



Pearson
Edexcel

Mark Scheme (Results)

Summer 2023

Pearson Edexcel GCE

In Design & Technology: Product Design (9DT0)

9DT0/01

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Summer 2023

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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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A Level 9DT01 2023 – Final

Question number	Answer	Mark
1(a)	<p>Any two of the following knock-down fittings:-</p> <ol style="list-style-type: none"> 1. Barrel and bolt / barrel nuts (1) 2. Cam lock fittings (1) 3. Connecting blocks / corner blocks / modesty blocks (1) 4. Furniture connector nuts / bolts (1) 5. Panel connectors (1) <p>Do not accept 'screws' Do not accept 'nuts and bolts' without further qualification as indicated in the mark scheme.</p> <p>Please accept any other correct answer.</p>	(2)

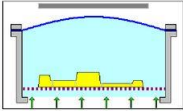
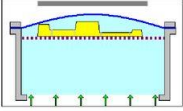
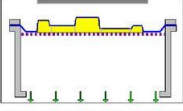
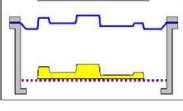
Question number	Answer	Mark
1(b)	<p>Any two explanations that include a correct characteristic and a linked justification of why the characteristic makes it a suitable material to use.</p> <ol style="list-style-type: none"> 1. Available in large / wide / flat sheets (1) so no need to join materials / easily stored/transported in flat pack form (1) 2. Uniform strength / rigidity (1) so doors and side panels will not need supporting framework / will be able to withstand applied loads. (1) 3. Cheaper than solid wood / other manufactured boards (1) so can be used in budget products (1) 4. Considered sustainable (1) as it utilises offcuts and waste timber in its manufacture (1) 5. Gives the aesthetic appearance of a solid hardwood (1) without the associated cost / sustainability concerns / by hiding the base chipboard layer / attracts customers (1) 6. Stable material / uniform material (1) does not bend / warp / twist in a dry indoor environment (1) 7. Available in a range of different thicknesses (1) to suit the structural / stiffness requirements of the wardrobes (1) 8. Different veneers can be applied / used (1) to match / coordinate / contrast with other furniture (1) <p>Any other appropriate response</p>	(4)

Question number	Answer Additional guidance	Mark
1(c)	<p>Any explanation that includes the identification of a disadvantage (1) and linked justifications of why that is a disadvantage (1+1):</p> <ol style="list-style-type: none"> 1. Core material easily damaged / becomes friable during assembly (1) which makes adjustments / relocation and second assembly more difficult (1) because screws / fixings are not able to establish a firm fixing (1) 2. Not water resistant / not suitable for damp/humid environments (1) because it will swell / degrade in contact with water / moisture (1) so needs effective balancing laminates to seal the core material / impacting of the structural integrity / properties of the wardrobe (1) 3. Low public opinion / perception (1) often considered an inferior material (1) may impact on sales when compared with other products (1). 4. The veneer can be easily scratched / be damaged / peel / lacks durability (1) resulting in the chipboard core being exposed (1) which impacts on the aesthetics of the product / requiring replacement of the product / allowing the core to become damaged / damp (1) 5. Cut material will expose the chipboard (1) therefore will need lipping (1) which adds time / costs to the construction (1) 6. Chipboard is a heavy / dense material (1) because of the resin bonded particles (1) making it difficult to transport / handle / move (1) 	(3)

Question number	Answer	Mark
2(a)	<p>Any two of the following:</p> <ol style="list-style-type: none"> 1. Folding box board 2. Corrugated board / corrugated cardboard 3. Solid white board 4. Cartonboard 	(2)

