



Mark Scheme (Results)

Summer 2025

Pearson Edexcel GCE

In Design and Technology (9DT0\_01)

## **Edexcel and BTEC Qualifications**

Edexcel and BTEC qualifications are awarded by Pearson, the UK's largest awarding body. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information visit our qualifications websites at [www.edexcel.com](http://www.edexcel.com) or [www.btec.co.uk](http://www.btec.co.uk). Alternatively, you can get in touch with us using the details on our contact us page at [www.edexcel.com/contactus](http://www.edexcel.com/contactus).

## **Pearson: helping people progress, everywhere**

Pearson aspires to be the world's leading learning company. Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for our commitment to high standards and raising achievement through innovation in education. Find out more about how we can help you and your students at: [www.pearson.com/uk](http://www.pearson.com/uk)

Summer 2025

Question Paper Log Number P79931

Publications Code 9DT0\_01\_2506\_MS

All the material in this publication is copyright

© Pearson Education Ltd 2025

## 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.

## A Level 9DT01 2025 – Final

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                     | Mark       |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>1(a)</b>     | <p>Any two of the following uses of a densitometer:-</p> <ol style="list-style-type: none"> <li>1. Measuring colour saturation (1)</li> <li>2. Measuring ink thickness / concentration / density (1)</li> <li>3. Calibration of printing equipment (1)</li> <li>4. To check printing quality (1)</li> </ol> <p>Do not accept checking the colours are correct<br/>Do not accept density without reference to ink or...</p> | <b>(2)</b> |

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Mark       |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>1(b)</b>     | <p>Any two explanations that include a correct benefit and a linked justification of why the benefit makes screen printing a suitable process to use.</p> <ol style="list-style-type: none"> <li>1. Uses a stencil to produce the image (1) which is easier to produce than a printing plate / can be easily produced using a photo-emulsion technique (1)</li> <li>2. Can print on almost any surface (1) meaning that the process is versatile / not restricted to traditional print media (1)</li> <li>3. Economic for short/batch/bespoke production runs (1) by utilising a simple reusable stencil / hand production technique (1)</li> <li>4. Low set up costs (1) because only a simple screen and frame is required (1)</li> <li>5. Easily produced / simple technique can be made in a school / small workshop environment (1) because equipment is inexpensive (1)</li> </ol> <p>Any other appropriate response</p> <p>Do not accept easy, cheap or quick without appropriate context</p> | <b>(4)</b> |

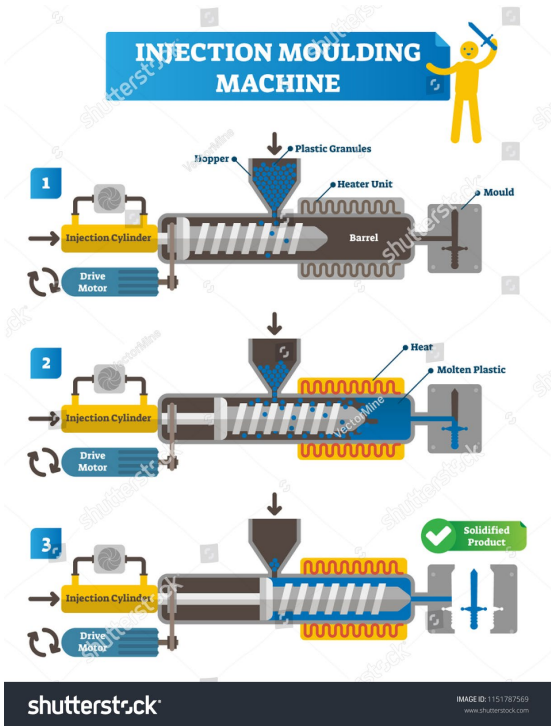
| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Mark       |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>1(c)</b>     | <p>Any explanation that includes the identification of any drawback (1) and linked justifications of why that is a drawback (1+1):</p> <ol style="list-style-type: none"> <li>1. Difficult to achieve fine detail (1) because of the limited number of colours that can be used in a single print (1) and the use of stencil type technology (1)</li> <li>2. Requires long drying times (1) reducing the overall speed of production (1) and the resultant amount of ink used can give the appearance of the print being raised from the printing surface / increasing costs / reducing efficiency (1)</li> <li>3. Not suitable for mass production (1) because it is a slow/time consuming process/requires separate screens for each colour (1) that is labour intensive/limiting the number of colours that can be used (1)</li> <li>4. Hand process (1) so more chance of errors/imperfections (1) resulting in inconsistent outcomes (1)</li> <li>5. Difficult to produce multi-colour images (1) with production over several stencils/prints (1) requiring a drying time between each colour (1)</li> </ol> | <b>(3)</b> |

