



Cambridge International AS & A Level

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DESIGN & TECHNOLOGY

9705/33

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 money box.

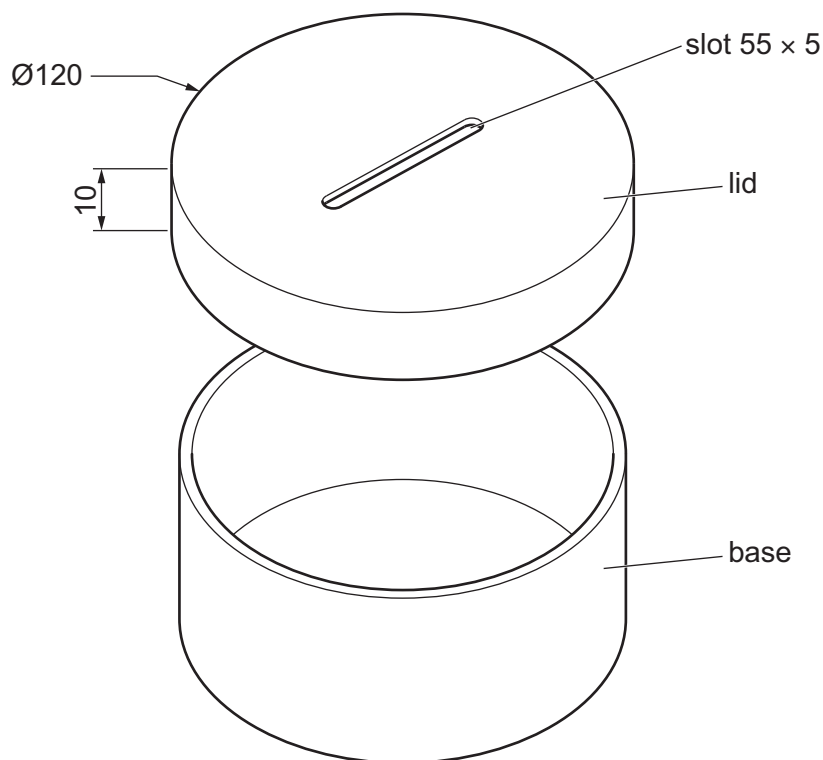


Fig. 1.1

- (a) State a suitable material for the money box lid 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** money box lid 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, the manufacturing method and the material selected, to produce 500 identical money box lids.



2 (a) Explain what is meant by the term work hardening.

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..... [2]

(b) Describe how additives are used to enhance the properties of polymers. Give **two** different examples.

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2

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..... [4]

(c) Use sketches and notes to show how a knock down (KD) fitting can be used on an item of furniture.

[4]





3 (a) Explain why injection moulding is unsuitable for producing a one-off component or product.

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..... [3]

(b) Explain **one** benefit for workers of a cell production manufacturing system.

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..... [3]

(c) Explain **two** ways in which the consumer can influence the design of products.

1

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2

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..... [4]





4 (a) Explain the term 'maturity' with reference to a product's life cycle.

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..... [2]

(b) Explain **one** benefit of using questionnaires to carry out market research.

..... [2]

(c) Discuss the importance of place when marketing products.

[6]





5 A car manufacturing company is looking for a site to produce its new car.

(a) Describe **one** factor that the company would have to consider when selecting a site.

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..... [2]

(b) Explain **one** method of Computer-aided manufacture (CAM) production that would be employed in a car manufacturing site.

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(c) Discuss the importance of quality systems in a car manufacturing production line.

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..... [6]





Question 6 starts on page 10.



- 6 A school for children aged 7–11 years requires a toy or puzzle for an after-school club.

The design specification states that the toy or puzzle must:

- be able to be used on a tabletop
- include movement of some form
- be manufactured as a batch of 10.

(a) Use sketches and notes to produce **two** different innovative ideas for the toy or puzzle.

(i) Idea 1





(ii) Idea 2





(b) Evaluate your **two** ideas for the toy or puzzle 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.

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(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** feature of the toy or puzzle where the safety of the children has been considered.

..... [2]





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