Question number	Answer	Additional Guidance	Mark
2(b)	<p>In order for the candidates to solve the problem, they will need to recognise that each of the following stages are required.</p> <p><u>Method 1</u></p> <p>Stage 1 (calculate the total volume of ink required) $3500 \times 2.5 = 8750 \text{ ml}$ (1)</p> <p>Stage 2 (convert to litres) $8750/1000 = 8.75 \text{ litres}$ (1)</p> <p>Stage 3 (calculate number of containers of ink required) $8.75/1.5 = 5.8333\dots$ rounded to 6 full containers (1)</p> <p>Stage 4 (calculate ink remaining) $(6 \times 1.5) - 8.75 = 0.25 \text{ litre}$ (1)</p> <p>Stage 5 (calculate number of extra printed cases) $(0.25 \times 1000)/2.5 = 100$ (1)</p> <p><u>Method 2</u></p> <p>Stage 1 (convert l to ml) $1.5 \times 1000 = 1500$ (1)</p> <p>Stage 2 (calculate the number of prints from one container) $1500/2.5 = 600$ (1)</p> <p>Stage 3 (calculate number of containers required) $3500/600 = 5.83 = 6 \text{ full containers}$ (1)</p> <p>Stage 4 (calculate max number of prints from 6 containers) $6 \times 600 = 3600$ (1)</p> <p>Stage 5 (calculate the number of extra prints) $3600 - 3500 = 100$ (1)</p>	<p>Accept alternative methods of correct working out.</p> <p>Error carried forward should be applied.</p> <p>Award full marks for correct answer only.</p> <p>For stage 3 to be awarded the answer must be 6</p> <p>Conversion of units may be applied at any point.</p>	(5)

Question number	Answer	Mark
3(a)	A valid explanation with a linked justification: <ol style="list-style-type: none">1. The mould should include a draft angle / have splayed sides (1) to allow the formed plastic to be easily separated from the template / mould / pattern (1)2. The mould should have holes drilled in the corner of any recesses (1) to allow the vacuum to be effective in pulling the softened plastic into the recess (1)3. The mould should have a slight rounding of corners (1) to reduce thinning of the plastic as it stretches around the corners / to produce a consistent wall thickness in the plastic forming (1)4. The mould side walls should have a smooth surface / lack intricate detail (1) to prevent the plastic gripping the mould / ensure a high-quality surface on the finished moulding (1)5. The mould should be rigid/have compressive strength (1) to stop the mould compressing (1)	(2)

Question number	Answer	Mark
3(b)	<p>Award marks as follows (maximum 4 marks):</p> <ol style="list-style-type: none"> 1. The mould is placed on to the bed / table / platen of the vacuum forming machine (1) 2. Clamp the vacuum forming (polymer/plastic) sheet in position (1) 3. The plastic is heated / the heater is pulled over the plastic until the plastic softens and sags (1) 4. Air is blown in (1) 5. The mould / bed / table is raised / plastic lowered (1) 6. Air is removed using the vacuum pump / the plastic is sucked around the mould (1) 7. Mould is removed / the plastic has cooled (1) <p style="text-align: center;">Vacuum Forming</p> <p><u>Process</u></p> <ol style="list-style-type: none"> 1 Heat up plastic (HIPS)  <ol style="list-style-type: none"> 2 Remove heater and blow air in  <ol style="list-style-type: none"> 3 Raise the Mould  <ol style="list-style-type: none"> 4 Remove air using vacuum pump  <ol style="list-style-type: none"> 5 Lower the mould releasing the shaped plastic <p>If no sketch, a sketch without annotations or incorrect order, award a maximum of 3 marks.</p>	(4)