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                            | Mark       |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>2(a)</b>     | <p>Any two of the following benefits:</p> <ol style="list-style-type: none"> <li>1. Speed of use / production (1)</li> <li>2. Can be applied from one side of the materials (1)</li> <li>3. Single operation forms rivet (1)</li> <li>4. No further finishing required (1)</li> <li>5. Strong permanent fixing (1)</li> <li>6. Low risk / safe process (1)</li> <li>7. Durable / will not rust (1)</li> </ol> <p>Do not accept easy or cheap.</p> | <b>(2)</b> |

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Additional Guidance                                                                                                                                                 | Mark       |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>2(b)</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>Stage 1 (calculate the number of rivet guns required)<br/> <math>235 / (6 \times 60/2) = 1.305</math><br/> <math>= 2</math> guns required<br/>         (accept other valid ways of calculating the number of rivet guns)</p> <p>Stage 2 (calculate the number of rivets required including waste allowance)<br/> <math>235 + (235 \times 7.5/100) =</math><br/> <math>235 + 17.625 = 252.625</math> or 253 (1)</p> <p>Stage 3 (calculate the cost of full packs of rivets)<br/> <math>253 / 50 = 5.06</math> (6 packs)<br/> <math>6 \times £2.50 = £15.00</math> (1)</p> <p>Stage 4 (calculate cost of rivet guns)<br/> <math>£38.25 \times 2 = £76.50</math> (1)</p> <p>Stage 5 (calculate total cost)<br/> <math>£76.50 + £15.00 = £91.50</math></p> | <p>Accept alternative methods / orders of correct working out.</p> <p>Error carried forward should be applied.</p> <p>Award full marks for correct answer only.</p> | <b>(5)</b> |

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Mark       |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>3(a)</b>     | <p>A valid explanation with linked justification:</p> <ol style="list-style-type: none"> <li>1. Thermoplastics can be reheated / reformed multiple times (1) which allows the pellets/granules/material to take on a liquid state and reform into a new product (1)</li> <li>2. Thermoplastics when heated have good fluidity / low melting point (1) which allows them to flow into / fill the mould / produce intricate shapes (1)</li> <li>3. Thermoplastics can be remelted after setting (1) so any waste/surplus plastic in the machine can be reused (1)</li> <li>4. Available in a wide range of colours (1) so no further surface treatments or decoration is needed which enhances the aesthetics of the product (1)</li> </ol> | <b>(2)</b> |

|  |                                                                                                                                           |  |
|--|-------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | 5. Thermoplastics have a low melting point (1)<br>which reduces the amount of energy needed for<br>the process / reduces energy costs (1) |  |
|--|-------------------------------------------------------------------------------------------------------------------------------------------|--|

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Mark |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 3(b)            | <p>Award marks as follows (maximum 4 marks):</p> <ol style="list-style-type: none"> <li>1. Plastic granules are placed in the hopper (1)</li> <li>2. Rotating spiral drive/Archimedes screw moves the granules forward (1)</li> <li>3. The granules pass the heater and liquefy (1)</li> <li>4. The ram / injection cylinder forces the molten plastic into the mould (1)</li> <li>5. The mould is cooled (1)</li> <li>6. The mould opens and the finished product is ejected (1)</li> </ol>  <p>If no sketch, a sketch without labels or incorrect order award a maximum of three marks.</p> | (4)  |

