



Pearson  
Edexcel

## Mark Scheme (Results)

Summer 2023

Pearson Edexcel GCSE  
In Design & Technology (1DT0)  
1B: Papers & Boards

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## General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.



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## Component 1 mark scheme

### Section A – Core content

Question number	Answer	Additional guidance	Mark
1 (a) (i)	Any <b>one</b> property from: <ul style="list-style-type: none"> <li>• Electrical insulator / does not conduct electricity (1)</li> <li>• Good heat resistance (1)</li> <li>• Good chemical resistance (1)</li> <li>• Hard (1)</li> <li>• Stiffness / rigidity (1)</li> </ul>	Do not accept Insulator on its own	<b>(1)</b>

Question number	Answer	Mark
1 (a) (ii)	Any <b>one</b> property from: <ul style="list-style-type: none"> <li>• Low density (1)</li> <li>• Lightweight / light (1)</li> <li>• Soft (1)</li> </ul>	<b>(1)</b>

Question number	Answer	Mark
1 (a) (iii)	Any <b>one</b> property from: <ul style="list-style-type: none"> <li>• Hard / hardness / scratch resistant (1)</li> <li>• Tough / toughness / impact resistant (1)</li> <li>• Resistant to corrosion / will not rust (1)</li> <li>• Durable (1)</li> <li>• Waterproof / water resistant (1)</li> </ul>	<b>(1)</b>

Question number	Answer	Additional guidance	Mark
1 (a) (iv)	Any <b>one</b> property from: <ul style="list-style-type: none"> <li>• Rigid / stiffness / hard to bend (1)</li> <li>• Absorbent / accepts ink well / printability (1)</li> </ul>	Do not accept hard on its own	<b>(1)</b>

Question number	Answer	Mark
1 (b) (i)	<p>Any <b>one</b> advantage of the company being operated as a privately-owned company (1) and a linked justification of that advantage (1).</p> <ul style="list-style-type: none"> <li>• The company can be more flexible in how it works / make / take their own decisions / control the share allocation (1) therefore they can adopt / exploit new technologies without having to consult shareholders / other stakeholders (1)</li> <li>• The company can make changes fast / make quick decisions without having to consult shareholders (1) which means they can respond to market trends / fashions very quickly (1)</li> <li>• Any profits go to the owners rather than shareholders / can be easily re-invested / spent on new and emerging technologies (1) which provides a greater incentive for the company owners to make a success of the business / work hard / more profits (1)</li> <li>• A privately owned company does not need to publish their accounts (1) therefore they can keep their finances more private (1)</li> <li>• The company can close / cease trading / take any money out (1) and start a new company under a new name (1)</li> </ul>	<b>(2)</b>

Question number	Answer	Additional guidance	Mark
1 (b) (ii)	<p>A calculation that includes:</p> <ul style="list-style-type: none"> <li>• correct setting out of formula</li> </ul> $\frac{30}{100} \times 150,000$ <p>(1)</p> <ul style="list-style-type: none"> <li>• correct answer</li> </ul> <p>£45,000</p> <p>(1)</p> <p>Alternative method</p> <ul style="list-style-type: none"> <li>• <math>£150,000 \times 1.3 = £195,000</math></li> </ul> <p>(1)</p> <ul style="list-style-type: none"> <li>• <math>£195,000 - £150,000 = £45,000</math></li> </ul> <p>(1)</p>	<p>Award full marks for correct numerical answer without working.</p> <p>Allow for ECF if candidate gets part of transposition wrong.</p> <p>If a candidate shows working out and gives an answer of £195,000 and shows it as an answer, 1 mark can be awarded. If however they just provide an answer of £195,000 without any working out, no marks should be awarded.</p>	<b>(2)</b>

Question number	Answer	Mark
2 (a)	<ul style="list-style-type: none"> <li>• Oblique (1)</li> <li>• Oblique projection (1)</li> <li>• Cavalier oblique (1)</li> <li>• Cabinet oblique (1)</li> <li>• Cavalier projection (1)</li> <li>• Cabinet projection (1)</li> </ul>	(1)

