

<p style="text-align: center;">Answer <b>ONE</b> question only.</p> <p><b>1 Built Environment and Construction</b></p> <p>There is a need to provide a wider range of facilities in a Community Farm.</p> <p><b>A covered outdoor area to provide washing facilities for children and adults who have come into contact with animals is required.</b></p> <p>The facility must:</p> <ul style="list-style-type: none"> <li>• have open access;</li> <li>• accommodate up to six users at a time.</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 school is proposing to install vending machines to dispense snack breakfast products.</p> <p><b>A suitable snack product for teenagers is required.</b></p> <p>The product must:</p> <ul style="list-style-type: none"> <li>• be ready to eat;</li> <li>• meet the nutritional needs of teenagers.</li> </ul> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>
<p><b>2 Engineering</b></p> <p>Many decorating and maintenance jobs around the house require a person to work on step ladders, which can be difficult to manoeuvre and store.</p> <p><b>A lightweight work platform is required for use around the house.</b></p> <p>The work platform must:</p> <ul style="list-style-type: none"> <li>• have a platform height of 500 mm;</li> <li>• be easy to store when not in use.</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 company providing party accessories wishes to extend its range of products.</p> <p><b>A matching facemask and hat for children to wear at parties is required.</b></p> <p>The product must:</p> <ul style="list-style-type: none"> <li>• include 3D features;</li> <li>• be produced as a batch of 10 000.</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>The storage of batteries prior to disposal needs to be done in such a way that they are kept safely away from young children.</p> <p><b>A child-proof container for used batteries is required.</b></p> <p>The container must:</p> <ul style="list-style-type: none"> <li>allow different sizes of battery to be stored separately.</li> <li>be suitable for production in batches of 10 000.</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>A kitchen appliance manufacturer has identified that there is a problem with saucepans boiling over.</p> <p><b>A product that prevents saucepans from boiling over is required.</b></p> <p>The product must:</p> <ul style="list-style-type: none"> <li>work with a range of saucepans;</li> <li>alert the cook before the saucepan boils over.</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 pre-school group for 3–4 year old children wishes to provide facilities for painting and drawing.</p> <p><b>A unit to enable children to draw and paint is required.</b></p> <p>The unit must:</p> <ul style="list-style-type: none"> <li>allow children to work in a standing or seated position;</li> <li>fold away for ease of storage.</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 toy manufacturer requires some new innovative designs for its educational toy range.</p> <p><b>A textile educational toy is required.</b></p> <p>The toy must:</p> <ul style="list-style-type: none"> <li>be suitable for children under 5 years of age;</li> <li>help the child develop their skills of coordination.</li> </ul> <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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(c) Final Developed Outcome

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

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<b>C</b>	

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