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Additional guidance                   | Mark       |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------|
| <b>3(c)</b>     | <p>Any two explanations that include identification of a drawback (1) and linked justifications of that drawback (1) + (1).</p> <ol style="list-style-type: none"> <li>1. Initial start-up costs are high (1) because a complex mould has to be produced / machinery is expensive (1) so high production outputs are required to cover this cost (1)</li> <li>2. Initial lead times are very long (1) because moulds have to be designed / manufactured / tested (1) potentially leading to loss of opportunities / market share (1)</li> <li>3. Design changes are difficult / expensive (1) because a new mould will most likely be needed (1) resulting in the scrapping of the existing mould (1)</li> <li>4. Only used in mass / volume production (1) because of the need to achieve economies of scale (1) in order to maintain product affordability (1)</li> <li>5. Energy intensive process (1) resulting in high energy costs / negative environmental impact (1) because fossil fuels may still be used in energy production (1)</li> <li>6. Only produces solid mouldings (1) which may lead to excessive use of thermoplastics / limits what can be produced (1) which are produced from fossil fuels / result in emissions / pollution (1)</li> <li>7. Only uses thermoplastics (1) which is a non-renewable material (1) so is not a sustainable process (1)</li> </ol> | Do not accept repeated justification. | <b>(6)</b> |

| Question number | Answer                                                                                                                                                                                                                                                                                                                        | Mark       |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>4(a)</b>     | <p>Any three of the following types of quality monitoring system to a maximum of 3 marks:</p> <ol style="list-style-type: none"> <li>1. Quality control (1)</li> <li>2. Quality assurance / ISO 9000 (1)</li> <li>3. Total Quality Management (TQM) (1)</li> <li>4. Six sigma</li> </ol> <p>Any other appropriate answer.</p> | <b>(3)</b> |



| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Mark       |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>4(b)</b>     | <p>An outline covering any 6 of the following points:</p> <ol style="list-style-type: none"> <li>1. Design and development costs/investment not yet covered (1)</li> <li>2. Start-up costs will be high and absorb initial profits (1)</li> <li>3. Investment in new machinery/tooling needs to be recouped (1)</li> <li>4. Market research / analysis is costly (1)</li> <li>5. High levels of advertising to establish product sales is costly (1)</li> <li>6. Staff training and development costs related to the new product (1)</li> <li>7. Slow sales impact on revenues (1)</li> <li>8. Lower output until demand rises (1)</li> <li>9. Profits low / non-existent (1)</li> <li>10. Sales / distribution networks not yet fully developed (1)</li> <li>11. Public / consumers have limited / no awareness / are cautious of the product (1)</li> <li>12. Cannot yet take advantage of economies of scale (1)</li> </ol> | <b>(6)</b> |

| Question number | Answer                                                                                                                                                                                                                                                                                                                                       | Mark       |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>4(c)</b>     | <p>Any two of the following:</p> <ol style="list-style-type: none"> <li>1. British Standards Institution / BSI (1)</li> <li>2. European Standards / CE / CEN (1)</li> <li>3. International Standards Organisation / ISO (1)</li> <li>4. The American National Standards Institute / ANSI (1)</li> </ol> <p>Any other appropriate answer.</p> | <b>(2)</b> |

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Mark |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 4(d)            | <p>This question asks candidates to discuss how a manufacturer can maintain their share of the market during the maturity stage of their product's lifecycle. Candidates should discuss the methods, strategies and policies a manufacturer might adopt to maintain their market share.</p> <p>Candidates might refer to the following in their responses:</p> <p>Issues to resolve:</p> <ul style="list-style-type: none"> <li>• Market saturation approaching / achieved</li> <li>• Levelling / slowing of demand</li> <li>• Competitors launch new desirable products</li> <li>• Products perceived as becoming outdated</li> <li>• Lower profits but still 'in-profit'</li> </ul> <p>Strategies deployed:</p> <ul style="list-style-type: none"> <li>• Consumer panels / feedback to maintain market awareness</li> <li>• Redevelopment / updates to increase demand</li> <li>• New 'model year' updates</li> <li>• Facelifts and improved features</li> <li>• Incorporation of features that used to be at extra cost</li> <li>• Incorporation of updated technology</li> <li>• Preparation for replacement models including user centred design</li> <li>• Brand loyalty campaigns / loyalty schemes</li> <li>• Marketing / advertising campaigns</li> <li>• Software upgrades</li> <li>• Extension strategies</li> <li>• Planned obsolescence</li> <li>• Social media campaign</li> </ul> | (9)  |

