may be necessary to the design, manufacturing method and the material selected to produce 1000 identical holders.



2 (a) Describe **one** of the stages in the product life cycle.

..... [2]

(b) Explain **two** reasons why material testing before production is important to the manufacturer.

1..... [4]

(c) Use sketches and notes to describe a jig that you could make in a school workshop, which would enable the cutting of 40 × 20 section hardwood into 200mm lengths.





- 3 (a) Identify a product that has been manufactured as one-off and describe **one** quality control check that could be carried out on the product.

product

quality control check

.....

.....

.....

.....

[3]

- (b)** Explain **one** external quality standard used in manufacturing industries.

.....

.....

.....

.....

.....

..... [3]

[3]

- (c) Explain **two** reasons why repair and maintenance is an important service sector in design and manufacturing industries.

.....

2.....

.....

[4]





4 (a) Explain **one** issue of concern relating to the extraction of raw materials.

..... [2]

(b) Give **one** example of how a designer would use photo manipulation software.

..... [2]

(c) Discuss the effectiveness of using customer observation to obtain market research information.

[6]





5 (a) Describe **one** way in which a filler can be used to enhance the properties of a polymer.

[2]

(b) Explain what is meant by CYMK with reference to printing.

[2]

(c) Discuss the benefits, to teams of designers, of collaborative working that uses digital technology.

[6]



- 6 A design company is to produce a holder for a digital drawing tablet, USB connector and pen.

The design specification states that the holder must be:

- easy to carry
- adjustable to allow the tablet to be supported at three different angles when in use
- manufactured as a batch of 250.

Details of the digital drawing tablet, USB connector and pen are given in Fig. 6.1.

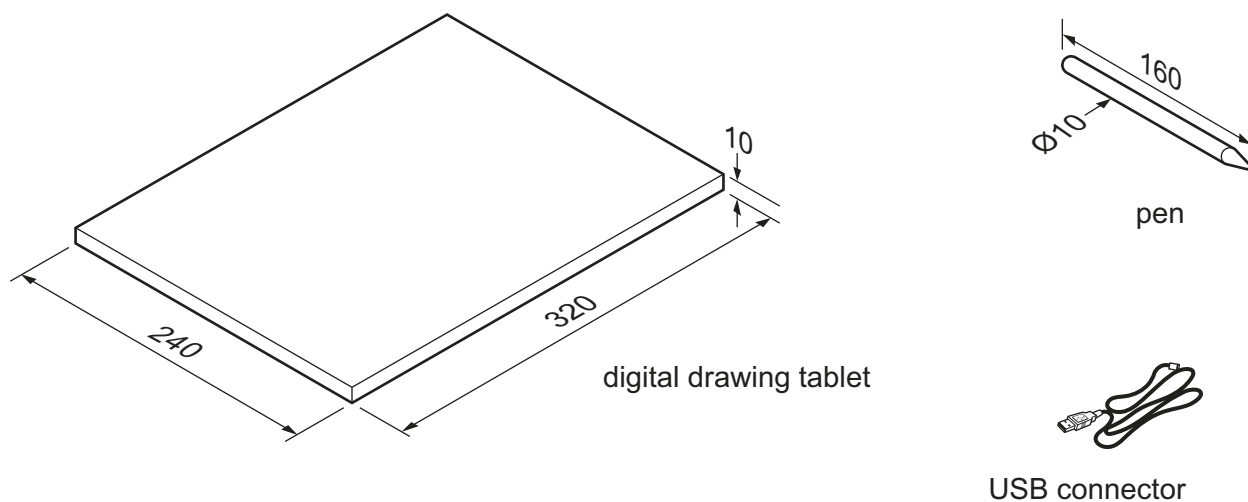


Fig. 6.1

Question 6 continues on page 10.



(a) Use sketches and notes to produce **two** different innovative ideas for the holder for a digital drawing tablet, USB connector and pen.

(i) Idea 1





(ii) Idea 2

[6]





(b) Evaluate your **two** ideas for the holder to select a final proposal for development. Justify your selection.

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..... [3]

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- (c) Use sketches and notes to develop your chosen idea to show details of functions, materials, construction and finishes.



(d) Use a method of your own choice to draw the complete design solution.

Include key details and dimensions.





(e) Write a detailed **manufacturing** specification for your chosen idea.

Your answer should include at least **four** different manufacturing specification points.

[5]

(f) Describe **one** disadvantage of using Computer-aided-design (CAD) when designing.

..... [2]





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