Question number	Answer	Mark
2 (b)	<p>Any <b>one</b> reason for using concrete (1) and a linked justification of that reason (1).</p> <ul style="list-style-type: none"> <li>• Concrete is fire proof (1) which means if any wax is spilt / drips onto it, it will not burn (1)</li> <li>• Concrete is dense / heavy (1) which means it will be stable / unlikely to be knocked / topple over (1)</li> <li>• The candle holder is cast into shape (1) which means an exact volume can be mixed / minimises waste (1)</li> </ul>	(2)

Question number	Answer	Mark
2 (c)	<p>Any <b>one</b> reason for manufacturing the concrete candle holder to hold a candle of a standardised size (1) and a linked justification of that reason (1)</p> <ul style="list-style-type: none"> <li>• The candles will be widely available / commonly used (1) which means they can be purchased from many different suppliers / shop around to find the cheapest price / know they can source candles in the future (1)</li> <li>• The candle holder can be sold / manufactured in different countries (1) which means it has much better sales potential / more profits for the company (1)</li> <li>• The candle holder can be mass produced since the candle is a standard sized (1) which minimises production changes / set up costs (1)</li> </ul>	(2)



Question number	Answer	Additional guidance	Mark
2 (d)	<p>A calculation that includes:</p> <ul style="list-style-type: none"> <li>• Conversion of units at the start or end (1)</li> <li>• Calculation of the volume of the square prism <math>8 \times 8 \times 3 = 192 \text{ cm}^3</math> or <math>192,000 \text{ mm}^3</math> (1)</li> <li>• Calculation of the volume of the cylindrical hole <math>3.142 \times 2.5^2 \times 1.5 = 29.45625 \text{ cm}^3</math> or <math>29456.25 \text{ mm}^3</math> (1)</li> <li>• correct answer <math>192 - 29.45625 = 162.54375 \text{ cm}^3</math> or <math>162548 \text{ mm}^3</math> rounded to <math>163 \text{ cm}^3</math> (1)</li> </ul>	<p>Award full marks for correct numerical answer without working.</p> <p>Allow for ECF if candidate gets part of transposition wrong.</p> <p>If answer is NOT rounded to a whole number do not award full marks</p>	(4)

Question number	Answer	Mark
3 (a)	<p>Any <b>one</b> softwood from:</p> <ul style="list-style-type: none"> <li>• Pine / pine wood (1)</li> <li>• Cedar (1)</li> <li>• Larch (1)</li> <li>• Redwood (1)</li> <li>• Spruce (1)</li> </ul>	(1)

Question number	Answer	Mark
3 (b)	<p>Any <b>one</b> reason for using a softwood for the frame rather than a hardwood (1) and a linked reason for the use (1)</p> <ul style="list-style-type: none"> <li>• Softwoods are faster / quicker growing (1) which means there will be a greater supply of timber / more sustainable (1)</li> <li>• Softwoods are cheaper (1) which means the overall cost of the frame will be lower / more likely to sell (1)</li> <li>• Softwoods are less dense than hardwoods / have a more open grain (1) therefore they are easier to machine / cut (1)</li> </ul>	<b>(2)</b>

Question number	Answer	Additional guidance	Mark
3 (c)	<p>A calculation that includes:</p> <ul style="list-style-type: none"> <li>• correct working out of waste left 300 – 270 = 30 cm (1)</li> <li>• correct answer 30/300 or 1/10<sup>th</sup> or 10/100<sup>th</sup> (1)</li> </ul>	<p>Award full marks for correct numerical answer without working.</p> <p>Allow for ECF if candidate gets part of calculation wrong.</p>	<b>(2)</b>

Question number	Answer	Mark
3 (d)	<p>Any <b>one</b> disadvantage of using mild steel for the fixing (1) and a linked reason for the disadvantage (1)</p> <ul style="list-style-type: none"> <li>• Mild steel will rust / corrode in the outside conditions / damp soil (1) which means the joint / frame will come apart / fail / become weak (1)</li> <li>• Mild steel has lower tensile strength / shear strength (1) which means the screw could shear / break / snap if overtightened (1)</li> </ul>	<b>(2)</b>

