

<p>Answer <b>ONE</b> question only.</p> <p><b>1 Built Environment and Construction</b></p> <p>A school wishes to encourage students to cycle to school.</p> <p><b>A cycle storage area is required.</b></p> <p>The storage area must:</p> <ul style="list-style-type: none"> <li>• be a permanent structure;</li> <li>• hold up to 20 cycles securely.</li> </ul> <p>Follow the instructions given in the four A3 answer sheets to complete the question.</p>	<p><b>3 Food</b></p> <p>A leading supermarket wants to extend its range of single portion ready meals.</p> <p><b>A new product that will be suitable for the elderly is required.</b></p> <p>The product must:</p> <ul style="list-style-type: none"> <li>• be suitable for freezing;</li> <li>• meet the nutritional needs of the elderly.</li> </ul> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>
<p><b>2 Engineering focus</b></p> <p>An engineering company has identified a need for a stand for portable LCD projectors.</p> <p><b>A projector stand is required.</b></p> <p>The projector stand must:</p> <ul style="list-style-type: none"> <li>• be portable;</li> <li>• be easily adjusted for height and angle of projection.</li> </ul> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>	<p><b>4 Graphic Products</b></p> <p>A fruit drink manufacturer is sponsoring a National Athletics Team.</p> <p><b>A new design of drinks package that can be used by the team is required.</b></p> <p>The product must:</p> <ul style="list-style-type: none"> <li>• be suitable for use during training and competition;</li> <li>• promote sustainability.</li> </ul> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>
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<p><b>5 Manufacturing</b></p> <p>Many modern houses have gardens that have limited space for play equipment for young children.</p> <p><b>A play centre that can be easily put together and taken apart for storage is required.</b></p> <p>The play centre must:</p> <ul style="list-style-type: none"> <li>• be suitable for children between 5 and 9 years of age;</li> <li>• include a number of activities for the child to enjoy.</li> </ul> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>	<p><b>7 Systems and Control</b></p> <p>When a car breaks down at night, it can be very dangerous for the car owner to attempt repairs such as changing a wheel.</p> <p><b>An illuminated warning device is required.</b></p> <p>The device must:</p> <ul style="list-style-type: none"> <li>• be easy to carry in the car;</li> <li>• be suitable for use in all weather conditions.</li> </ul> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>
<p><b>6 Resistant Materials</b></p> <p>A new secondary school requires furniture for use at examination times.</p> <p><b>An integrated examination desk and seat is required.</b></p> <p>The product must:</p> <ul style="list-style-type: none"> <li>• have an adjustable desk height;</li> <li>• be able to be used for a range of school examinations.</li> </ul> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>	<p><b>8 Textiles</b></p> <p>A clothing manufacturer wants to extend its range of cycling wear.</p> <p><b>A new outer layer cycle jacket is required.</b></p> <p>The jacket must:</p> <ul style="list-style-type: none"> <li>• be unisex;</li> <li>• protect the wearer from severe weather.</li> </ul> <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 \_\_\_\_\_

\_\_\_\_\_

**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

\_\_\_\_\_ **[6]**

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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]**

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(b) Ideas with development (continued)

A3 SHEET 3 OF 4

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R	
D	
E	

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CENTRE NUMBER

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(c) Final Developed Outcome

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

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<b>F</b>	
<b>C</b>	

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