Question number	Answer	Additional guidance	Mark
3(c)	<p>Any two explanations that include identification of disadvantages of vacuum forming (1) and linked reasons for that being a disadvantage (1) + (1).</p> <ol style="list-style-type: none"> 1. Complex shapes cannot be produced (1) because the pattern has to be removed from the rear of the form (1) which limits the features that can be incorporated / only allows open backed designs to be produced (1) 2. Products cannot have intricate surface detail / finishes / sharp edges (1) because the plastic forms over the pattern (1) and the thickness of the plastic sheet limits the detail that can be achieved on the outer surface of the moulding (1) 3. Vacuum forming only forms open backed shapes / does not allow undercuts (1) so the object has limited structural integrity (1) and the sides of the finished artefact can splay out / distort when forces are applied (1) 4. The plastic is stretched over the pattern (1) resulting in thinner side walls / webbing can form (1) limiting the depths / height of the moulding and depth of the recesses (1) 5. Vacuum forming produces a lot of waste (1) which is not environmentally friendly / a single sheet to suit the machine/bed size is used (1) and excess material has to be cut/trimmed from the finished form (1) 6. Relatively slow process because of the heating/cooling/removal time (1) reduces output/production/efficiency levels (1) meaning that multiple machines will be required / longer waiting time for consumers/clients (1) 7. Not cost effective for one-off production (1) because the mould/pattern needs to be produced (1) therefore only suitable for batch/mass production (1) 	<p>Do not accept repeated justification.</p> <p>Accept mould, or former in place of pattern</p>	(6)

Question number	Answer	Mark
4(a)	The three roles within the scrum team, 3 marks: 1. Product owner (1) 2. Scrum master / project leader / project manager (1) 3. Developers / development team / designers (1)	(3)

Question number	Answer	Mark
4(b)	An outline covering any 6 of the following points: 1. Holistic project management strategy (1) 2. Teamwork is at the centre of the process (1) 3. Control over the empirical process (transparency, evaluation and adaptation) (1) 4. Self-organisation (increases the level of independence of the team) / feedback from workers / daily team meetings / scrum sessions (1) 5. Assessment of team performance (1) 6. Team goals (1) 7. Led by scrum master / leader / project manager (1) 8. Collaboration (awareness, clarity and distribution) (1) 9. Feedback at every stage (1) 10. Value based prioritisation (value and importance to end users and the manufacturer to determine order of completion) (1) 11. Timeboxing (allocating and scheduling time to activities) (1) 12. Sprints (short release cycles with planning, daily monitoring and reviews) to achieve smaller broken down tasks (1) 13. Iterative development (constant/ongoing adjustment and revision of design to create the best product possible) continuous improvement (1) 14. Scrum values: commitment, courage, focus, openness and respect (1) 15. Consumer feedback to update designs (1)	(6)

Question number	Answer	Mark
4(c)	The two methods of protecting the form and function of a design: 1. Patents (1) 2. design rights (1) 3. registered designs (1) Do not accept copyright or trademark as these do not protect the design of a physical consumer product.	(2)

Question number	Answer	Mark
4(d)	<p>This question asks candidates to discuss how the design and manufacturing of consumer products can minimise the impact of the product on the natural environment.</p> <p>Candidates might refer to the following in their responses:</p> <p>Material selection</p> <ul style="list-style-type: none"> • source • quantity • quality • range • recyclability • biodegradability <p>Manufacture</p> <ul style="list-style-type: none"> • minimising energy use • optimum use of materials / components • simplification / streamlining of processes • minimising waste • scale of production <p>Distribution</p> <ul style="list-style-type: none"> • efficient / minimisation of packaging • maximisation of product carried on each vehicle <p>Use</p> <ul style="list-style-type: none"> • energy efficient products • ease of repair / maintenance <p>End of life</p> <ul style="list-style-type: none"> • design for disassembly • recovered material feasibility • potential for re-processing • potential for energy recovery • minimising elements to landfill 	(9)

Level	Mark	Descriptor
	0	No rewardable materials
Level 1	1 – 3	<ul style="list-style-type: none"> • Superficial discussion that considers a narrow range of factors, demonstrating limited understanding. • Partial application of understanding to the context of the question.
Level 2	4 – 6	<ul style="list-style-type: none"> • Coherent discussion that makes some relevant links between a sufficient range of factors, demonstrating competent understanding. • Generally sound application of understanding to the context of the question.
Level 3	7 - 9	<ul style="list-style-type: none"> • Comprehensive discussion that makes effective links between a wide range of factors, demonstrating thorough understanding. • Considered and effective application of understanding to the context of the question.