Question number	Answer	Mark
3 (e)	<p>Any <b>two</b> benefits of using corrugated board for the box (1) and a linked justification of the benefits (1).</p> <ul style="list-style-type: none"> <li>• Corrugated board is lightweight (1) therefore it will not add too much cost to the postal delivery charges / will not add unnecessary weight when lifting (1)</li> <li>• Corrugated board has good impact resistance / is fluted (1) therefore it is good at protecting the frame / parts inside / prevents damage to parts during transportation (1)</li> <li>• Corrugated board is widely recyclable / biodegradable / can be made from recycled materials (1) therefore it will not need to go into general waste / landfill / can be recycled and used again / better for the environment (1)</li> <li>• Corrugated board is absorbent / takes ink well / printability (1) therefore the box can be printed with the company's logo / brand / advertising / recyclable logos on it / stack height (1)</li> <li>• Corrugated board is a cheap / readily available materials (1) therefore it helps to keep down the cost of packaging / overall production costs (1)</li> </ul>	<b>(4)</b>

Question number	Answer	Mark
4 (a)	<p>Any <b>one</b> working property of polyester (1) and a linked justification of that property (1).</p> <ul style="list-style-type: none"> <li>• Polyester is waterproof / shrink resistant (1) which means it will protect the laptop inside from being damaged by the rain / liquids (1)</li> <li>• Polyester has good tensile strength (1) which means the strap / bag will support the weight of the laptop inside (1)</li> <li>• Polyester is a durable material (1) which means it will resist wear as the bag rubs against the clothes being worn by the user (1)</li> <li>• Polyester is stain/chemical resistant (1) which means it will not be affected by any liquids / coffee spilt on it (1)</li> <li>• Polyester is stretch resistant (1) which means it will not deform/change shape due to any loading/weight of the laptop inside (1)</li> </ul>	<b>(2)</b>

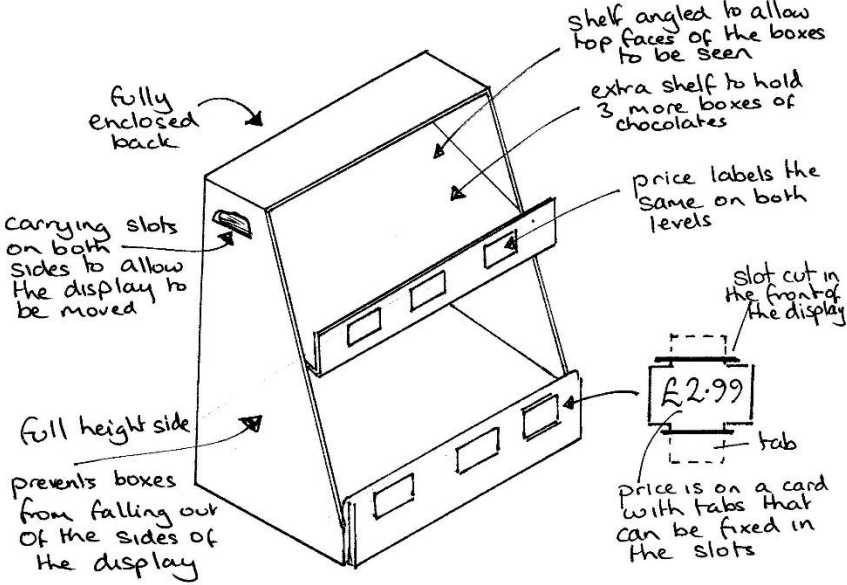
Question number	Answer	Additional guidance	Mark
4 (b)	<p>A calculation that includes:</p> <ul style="list-style-type: none"> <li>• correct working out of recycled polyester  <math>100\% - 60\% = 40\%</math>  (1)</li> <li>• correct working out of grams of recycled polyester  <math>40/100 \times 320 = 128</math> grams  (1)</li> </ul> <p>Alternative method</p> <ul style="list-style-type: none"> <li>• correct working out of new polyester  <math>60/100 \times 320 = 192</math>  (1)</li> <li>• correct working out of grams of recycled polyester  <math>320 - 192 = 128</math> grams  (1)</li> </ul>	<p>Award full marks for correct numerical answer without working.</p> <p>Allow for ECF if candidate gets part of calculation wrong.</p>	<b>(2)</b>