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

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Additional Guidance                                                                                                                                                                                                                                                                                                                           | Mark |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 5(a)            | <p><b><u>Method 1</u></b></p> <p>Stage 1 (calculate the area of the top and bottom flange) (1)<br/> <math>10 \times 125 \times 2 = 2500 \text{ mm}^2</math></p> <p>Stage 2 (calculate area of the web) (1)<br/> <math>(175 - (2 \times 10)) \times 10 = 1550 \text{ mm}^2</math></p> <p>Stage 3 (calculate the total area) (1)<br/> <math>2500 + 1550 = 4050 \text{ mm}^2</math></p> <p>Stage 4 (conversion of units) (1)<br/> <math>4050 / (1000 \times 1000) = 0.00405 \text{ m}^2</math></p> <p>Stage 5 (0.0041m<sup>2</sup> answer shown to 4dp) (1)</p> <p><b><u>Method 2</u></b></p> <p>Stage 1 (calculate the area of the rectangle) (1)<br/> <math>125 \times 175 = 21875 \text{ mm}^2</math></p> <p>Stage 2 (calculate area of the two voids) (1)<br/> <math>2 \times ((175 - (2 \times 10)) \times ((125 - 10) / 2)) = 17825 \text{ mm}^2</math></p> <p>Stage 3 (calculate the total area) (1)<br/> <math>21875 - 17825 = 4050 \text{ mm}^2</math></p> <p>Stage 4 (conversion of units) (1)<br/> <math>4050 / (1000 \times 1000) = 0.00405 \text{ m}^2</math></p> <p>Stage 5 (0.0041m<sup>2</sup> answer shown to 4dp) (1)</p> | <p>Accept alternative methods of correct working out.</p> <p>Error carried forward should be applied.</p> <p>Rounding an incorrect answer to 4dp receives the mark for correct rounding</p> <p>Award full marks for correct answer only (to 4dp)</p> <p>Note conversion of units could be at the beginning or the end of the calculation.</p> | (5)  |

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Additional Guidance                                                                                                                                                                  | Mark |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 5(b)            | <p><b>Method 1</b></p> <p>Stage 1 (calculate total beam length) (1)</p> $5 \times 12 = 60 \text{ m}$ <p>Stage 2 (calculate volume of steel) (1)</p> $60 \times 0.00405 = 0.243 \text{ m}^3$<br>or<br>$60 \times 0.0041 = 0.246$ <p>Stage 3 (calculate weight of beam) (1)</p> $0.243 \times 7.9 = 1.9197 \text{ (or 1.92)}$<br>or<br>$0.246 \times 7.9 = 1.9434 \text{ (or 1.94)}$ <p>(Also accept 1.9)</p> <p><b>Method 2</b></p> <p>Stage 1 Calculate volume of 1 beam (1)</p> $5 \times 0.00405 = 0.02025$<br>Or<br>$5 \times 0.0041 = 0.0205$ <p>Stage 2 Calculate overall volume of 12 beams (1)</p> $12 \times 0.02025 = 0.243$<br>Or<br>$12 \times 0.0205 = 0.246$ <p>Stage 3 (calculate weight of beam) (1)</p> $0.243 \times 7.9 = 1.9197 \text{ (or 1.92)}$<br>or<br>$0.246 \times 7.9 = 1.9434 \text{ (or 1.94)}$<br>(Also accept 1.9) | <p>Accept alternative methods of correct working out.</p> <p>Error carried forward should be applied [including from part (a)].</p> <p>Award full marks for correct answer only.</p> | (3)  |

| Question Number | Answer                                                                                                                                                                                                                                                                                                                                                                                                              | Mark |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 6(a)            | <p>Any two of the following manmade fibres:</p> <ol style="list-style-type: none"> <li>1. Nylon (1)</li> <li>2. Polypropylene (1)</li> <li>3. Polyester / polyethylene terephthalate (PTE) (1)</li> <li>4. Acrylic (1)</li> <li>5. Rayon (1)</li> <li>6. Lycra / Spandex / Elastane (1)</li> <li>7. Polyethylene / polytetrafluoroethylene / ePTFE / Gore Tex (1)</li> </ol> <p>Any other appropriate response.</p> | (2)  |