Question number	Answer	Additional Guidance	Mark
5(a)	<p>Stage 1 (calculate total frequency) (1) $155 + 83 + 167 = 405$</p> <p>Stage 2 (method mark for selecting/deducing correct formula) (1) Sector angle = (frequency x 360)/total frequency</p> <p>Stage 3 (calculate sector angle for hatchback) (1) $(155 \times 360)/405 = 137.7777\dots^\circ$</p> <p>Stage 4 (calculate sector angle for saloon) (1) $(83 \times 360)/405 = 73.7777\dots^\circ$</p> <p>Stage 5 (calculate sector angle for SUV) (1) $(167 \times 360)/405 = 148.4444\dots^\circ$</p> <p>Stage 6 (correct rounding to 1DP) (1) $137.8^\circ, 73.8^\circ, 148.4^\circ$</p> <p>SC 137.7, 73.7, 148.4 seen award 5 marks</p>	<p>Accept alternative methods of correct working out.</p> <p>Error carried forward should be applied.</p> <p>Award full marks for correct answer only (to 1DP).</p>	(6)

Question number	Answer	Additional Guidance	Mark
5(b)	<p>Stage 1 (calculation of total revenue) (1) $(155 \times 24500) + (83 \times 32400) + (167 \times 43900)$ $= 3,797,500 + 2,689,200 + 7,331,300$ (M1) $= \text{£}13,818,000.00$ (A1)</p> <p>Stage 2 (calculation of mean) (1) $\text{£}13,818,000.00/405 = 34,118.51851$ Also accept: $\text{£}34,118.52$ Answers that round to $\text{£}34,118.52$, and $\text{£}34,119$</p>	<p>Accept alternative methods of correct working out.</p> <p>Error carried forward should be applied.</p> <p>Award full marks for correct answer only.</p> <p>Special case award 1 mark for $(24,500 + 32,400 + 43,900) / 3 = 33,600$</p>	(2)

Question Number	Answer	Mark
6(a)	<p>Any two of the following benefits</p> <ol style="list-style-type: none"> 1. Protection from the elements / sea water / weathering / water resistance / seals the wood (1) 2. Aesthetic appeal / the natural beauty of the hardwood remains visible (1) 3. Protection from wear and tear (1) 4. Provides / maintains a smooth / high gloss / splinter free finish (1) 5. Easier to clean / wash down the deck (1) 	(2)

Question number	Answer	Mark
6(b)	<p>Any two explanations that include identification of a benefit (1) and linked explanations of that benefit (1) + (1).</p> <ol style="list-style-type: none"> 1. Durable hull (1) because the GRP does not rot / resists degradation / withstand minor impacts (1) therefore requires minimal maintenance / does not require a treatment / repainting (1) 2. Provides a water tight hull structure (1) because it is a monolithic / single piece construction (1) therefore it has no joints / laps or seals (1) 3. Lightweight hull / high strength to weight ratio (1) reduces the power required / improves speed and performance / withstands the buffeting of waves at speed / improves buoyancy (1) whilst minimising the amount of fuel required (1) 4. Clean sleek smooth lines / curves / shape / surfaces possible (1) produces good aerodynamics/hydrodynamics reduces drag / allows water to flow around the shape (1) resulting in a smoother / quieter ride (1) 5. Can be repaired easily using GRP (1) which is available in patch kits (1) and is a cost effective solution (1) <p>Note the question responses relate to the benefits of a boat hull made out of GRP and not manufacturing benefits.</p>	(6)

Question number	Answer	Mark
6(c)	<p>This question is about the principles and applications of quality control and quality assurance as they would apply to the manufacture of the speedboat. Creditworthy responses will make connections which show understanding of factors that need to be considered, going beyond general knowledge.</p> <p>Candidates might refer to the following in their responses:</p> <ul style="list-style-type: none"> • Quality policies • Quality procedures (COSHH) Regulations • ISO 9001 quality management systems / certification • Monitoring of quality • Document control and registers • Staff training • Use of computer control • Automated QC systems • Dimensional control / tolerance checks • Stage testing • End testing • Minimisation of defects • Minimisation of waste • Improved customer satisfaction • Improved company reputation • Impact on sales • Batch records / tractability • Impact on guarantee / warranty • Right first time 	(6)