Question number	Answer	Mark
4 (c)	<p>Any <b>one</b> explanation that references why carrying out a LCA can help to reduce the environmental impact (1) and a linked justification (1).</p> <ul style="list-style-type: none"> <li>• Materials would be sourced from local suppliers (1) which means there would be fewer miles / reduced travel / pollution created by not buying materials from overseas suppliers (1)</li> <li>• More recycled polyester / materials would be used in the bag (1) which will reduce the demand for new materials / impact of drilling for oil / conservation of finite resources (1)</li> <li>• The company would consider the types of vehicles used to distribute their products / use greener transport (1) which would reduce the pollution / greenhouse gas emissions from traditional fuelled vehicles (1)</li> <li>• The company would consider how the bag / customers can recycle the at the end of its useful working life / broken down / separated into different parts (1) which means materials / parts could be recycled / reused rather than being dumped in landfill / incinerated (1)</li> <li>• The company would use more sustainable sources of energy (1) which reduces the carbon footprint in the manufacture of the bag (1)</li> <li>• The company could consider how to adapt the design of the bag (1) which means they could reduce the amount of raw materials used in its manufacture (1)</li> <li>• The company should consider / review the manufacturing processes / techniques used for the manufacture (1) which means they could reduce the number of processes / machines / energy used (1)</li> </ul>	<b>(2)</b>

Question number	Indicative content	Mark
4 (d)	<ul style="list-style-type: none"> <li>• Improved battery capability has meant that it is possible to work for longer without the need to be plugged into mains power making it much easier to work on the move rather than needing to be based in an office / home</li> <li>• Laptops have become smaller / lighter which has meant that they have become much more portable due to advances in materials technology / miniaturisation allowing users to take them home / travel with them easier which means they can work anywhere</li> <li>• Many laptops now have built in cameras / speakers which means that remote working / video conference / zoom / teams has meant that the workforce can attend virtual meetings with little additional equipment / can join meetings from anywhere that has a Wi-Fi connection</li> <li>• The processing power / increase in RAM / speeds of modern laptops make them much more capable of handling demanding software such as graphics / CAD based packages</li> <li>• With Wi-Fi / internet ready / enabled laptops more computing can be carried out in 'cloud' based environments reducing the need for bigger more powerful processor based computers / meaning that more people can work without having to be connected to office / work place networks</li> <li>• The ability to connect more devices such as printers / stylus pens / keyboards / mouse / tablets via blue tooth / wireless has reduced the need for USB ports meaning that laptops can be made thinner / tapered / more devices attached</li> <li>• The ability to attach / connect additional screens / use of docking stations / has allowed for greater / improved working capability / office simulations</li> </ul>	<b>(6)</b>

Level	Mark	Descriptor
	0	
Level 1	1 - 2	<ul style="list-style-type: none"> <li>• Attempts to interrogate and deconstruct information but connections and logical chains of reasoning are flawed.</li> <li>• An unbalanced appraisal of the information/issues, containing judgements that show a limited awareness of the interrelationships between factors or competing arguments.</li> </ul>
Level 2	3 – 4	<ul style="list-style-type: none"> <li>• Interrogates and deconstructs information and provides some connections and logical chains of reasoning.</li> <li>• A balanced appraisal of the information/issues, containing judgements that show an awareness of the interrelationships between factors or competing arguments.</li> </ul>
Level 3	5 - 6	<ul style="list-style-type: none"> <li>• Interrogates and deconstructs information and provides sustained connections and logical chains of reasoning.</li> <li>• A well-balanced appraisal of the information/issues, containing judgements that show a thorough awareness of the interrelationships between factors or competing arguments.</li> </ul>