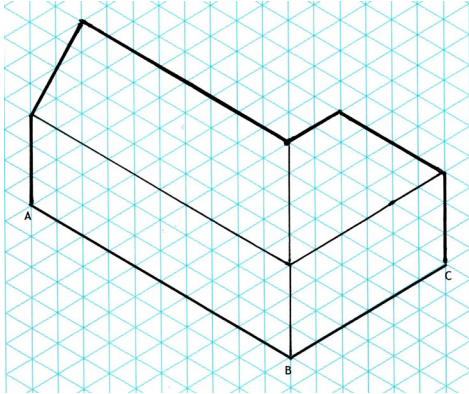
| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Mark       |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>6(b)</b>     | <p>Any two explanations that include identification of a use (1) and linked explanations of that use (1) + (1).</p> <ol style="list-style-type: none"> <li>1. Development of sizing systems (1) because the manufacturer can combine / use the different measurements to determine a given standard male/female size (1) to maximise potential fit / provide a range within the given standard size / to determine correct positioning of pockets / zips / fasteners etc (1)</li> <li>2. Demand prediction for different sizes/stock ratios (1) because anthropometric data provides a normal distribution of measurements (1) allowing the manufacturer to decide the production / stock levels of the different sizes / size to suit the 5<sup>th</sup> to 95<sup>th</sup> percentile (1)</li> <li>3. To maximise comfort / fit (1) because linked data is used for common sizing (1) helping to achieve good/effective freedom of movement / use of the garment (1)</li> </ol> | <b>(6)</b> |

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Mark       |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>6(c)</b>     | <p>This question is about the benefits of automated storage and retrieval systems. Creditworthy responses will make connections that 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"> <li>• Speed and efficiency</li> <li>• Increased throughput</li> <li>• Reduction in labour requirements</li> <li>• Safety improvements</li> <li>• Use in material / component storage</li> <li>• Use in finished product storage</li> <li>• Types of racking system</li> <li>• Bar coding and scanning</li> <li>• Links to stock control systems</li> <li>• Use of AGVs</li> <li>• Optical sensors</li> <li>• Laser guidance</li> <li>• Use of conveyor systems</li> <li>• Use of robotic arms / robotics</li> <li>• Computer control and optimisation</li> <li>• Route control and guidance</li> <li>• Cost effective in the long term</li> <li>• Operates 24/7</li> <li>• More compact warehousing</li> <li>• Reduced human error</li> </ul> | <b>(6)</b> |

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

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                              | Mark       |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>6(d)</b>     | <p>Any two of the following end of life design considerations</p> <ol style="list-style-type: none"> <li>1. Disassembly (1)</li> <li>2. Recyclability of materials / components (1)</li> <li>3. Biodegradability (1)</li> <li>4. Reuse / repurposing potential (1)</li> <li>5. Potential energy recovery (1)</li> <li>6. Material identification and sorting (1)</li> <li>7. Minimise use of landfill (1)</li> <li>8. Ease of repair (1)</li> </ol> | <b>(2)</b> |

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                            | Additional Guidance                                                                                        | Mark       |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|------------|
| <b>6(e)</b>     | <p>Stage 1<br/>Rearrange the formula<br/><math>O = P/T</math><br/><math>OT = P</math> <b>(1)</b></p> <p>Stage 2<br/>Calculate weekly production time (T)<br/><math>(16 \times 4) + 8 = 72</math> (hours) <b>(1)</b></p> <p>Stage 3<br/>Calculate the number of items needed to be produced on Friday<br/><math>9 \times 72 = (145 + 160 + 155 + 115) + F</math><br/><math>648 = 575 + F</math><br/><math>F = 648 - 575 = 73</math> <b>(1)</b></p> | <p>Accept alternative methods of correct working out.</p> <p>Award full marks for correct answer only.</p> | <b>(3)</b> |