Level	Mark	Descriptor
	0	No rewardable materials
Level 1	1 - 2	<ul style="list-style-type: none"> • Superficial discussion that considers a narrow range of factors, demonstrating limited understanding. • Partial application of understanding to the context of the question.
Level 2	3 - 4	<ul style="list-style-type: none"> • Coherent discussion that makes some relevant links between a sufficient range of factors, demonstrating competent understanding. • Generally sound application of understanding to the context of the question.
Level 3	5 - 6	<ul style="list-style-type: none"> • Comprehensive discussion that makes effective links between a wide range of factors, demonstrating thorough understanding. • Considered and effective application of understanding to the context of the question.

Question number	Answer	Mark
6(d)	<p>Any two of the following pieces of legislation:</p> <ol style="list-style-type: none"> 1. The Health and Safety at Work Act (1) 2. The Control of Substances Hazardous to Health (COSHH) regulations (1) 3. The Management of Health and Safety at Work Regulations (HSWA)(HASAWA)(1) 4. The Workplace (Health Safety and Welfare) Regulations (1) 5. The Personal Protective Equipment Regulations (PPE Regs) (1) 6. The Manual Handling Regulations (1) 7. The Provision and Use of Work Equipment Regulations (PUWER) (1) 8. Reporting of Injuries, Diseases and Dangerous Occurances Regulations (RIDDOR) (1) 9. Lifting Operations and Lifting Equipment Regulations (LOLER) (1) <p>Any other appropriate answer. Accept correct acronyms</p>	(2)

Question number	Answer	Additional Guidance	Mark
6(e)	<p>Stage 1 Calculate the fuel used per km $13.62/90 = 0.151333(33\dots)$ (1)</p> <p>Stage 2 Calculate the amount of fuel required for a 25km journey $0.151333(33\dots) \times 25 = 3.78(333\dots)$ (1)</p> <p>Stage 3 Calculate the cost of fuel $3.78(333\dots) \times 1.65 = \text{£}6.24$ (1)</p>	<p>Accept alternative methods of correct working out.</p> <p>Error carried forward should be applied.</p> <p>Award full marks for correct answer only.</p> <p>Answer in currency format ie 2dp for full marks.</p>	(3)

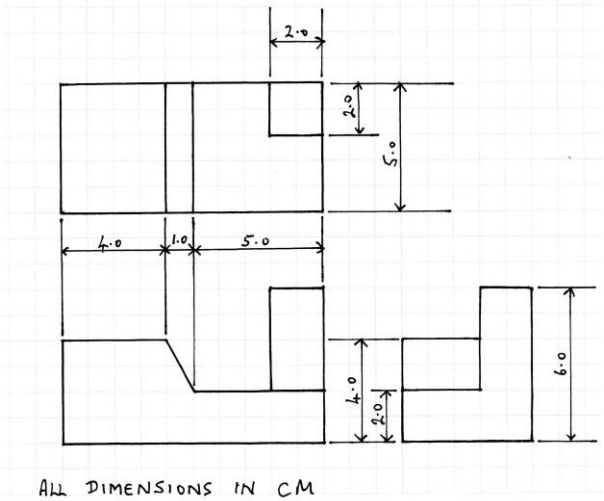
Question number	Answer	Mark
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7

A third angle orthographic drawing of the component.

(6)

The dimensions shown in the exemplar below provide the minimum number of discrete dimensions required to manufacture the product.