## Section B – Papers and Boards

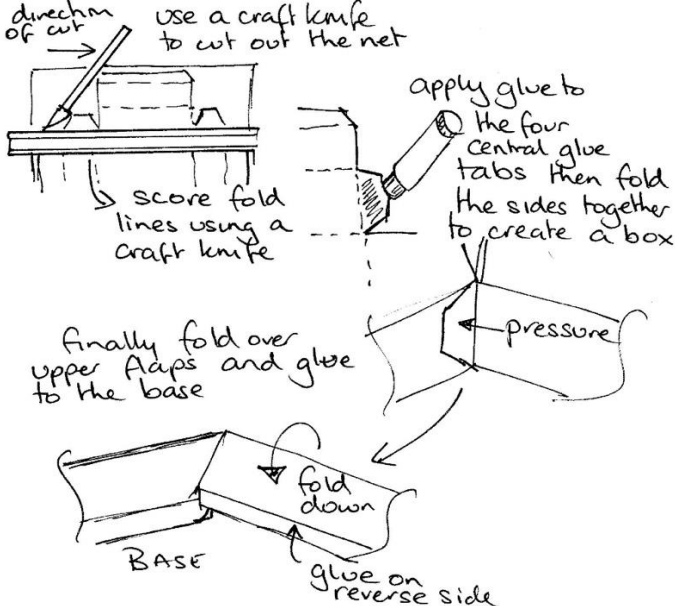
Question number	Answer	Mark
5 (a)	<p><b>Marks will be awarded for understanding of design and technology, not graphical skills.</b></p> <p>Notes and/or sketches that include:</p> <ul style="list-style-type: none"> <li>• be able to hold an additional three boxes of chocolates (1) and allow the top face of each individual chocolate box to be seen (1) e.g. shelf / longer / wider base / with clear sight lines to be able to see EACH box (no stacking boxes on top of each other)</li> <li>• include a method to show the price of a box of chocolates (1) that allows the price to be changed (1) e.g. laminated or varnished sections that allows prices to be written on and cleaned / labels with tabs and slots / Velcro patches to allow labels to be removable / pockets to allow labels to be inserted / cards in and out / technology based options</li> <li>• be portable (1) so that it can be moved to another place without the chocolate boxes falling off (1) e.g. handle(s) / hand holes / straps / extended sides / lips around the edges</li> </ul> <p>Example of candidate response.</p> 	(6)



	<p>Annotated notes:  Fully enclosed back  Carrying slots on both sides to allow the display to be moved  Full height side prevents boxes from falling out of the sides of the display  Shelf angled to allow top faces of the boxes to be seen  Additional shelf to hold 3 more boxes of chocolate  Price labels the same on both levels  Slot cut in the front of the display  Price is on a card with tabs that can be fixed in the slots</p>	
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Question number	Answer	Mark
5(b)	<p>Any <b>two</b> explanations that include a way the cardboard puzzle meets or fails to meet the requirement (1) and a linked justification of that way (1).</p> <ul style="list-style-type: none"> <li>• The steel balls need to be moved from the start to the finish between the cardboard walls (1) which the young children need to tilt and turn the puzzle to control the direction of the steel balls (1)</li> <li>• The children can see the steel balls clearly (1) which means they can see where the steel balls are / where they need to move to (1)</li> <li>• The puzzle does not have a lid on it to stop the steel balls from falling out / being removed (1) which means the steel balls could get lost / fall out from the game / rendering the game useless / allows cheating/ balls swallowed (1)</li> <li>• The start / finish are not marked as such on the puzzle (1) therefore there is no clear indication / point / focus to the game and the children might not see any point in playing / using it (1)</li> <li>• The steel balls can only travel between the cardboard walls (1) therefore there is very little control needed since the steel balls can only travel in straight lines up / down / across (1)</li> <li>• There are multiple steel balls to be moved (1) therefore the game is more challenging / makes it more demanding / difficult (1)</li> </ul>	<b>(4)</b>

Question number	Answer	Mark
6 (a)	<p>Any <b>two</b> explanations of characteristics of folding boxboard (1) and a linked justification (1)</p> <ul style="list-style-type: none"><li>• Folding boxboard has high levels of stiffness / less likely to bend (1) which means that the packaging will be able to keep its shape/provide protection to the contents (1)</li><li>• Folding boxboard has a bleached/pure white/smooth outer layers (1) which means that printed images will have vivid colours / true representations of colours (1)</li><li>• Folding boxboard can be scored / creased (1) which allows it to be formed into boxes without the board splitting when folded (1)</li></ul>	<b>(4)</b>

