



GCE AS/A LEVEL

2603U10-1

MONDAY, 13 MAY 2024 – AFTERNOON

DESIGN AND TECHNOLOGY – AS unit 1

Product Design

2 hours plus your additional time allowance

Surname _____

First name(s) _____

Centre Number _____

Candidate Number 2 _____

For Examiner's use only

Question	Maximum Mark	Mark Awarded
1.	8	
2.	8	
3.	8	
4.	8	
5.	8	
6.	40	
Total	80	

ADDITIONAL MATERIALS

A calculator, ruler, pencil and coloured pencils.

INSTRUCTIONS TO CANDIDATES

Use black ink, black ball-point pen or your usual method.

Write your name, centre number and candidate number in the spaces provided on the front cover.

Answer ALL questions.

Write your answers in the spaces provided in this booklet. If you run out of space, use the additional page at the back of the booklet, taking care to number the question(s) correctly.

INFORMATION FOR CANDIDATES

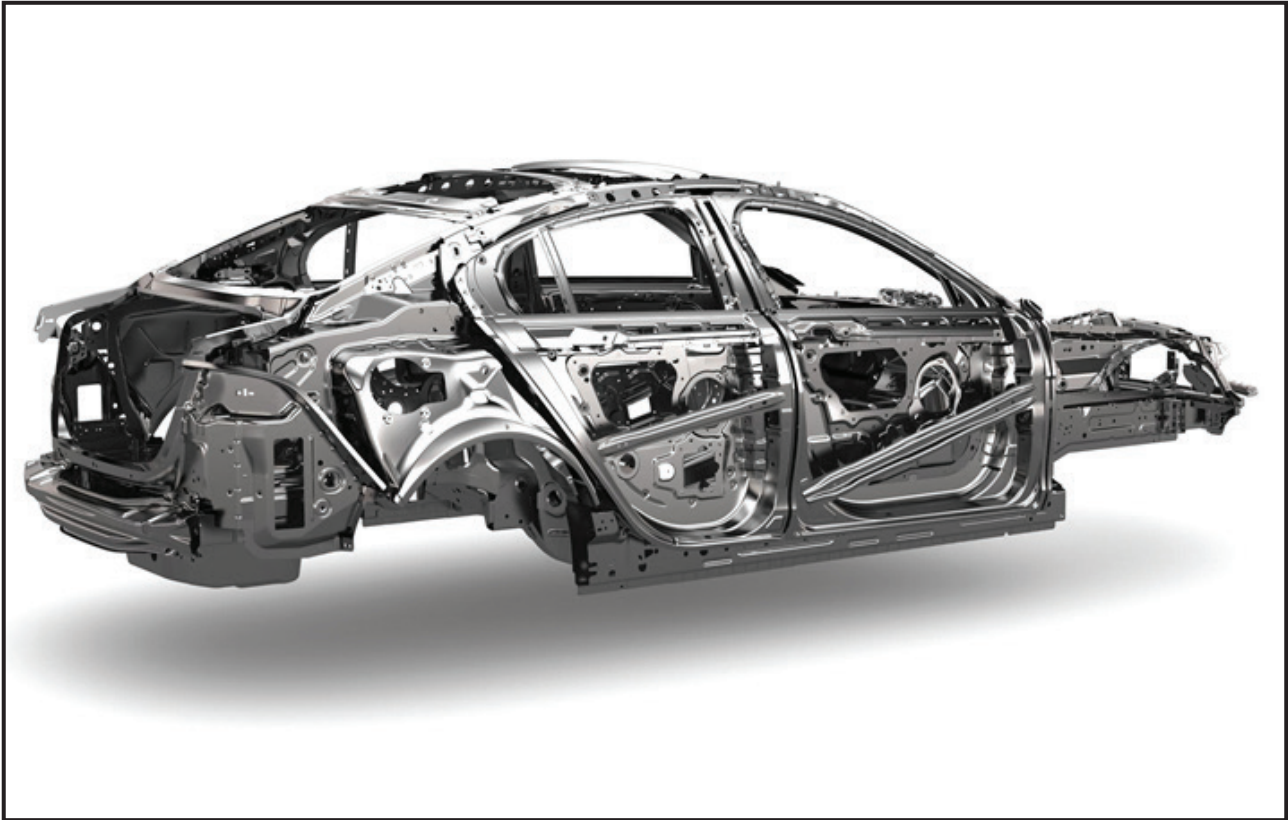
The number of marks is given in brackets at the end of each question or part-question. You are advised to divide your time accordingly.

The total number of marks available is 80.

You are reminded of the need for good English and orderly, clear presentation in your answers. The quality of your written communication, including appropriate use of punctuation and grammar, will be assessed in your answer to question 5.



- 1 (b) Select a part of the clothing rail. Using annotated sketches, design a jig that could be used for manufacturing the part. [4 marks]**



2. The car body shown opposite is manufactured from an aluminium alloy.

(a) Explain the meaning of the term 'alloy'. [2 marks]

(b) Explain the benefits for the manufacturer and consumer of using an aluminium alloy for the car body. [6 marks]





Product A

440 g

**Tin coated
steel can with
printed paper
label**



Product B

200 g per pot

**PET pot with printed card
package**

- 6 (a) Design a prototype space-saving collapsible stool for a young child. The space-saving collapsible stool is to be manufactured in plywood using a CNC machine.**

SPECIFICATION

The design of the stool must:

- **be a creative design that would appeal to a 3 to 5-year-old child**
- **have a seat height of 300 mm**
- **be easily assembled and dis-assembled**
- **make innovative use of plywood sheet**
- **be safe and stable**
- **be portable and lightweight.**

6 (a) You are required to use a mixture of 2D and 3D annotated sketches.

Marks will be awarded for:

- (i) An innovative design that meets the specification. [6 marks]**
- (ii) Clear constructional details. [4 marks]**
- (iii) The inclusion of appropriate dimensions. [2 marks]**
- (iv) The quality of communication. [4 marks]**

6 (a) Use the space below for your idea.

Note: You are not expected to render, colour or shade your design.