Level	Mark	Descriptor
	0	No rewardable materials
Level 1	1 - 2	<ul style="list-style-type: none"> • Drawing is produced with limited attention to detail and lacks accuracy and precision. • Inappropriate use of orthographic projection techniques resulting in inappropriate drawing orientation, layout or missing views • Inappropriate attention to scale, size, alignment and dimensions • Line style is inconsistent and inappropriate throughout.
Level 2	3 - 4	<ul style="list-style-type: none"> • Drawing is produced with some precision and accuracy. • Mostly appropriate use of orthographic projection techniques with mostly accurate orientation, layout and views • Some attention to scale, size, alignment and dimensions • Line style is mostly appropriate and consistent throughout.
Level 3	5 - 6	<ul style="list-style-type: none"> • Drawing is produced with precision and accuracy. • Fully appropriate use of orthographic projection techniques with correct orientation, layout and views • Accurately drawn to scale with correct dimensioning and alignment • Line style is appropriate and consistent throughout enhancing the 3D effect.

Question number	Answer	Mark
8	<p>Discussion focusing on the design influence and style of the Streamlining movement This question is about the design influence and style of the Streamlining movement and how this influenced the design of the pencil sharpener designed by Raymond Loewy. Creditworthy responses will make connections, which show understanding of factors that need to be considered, going beyond general observation of the images provided. Candidates should consider the philosophies and style of the movement, showing understanding of their impact on design.</p> <p>Candidates might refer to the following in their responses:</p> <p>Design philosophy</p> <ul style="list-style-type: none"> • Raymond Loewy was a key figure in the streamlining movement who advocated efficient streamlined designs • Raymond Loewy known as 'The Father of Industrial Design' • Emerged from the Art Deco period originally known as Streamline Moderne • Influenced by aerodynamic designs in aviation and transportation • Beauty through function and simplification • Embraced new materials and processes • Use of new technologies to produce refined designs • Products to be appealing to the emerging consumer society • Popular and influential in the US • Emerged in the 1930s • Designs to broaden the minds of consumers • Associated architectural style 'Googie' • Good appearance is a saleable commodity <p>Style</p> <ul style="list-style-type: none"> • Teardrop shape • Form over function • Lack of ornamentation • Sleek and efficient forms • Smooth surfaces • Airliner inspiration • Marine life inspiration • Aerodynamic aesthetics • Rounded end to front aspect of designs • Tapered edge to rear aspect of designs • Futuristic designs influenced by science fiction • Space age/atomic age • Designs that depict motion • Streamlining has glamorous overtones • Designs that make a statement • Italian style and design eg smeg still popular today 	(9)

Level	Mark	Descriptor
	0	No rewardable materials
Level 1	1 – 3	<ul style="list-style-type: none"> • Superficial discussion that considers a narrow range of factors, demonstrating limited understanding. • Partial application of understanding to the context of the question.
Level 2	4 – 6	<ul style="list-style-type: none"> • Coherent discussion that makes some relevant links between a sufficient range of factors, demonstrating competent understanding. • Generally sound application of understanding to the context of the question.
Level 3	7 - 9	<ul style="list-style-type: none"> • Comprehensive discussion that makes effective links between a wide range of factors, demonstrating thorough understanding. • Considered and effective application of understanding to the context of the question.

Question number	Answer	Mark
9	<p>This question asks candidates to discuss benefits to the manufacturer of quick response manufacturing (QRM). Candidates might refer to the following factors in their responses:</p> <ul style="list-style-type: none"> • Reduction of lead times / time to market • Flow production triggered by consumer demand • Orders move quickly through the supply chain • Rapid updates on trends / fashion / consumer demand • Gives an ability to changes designs/styles quickly • Dedicated cells / product lines reduces retooling costs • Increases ability to improve market share • Improved cash flow • Lower working capital requirement • Reduced stockpiling of completed products • Allows use of JIT methods • Reduced storage costs • Highly automated manufacturing cells • Reduced waste • Reduced overheads • Delivery from production to customer • Allows customisation / flexibility / adaptability • Improved customer satisfaction • Improved company standing / reputation 	(9)

Level	Mark	Descriptor
	0	No rewardable materials
Level 1	1 - 3	<ul style="list-style-type: none"> • Superficial discussion that considers a narrow range of factors, demonstrating limited understanding. • Partial application of understanding to the context of the question.
Level 2	4 - 6	<ul style="list-style-type: none"> • Coherent discussion that makes some relevant links between a sufficient range of factors, demonstrating competent understanding. • Generally sound application of understanding to the context of the question.
Level 3	7 - 9	<ul style="list-style-type: none"> • Comprehensive discussion that makes effective links between a wide range of factors, demonstrating thorough understanding. • Considered and effective application of understanding to the context of the question.

