

Answer **ONE** question only.

1 Built Environment and Construction focus

As part of a project to transform a seafront area the local council has decided to update existing beach huts.

A product that would replace an existing beach hut is required.

The product must:

- have a plan area not greater than 4 metres × 2.5 metres
- be manufactured from portable panels that can be assembled on site.

Follow the instructions given on the four A3 answer sheets to complete the question.

3 Food Focus

A local zoo wants to increase its range of food products in the cafe and shop.

A children's snack box is required.

The product must:

- be able to provide a nutritionally balanced lunch for a child
- be easily eaten without additional cutlery.

Follow the instructions given on the four A3 answer sheets to complete the question.

2 Engineering focus

It is often difficult to cut the branches of tall trees.

A product that would enable an adult to cut branches without the use of a ladder or steps is required.

The product must:

- be able to cut small branches up to 2.5 metres from ground level
- be able to be stored easily.

Follow the instructions given on the four A3 answer sheets to complete the question.

4 Graphic products focus

Fancy dress and themed parties are becoming very popular.

A product is required that could be assembled and disassembled to use at a children's party.

The product must:

- be able to be used on more than one occasion
- be suitable for sale in flat-pack form.

Follow the instructions given on the four A3 answer sheets to complete the question.

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<p>5 Manufacturing focus</p> <p>Children's bedrooms can be small and cramped.</p> <p>A multi-functional unit for a child's bedroom is required.</p> <p>The product must be:</p> <ul style="list-style-type: none"> • suitable for children of 3 years of age and above • produced as a flat-packed item for self-assembly by an adult. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>	<p>7 Systems and Control focus</p> <p>People can be at risk during very cold weather.</p> <p>A product that will clearly indicate that the temperature has fallen below a safe level in a room is required.</p> <p>The product must:</p> <ul style="list-style-type: none"> • have an audible and/or visual alarm to indicate that the temperature has fallen below the set level • have an adjustable temperature setting. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>
<p>6 Resistant materials focus</p> <p>It is often difficult to transport supplies to people that have been affected by severe weather conditions such as snow or floods.</p> <p>A product is required that could be used to transport supplies over short distances.</p> <p>The product must:</p> <ul style="list-style-type: none"> • be able to be pulled or pushed by a single person • be easily adaptable for use over different surface conditions. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>	<p>8 Textiles Focus</p> <p>Primary School children need protecting from the sun when working or playing outdoors.</p> <p>A wearable product that could be used to protect primary aged children from the sun is required.</p> <p>The product must:</p> <ul style="list-style-type: none"> • be suitable for a child aged between 4 and 11 years • be easily adapted to suit a range of sizes. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>
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Circle the question number you are answering

1 2 3 4 5 6 7 8

(a) Give **three** justified specification points.

1 _____

2 _____

3 _____

_____ [6]

Instructions to candidates

ALLOCATION OF MARKS FOR PAPER F524/02

- (a) specification points [6]
- (b) range of developed ideas [33]
- (c) final developed outcome [9]
- (d) communication [6]

[Total: 54]

All dimensions are in millimetres

Where necessary, calculators may be used

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S	R	D	E	F	C	Total

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- (b) Ideas with development
- A range of ideas [15]
 - Consider manufacturing/construction detail [12]
 - Evaluate ideas with reference to specification and volume production [6]
- [Total: 33]**

F524/02 PRODUCT DESIGN	CANDIDATE NAME	CANDIDATE NUMBER	CENTRE NUMBER
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				R	
				D	
				E	

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(g) Final developed outcome

Sketch a final developed outcome. Justify key design features. [9]

END OF QUESTION PAPER

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F	
C	

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