Question number	Answer	Additional guidance	Mark
6 (b)	<p><b>Marks will be awarded for understanding of design and technology, not graphical skills.</b></p> <p>Notes and/or sketches that include:</p> <ul style="list-style-type: none"> <li>• Outline cut out (1)</li> <li>• Fold lines scored (1)</li> <li>• Adhesive applied to inner tabs / flaps (1)</li> <li>• Sides folded up and fixed together (1)</li> <li>• Outer flaps / tabs folded back in to the box and fixed down (1)</li> </ul> <p>Example of candidate response:</p>  <p>Annotated notes:</p> <ul style="list-style-type: none"> <li>• Use a craft knife to cut out the net (showing direction of cut)</li> <li>• Score fold lines using a craft knife</li> <li>• Apply glue to the four central glue tabs then fold the sides together to create a box (with pressure)</li> <li>• Finally fold over the upper flaps and glue to the base</li> <li>• Glue on reverse side, fold down</li> </ul>	Cap at three marks if no sketches or all sketches and no notes	<b>(4)</b>

Question number	Answer	Mark
6 (c)	<p>Any <b>one</b> explanation that includes a way of avoiding offence to potential buyers (1) and a linked justification for that way (1)</p> <ul style="list-style-type: none"><li data-bbox="344 398 1249 551">• Careful consideration must be given to the choice of colour used for the detailing / images / text on the packaging (1) as different colours are used to represent different things in some countries / bring bad luck / have different connotations (1)</li><li data-bbox="344 555 1249 667">• The use / choice of language / images must be considered (1) as some words / images when interpreted / seen have very different meanings / use / range of different languages / font (1)</li></ul>	<b>(2)</b>

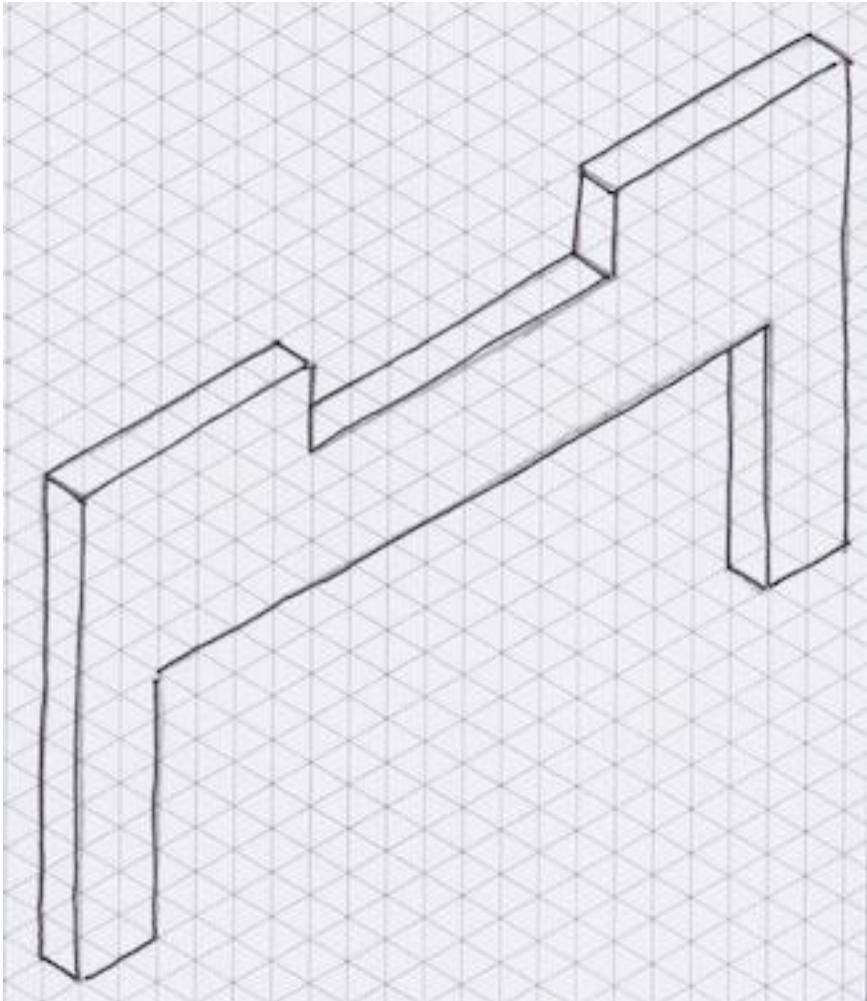
Question number	Answer	Mark
6 (d)	<p>Any <b>two</b> manufacturing methods (1), plus <b>two</b> linked justifications of that manufacturing method (1) + (1)</p> <p>Method</p> <ul style="list-style-type: none"> <li>• Plotter-cutting (1)</li> </ul> <p>Explanation</p> <ul style="list-style-type: none"> <li>• All the cuts / score / crease marks are made on the same machine (1) which means they will all be in the correct position / relative to each other (1)</li> </ul> <p>Method</p> <ul style="list-style-type: none"> <li>• Computer aided manufacturing / laser cutting (1)</li> </ul> <p>Explanation</p> <ul style="list-style-type: none"> <li>• There is no physical contact between the laser beam and the board (1) which means that there is no chance of snagging / tearing at the corners (1)</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• All the cuts / score / crease marks are made on the same machine (1) which means they will all be in the correct position / relative to each other (1)</li> </ul> <p>Method</p> <ul style="list-style-type: none"> <li>• Die cutting (1)</li> </ul> <p>Explanation</p> <ul style="list-style-type: none"> <li>• Allows for multiple flat boards to be cut at the same time (1) as well as further operations such as creasing and perforating (1)</li> </ul>	<b>(6)</b>