Question number	Indicative Content	Mark
10	<p>Any three explanations that include identification of a use (1) and linked justifications of that use (1) + (1).</p> <ol style="list-style-type: none"> 1. Pressure switches in power tools / consumer products (1) allows controllable input power (1) which results in differing speed / power / torque outputs (1) 2. Gesture control of electronic devices (1) allows swipe and pinch functions (1) to expand / reduce image size on of screen outputs / use as virtual slide switch / control (1) 3. Contact detection / force detection (1) used in sports such as fencing or martial arts (1) to detect when a valid scoring contact is made (1) 4. Electronic health monitoring (1) such as use in blood pressure testing / cuffs (1) to improve accuracy when cuffs are inconsistently applied (1) 5. Wearable electronics (1) with touch and gesture interactivity (1) working interactive textile patches (1) 6. Used in prosthetic limbs (1) to simulate touch sensitivity (1) and replicate human skin sensitivity (1) 7. Used in robotics (1) to detect grip pressure (1) and apply appropriate pressure to safely manipulate the product (1) 8. Used in architecture / structural engineering / surveying (1) to measure/monitor building movement (1) to check on subsidence / earthquake impact / cracking (1) 9. Used in gaming controller / mouse / touch pad / joystick (1) to allow sensory interaction (1) and variable control (1) 	(9)

Question number	Answer	Mark
11	<p>This question asks candidates to evaluate the functionality of a bedside lamp with reference to aesthetics and user requirements within a home setting. Candidates should analyse the lamp in terms of aesthetics, potential performance and ease of use and give reasoned justification to qualify their judgements and conclusion.</p> <p>Points of analysis:</p> <ul style="list-style-type: none"> • Shape and form • Functional use • Ease of use when switching on / off / adjusting intensity • Glass shade • Fixed curved support • Use of glass • Use of stainless steel • Adjustability • Power source • Output device • Support and balance • Aesthetic points related to the above • Recycling / disassembly potential <p>Points of evaluation:</p> <ul style="list-style-type: none"> • Weight of unit • Proportion and size • Ease of use • Typical setting • Safety • Comfort • Features of the lamp • Light dispersion • Aesthetic evaluation • Durability • Market positioning • Appropriate conclusion 	(12)

Level	Mark	Descriptor
	0	No rewardable materials
Level 1	1 – 3	<ul style="list-style-type: none"> • Applies a basic understanding to deconstruct information, making limited connections between concepts. • Incomplete evaluation with unresolved conclusion that demonstrates limited synthesis of understanding. • Judgements are tentatively supported by evidence.
Level 2	4 – 6	<ul style="list-style-type: none"> • Applies a generally sound understanding to deconstruct information and provide some clear connections between concepts. • Imbalanced evaluation that synthesises some relevant understanding into a generally coherent conclusion. • Judgements are occasionally supported by relevant evidence.
Level 3	7 - 9	<ul style="list-style-type: none"> • Applies an effective understanding to deconstruct information and provide logical connections between concepts. • Balanced evaluation that synthesises relevant understanding into a considered conclusion. • Judgements are mostly supported by relevant evidence.
Level 4	10 - 12	<ul style="list-style-type: none"> • Applies a comprehensive understanding to deconstruct information and provides insightful connections between concepts throughout. • Thorough and balanced evaluation that synthesises relevant understanding into a well-developed conclusion. • Judgements are supported by pertinent evidence throughout.