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Mark                                                                                                                                                                                                                                                                                                                                                                                 |      |            |  |   |                         |         |       |                                                                                                                                                                                                                                                                                                                                                                       |         |       |                                                                                                                                                                                                                                                                                                                                                                                      |         |       |                                                                                                                                                                                                                                                                                                                                                                         |     |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------|--|---|-------------------------|---------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 7               | <p>An isometric drawing of the building.</p>  <table border="1"> <thead> <tr> <th>Level</th><th>Mark</th><th>Descriptor</th></tr> </thead> <tbody> <tr> <td></td><td>0</td><td>No rewardable materials</td></tr> <tr> <td>Level 1</td><td>1 – 2</td><td> <ul style="list-style-type: none"> <li>Drawing is produced with limited attention to detail and lacks accuracy and precision.</li> <li>Inappropriate use of isometric grid resulting in inappropriate drawing orientation</li> <li>Inappropriate attention to scale, size and dimensions</li> <li>Line style is inconsistent and inappropriate throughout.</li> </ul> </td></tr> <tr> <td>Level 2</td><td>3 – 4</td><td> <ul style="list-style-type: none"> <li>Drawing is produced with some precision and accuracy although some ridge/hip connections may be inaccurately placed.</li> <li>Mostly appropriate use of isometric grid with mostly accurate orientation</li> <li>Some attention to scale, size and dimensions</li> <li>Line style is mostly appropriate and consistent throughout.</li> </ul> </td></tr> <tr> <td>Level 3</td><td>5 – 6</td><td> <ul style="list-style-type: none"> <li>Drawing is produced with precision and accuracy with ridge/hip connection points correctly plotted and positioned.</li> <li>Fully appropriate use of isometric grid with correct orientation</li> <li>Accurately drawn to scale</li> <li>Line style is appropriate and consistent throughout enhancing the 3D effect.</li> </ul> </td></tr> </tbody> </table> | Level                                                                                                                                                                                                                                                                                                                                                                                | Mark | Descriptor |  | 0 | No rewardable materials | Level 1 | 1 – 2 | <ul style="list-style-type: none"> <li>Drawing is produced with limited attention to detail and lacks accuracy and precision.</li> <li>Inappropriate use of isometric grid resulting in inappropriate drawing orientation</li> <li>Inappropriate attention to scale, size and dimensions</li> <li>Line style is inconsistent and inappropriate throughout.</li> </ul> | Level 2 | 3 – 4 | <ul style="list-style-type: none"> <li>Drawing is produced with some precision and accuracy although some ridge/hip connections may be inaccurately placed.</li> <li>Mostly appropriate use of isometric grid with mostly accurate orientation</li> <li>Some attention to scale, size and dimensions</li> <li>Line style is mostly appropriate and consistent throughout.</li> </ul> | Level 3 | 5 – 6 | <ul style="list-style-type: none"> <li>Drawing is produced with precision and accuracy with ridge/hip connection points correctly plotted and positioned.</li> <li>Fully appropriate use of isometric grid with correct orientation</li> <li>Accurately drawn to scale</li> <li>Line style is appropriate and consistent throughout enhancing the 3D effect.</li> </ul> | (6) |
| Level           | Mark                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Descriptor                                                                                                                                                                                                                                                                                                                                                                           |      |            |  |   |                         |         |       |                                                                                                                                                                                                                                                                                                                                                                       |         |       |                                                                                                                                                                                                                                                                                                                                                                                      |         |       |                                                                                                                                                                                                                                                                                                                                                                         |     |
|                 | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No rewardable materials                                                                                                                                                                                                                                                                                                                                                              |      |            |  |   |                         |         |       |                                                                                                                                                                                                                                                                                                                                                                       |         |       |                                                                                                                                                                                                                                                                                                                                                                                      |         |       |                                                                                                                                                                                                                                                                                                                                                                         |     |
| Level 1         | 1 – 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>Drawing is produced with limited attention to detail and lacks accuracy and precision.</li> <li>Inappropriate use of isometric grid resulting in inappropriate drawing orientation</li> <li>Inappropriate attention to scale, size and dimensions</li> <li>Line style is inconsistent and inappropriate throughout.</li> </ul>                |      |            |  |   |                         |         |       |                                                                                                                                                                                                                                                                                                                                                                       |         |       |                                                                                                                                                                                                                                                                                                                                                                                      |         |       |                                                                                                                                                                                                                                                                                                                                                                         |     |
| Level 2         | 3 – 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>Drawing is produced with some precision and accuracy although some ridge/hip connections may be inaccurately placed.</li> <li>Mostly appropriate use of isometric grid with mostly accurate orientation</li> <li>Some attention to scale, size and dimensions</li> <li>Line style is mostly appropriate and consistent throughout.</li> </ul> |      |            |  |   |                         |         |       |                                                                                                                                                                                                                                                                                                                                                                       |         |       |                                                                                                                                                                                                                                                                                                                                                                                      |         |       |                                                                                                                                                                                                                                                                                                                                                                         |     |
| Level 3         | 5 – 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>Drawing is produced with precision and accuracy with ridge/hip connection points correctly plotted and positioned.</li> <li>Fully appropriate use of isometric grid with correct orientation</li> <li>Accurately drawn to scale</li> <li>Line style is appropriate and consistent throughout enhancing the 3D effect.</li> </ul>              |      |            |  |   |                         |         |       |                                                                                                                                                                                                                                                                                                                                                                       |         |       |                                                                                                                                                                                                                                                                                                                                                                                      |         |       |                                                                                                                                                                                                                                                                                                                                                                         |     |

