

<p>Answer ONE question only.</p> <p>1 Built Environment and Construction</p> <p>A school wishes to encourage students to cycle to school.</p> <p>A cycle storage area is required.</p> <p>The storage area must:</p> <ul style="list-style-type: none"> • be a permanent structure; • hold up to 20 cycles securely. <p>Follow the instructions given in the four A3 answer sheets to complete the question.</p>	<p>3 Food</p> <p>A leading supermarket wants to widen its range of single portion ready meals.</p> <p>A new product that will be suitable for the elderly is required.</p> <p>The product must:</p> <ul style="list-style-type: none"> • be suitable for freezing; • meet the nutritional needs of the elderly. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>
<p>2 Engineering focus</p> <p>An engineering company has identified a need for a stand for portable LCD projectors.</p> <p>A projector stand is required.</p> <p>The projector stand must:</p> <ul style="list-style-type: none"> • be portable; • be easy to adjust for height and angle of projection. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>	<p>4 Graphic Products</p> <p>A fruit drink manufacturer is sponsoring a National Athletics Team.</p> <p>A new design of drinks package that can be used by the team is required.</p> <p>The product must:</p> <ul style="list-style-type: none"> • be suitable for use during training and competition; • promote sustainability. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>
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<p>5 Manufacturing</p> <p>Many modern houses have gardens without much space for play equipment for young children.</p> <p>A play centre that can be easily put together and taken apart for storage is required.</p> <p>The play centre must:</p> <ul style="list-style-type: none"> • be suitable for children between 5 and 9 years of age; • include a number of activities for the child to enjoy. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>	<p>7 Systems and Control</p> <p>When a car breaks down at night, it can be very dangerous for the car owner to do repairs such as changing a wheel.</p> <p>An illuminated warning device is required.</p> <p>The device must:</p> <ul style="list-style-type: none"> • be easy to carry in the car; • be suitable for use in all weather conditions. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>
<p>6 Resistant Materials</p> <p>A new secondary school requires furniture for use at examination times.</p> <p>An integrated examination desk and seat is required.</p> <p>The product must:</p> <ul style="list-style-type: none"> • have an adjustable desk height; • be able to be used for a range of school examinations. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>	<p>8 Textiles</p> <p>A clothing manufacturer wants a wider range of cycling wear.</p> <p>A new outer layer cycle jacket is required.</p> <p>The jacket must:</p> <ul style="list-style-type: none"> • be unisex; • protect the wearer from severe weather. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>
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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

FOR EXAMINER'S USE	
R	
D	
E	

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CANDIDATE NUMBER

CENTRE NUMBER

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(c) Final Developed Outcome

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

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