

<p style="text-align: center;">Answer ONE question only.</p> <p>1 Built environment and construction focus</p> <p>The owner of a residential complex has identified a need for a cycle storage unit.</p> <p>A cycle storage unit is required.</p> <p>The unit must:</p> <ul style="list-style-type: none"> • be a permanent structure • hold 20 cycles securely. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>	<p>3 Food focus</p> <p>An increasing number of people choose not to eat meat or dairy foods.</p> <p>A product that would provide alternative sources of protein is required.</p> <p>The product must:</p> <ul style="list-style-type: none"> • provide a good source of protein to the daily diet without containing meat or dairy • be suitable for college/university students. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>
<p>2 Engineering focus</p> <p>Digital projectors are widely used in schools and colleges.</p> <p>A product to hold a digital projector is required.</p> <p>The product must:</p> <ul style="list-style-type: none"> • be easily adjustable to suit different rooms • be suitable for use with all types and sizes of projectors. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>	<p>4 Graphic products focus</p> <p>Learning through play is an integral part of primary school education.</p> <p>A cardboard product that would encourage creative play is required.</p> <p>The product must:</p> <ul style="list-style-type: none"> • be lightweight and able to be flat-packed • be suitable for use by children aged 5 to 7 years old. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>
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<p>5 Manufacturing focus</p> <p>It is often difficult for students to find space in their accommodation to dry wet items of clothing.</p> <p>A product that can be used to dry wet items of clothing is required.</p> <p>The product must:</p> <ul style="list-style-type: none"> • be able to be stored easily when not in use • be suitable for production in a batch of 1000. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>	<p>7 Systems and control focus</p> <p>Walking a dog along unlit roads on a dark winter night can be dangerous for both the owner and the dog.</p> <p>A product to improve the safety of dogs and their owners is required.</p> <p>The product must:</p> <ul style="list-style-type: none"> • be fully adjustable • be easily attached and removed. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>
<p>6 Resistant materials focus</p> <p>There is increasing concern over the general health and fitness of children.</p> <p>A product that will enable children to exercise safely is required.</p> <p>The product must:</p> <ul style="list-style-type: none"> • be able to be used indoors and outdoors • be suitable for use by children aged 7 to 11 years old. <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p>	<p>8 Textiles focus</p> <p>Moving a child from a cot into a bed can sometimes be a difficult transition.</p> <p>A product that will encourage children to move into their own bed is required.</p> <p>The product must:</p> <ul style="list-style-type: none"> • be suitable for use with any bed • be suitable for children aged 2 to 5 years old. <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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(c) Final developed outcome

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

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END OF QUESTION PAPER

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