Question number	Answer	Mark
7 (a)	<p>Any <b>one</b> fastener from:</p> <ul style="list-style-type: none"> <li>• Staple (1)</li> <li>• Staples (1)</li> <li>• Paper staple (1)</li> <li>• Paper staples (1)</li> </ul>	<b>(1)</b>

Question number	Answer	Additional guidance	Mark
7 (b)	<p>Any <b>two</b> explanations that include an advantage of using CAM (1) plus a linked justification for the advantage (1).</p> <ul style="list-style-type: none"> <li>• The centre hole will be accurately placed / machined in the centre (1) which means that the hole in the centre of the wheel will be concentric to the outside edge (1)</li> <li>• The wheel will be perfectly round / clean edge / smooth cut (1) which means it will roll without any deviation (1)</li> <li>• All the wheels will be the same size / identical (1) which means that when they are fitted the toy will be at the right height (1)</li> <li>• The file / wheel can be nested / lay planned using the CAD software used to draw the wheel (1) which results in the most efficient use of the corrugated board / minimising waste (1)</li> <li>• Cutting speed / feed rates can be set to produce a perfect finish (1) which means there will be less secondary finishing required / burning (1)</li> </ul>	Do not accept any responses related to 24/7 manufacture or comparisons to being handmade	<b>(4)</b>

Question number	Answer	Mark
7 (c)	<p>A drawing that includes:</p> <ul style="list-style-type: none"> <li>• Correct overall length at 100mm</li> <li>• Correct overall height at 55mm</li> <li>• Correct overall thickness at 5mm</li> <li>• Position of the top cut out</li> <li>• Position of the bottom cut out</li> </ul>	<p><b>(5)</b></p> <p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p> <p>(1)</p>

Example of candidate response





Question number	Answer	Mark
7 (d)	<p>Any <b>two</b> explanations that includes a disadvantage (1), plus <b>two</b> linked justifications of that disadvantage (1) + (1).</p> <ul style="list-style-type: none"> <li>• The template could be the wrong size to start with (1) which means any parts marked out using it would be wrong (1) therefore the parts would not fit the rest of the toy (1)</li> <li>• There is a chance it could get lost (1) which means that any other front pieces would need to be marked out by hand (1) therefore they could be the wrong size / different sizes (1)</li> <li>• The template could wear / get damaged as it is used (1) which means the longer it is used the smaller each of the parts get (1) therefore resulting in parts that will not fit / be the right size (1)</li> <li>• The template needs to be located correctly in the first place (1) which means initial errors can be compounded / template might slip / move during marking out (1) therefore resulting in parts that may be the same shape but a different size / meaning material is wasted (1)</li> </ul>	<b>(6)</b>

Question number	Answer	Additional guidance	Mark
8 (a)	<p>Any <b>one</b> explanation that includes a benefit of using foil-lined board (1) and a linked justification of that benefit (1).</p> <ul style="list-style-type: none"> <li>• The foil lining on the board provides insulation (1) which means that hot takeaway food stays hot / will retain heat for longer / cold foods stay cool / will remain cool (1)</li> <li>• Foil-lined board will mean the takeaway food box is waterproof (1) which means that any liquid / sauces / grease will not be able to escape from the packaging / spill / leak / be absorbed (1)</li> </ul>	Do not accept responses related to 'recycling'	<b>(2)</b>

Question number	Answer	Mark
8 (b)	<p>Any <b>one</b> explanation of a cost factor (1), plus <b>one</b> linked justification of that cost factor (1) + (1).</p> <ul style="list-style-type: none"> <li>• The source / grade of the pulp will have a bearing on the cost of the material (1) which means recycled pulp will be cheaper (1) which may result in impurities in the board contaminating the food (1)</li> <li>• The availability of aluminium foil will be a factor (1) which means the prices may vary (1) therefore resulting in a higher cost prices (1)</li> <li>• The levels of supply / demand for recycled paper pulp will vary (1) due to it being used for other types of papers and board (1) therefore resulting in higher cost prices (1)</li> </ul>	<b>(3)</b>

Question number	Answer	Mark
8 (c)	<p>Any <b>two</b> explanations of quality control checks (1) and a linked justification of those checks (1).</p> <ul style="list-style-type: none"> <li>• The quality of the printed finish would be checked (1) which means that any defects / hickeys / blurred images / spelling mistakes would be removed / not be sent out to customers (1)</li> <li>• The dimensions of the takeaway food boxes would be checked (1) therefore ensuring that they are within a certain tolerance / meet customer requirements (1)</li> <li>• The quality of the board / assembly would be checked (1) therefore any torn boxes / boxes that are not properly assembled would be removed from the production line / recycled (1)</li> </ul>	<b>(4)</b>

Question number	Indicative content	Mark
8 (d)	<p><b>AO3 (9 marks)</b></p> <ul style="list-style-type: none"> <li>• Foil-lined board food boxes are a very common method for packaging takeaway food in many countries</li> <li>• Takeaway food box design has evolved for different markets and some have hinged lids whilst others have interlocking tabs on the top</li> <li>• Takeaway food boxes are provided in restaurants and supermarkets all around the world to transport both hot and cold foods</li> <li>• More takeaway food restaurants are opening / street food / pop up restaurants / food markets / food festivals selling and promoting food that is eaten from disposable foil-lined board food boxes</li> <li>• Some takeaway food boxes are highly colourful / decorative / fashion / culture / reflective / have 'shelf appeal' to increase market share, especially in supermarkets</li> <li>• Some restaurants / supermarkets actively promote the recycling of their takeaway food boxes as a statement to improve their business credentials</li> <li>• The difficulty in recycling foil-lined board packaging has reduced the demand for this type of packaging especially in countries where the level of recycling is high</li> <li>• With increasing home delivery food services offering a wide range of food types / more food is on offer that would be delivered in foil-lined food boxes</li> <li>• Huge numbers of takeaway food boxes are required / used hence the need for continuous manufacture</li> <li>• Trends / fashions / growing concerns around the use of takeaway food boxes given the negative environmental impact of transporting materials</li> </ul>	<b>(9)</b>

Level	Mark	Descriptor
	0	
Level 1	1 - 3	<ul style="list-style-type: none"> <li>• Attempts to interrogate and deconstruct information but connections and logical chains of reasoning are flawed.</li> <li>• An unbalanced appraisal of the information/issues, containing judgements that show a limited awareness of the interrelationships between factors or competing arguments.</li> <li>• A conclusion may be presented but it is likely to be generic assertions rather than supported by relevant judgements.</li> </ul>
Level 2	4 – 6	<ul style="list-style-type: none"> <li>• Interrogates and deconstructs information and provides some connections and logical chains of reasoning.</li> <li>• A balanced appraisal of the information/issues, containing judgements that show an awareness of the interrelationships between factors or competing arguments.</li> <li>• A conclusion is presented that is partially supported by relevant judgements.</li> </ul>
Level 3	7 - 9	<ul style="list-style-type: none"> <li>• Interrogates and deconstructs information and provides sustained connections and logical chains of reasoning.</li> <li>• A well-balanced appraisal of the information/issues, containing judgements that show a thorough awareness of the interrelationships between factors or competing arguments.</li> <li>• A conclusion is presented that is fully supported by relevant judgements.</li> </ul>