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Mark |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 8               | <p>This question is about the design influence and style of the Streamlining movement and how this influenced the design of the fuel station in the Googie architectural style. 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"> <li>• Development of high impact visual imagery</li> <li>• Designs to attract increasingly mobile consumers</li> <li>• Designs signalling the beginning of a new era</li> <li>• Emerged from the Art Deco period and was originally known as Streamline Moderne</li> <li>• Influenced by aerodynamic designs in aviation and transportation</li> <li>• Beauty through function and simplification</li> <li>• Embraced new materials and processes</li> <li>• Use of new technologies to produce refined designs</li> <li>• Designs to be appealing to the emerging consumer society</li> <li>• Designs to broaden the minds of consumers</li> <li>• Associated architectural style 'Googie'</li> <li>• Good appearance is a saleable commodity</li> </ul> <p>Style</p> <ul style="list-style-type: none"> <li>• Teardrop shapes</li> <li>• Futuristic / space age</li> <li>• Sleek and efficient forms</li> <li>• High visual impact</li> <li>• Smooth surfaces</li> <li>• Airliner inspiration</li> <li>• Marine life inspiration</li> <li>• Aerodynamic aesthetics</li> <li>• Depicting the atomic age</li> <li>• Tapered edge to rear aspect of designs</li> <li>• Futuristic designs influenced by science fiction</li> <li>• Designs that depict motion</li> <li>• Designs depicting wings and flight</li> <li>• Roofs forming an inverted obtuse triangle</li> <li>• Starbursts</li> </ul> | (9)  |



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

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Mark |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 9               | <p>Candidates might refer to the following in their responses:</p> <ul style="list-style-type: none"> <li>• Benefits of good aesthetics</li> <li>• Benefits of good ergonomics</li> <li>• Principles of good design</li> <li>• Buildability</li> <li>• Product performance</li> <li>• Ease of use</li> <li>• User comfort</li> <li>• Potential safety issues</li> <li>• Cost issues</li> <li>• Impact of anthropometric data</li> <li>• Outliers</li> <li>• Form v function</li> <li>• Form follows function</li> <li>• Form over function</li> <li>• Impact of fashion and taste on the product</li> <li>• Target market group and their priorities</li> <li>• Stimulation of product demand</li> <li>• Marketability</li> <li>• Durability of aesthetically pleasing materials</li> </ul> | (9)  |

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

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Mark |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 10              | <p>Any two explanations of a benefit and one explanation of a drawback that include identification of the benefit / drawback (1) and linked justifications of that benefit / drawback (1) + (1).</p> <p>Benefits:</p> <ol style="list-style-type: none"> <li>1. Slim / thin display (1) because this reduces the bulk of the product (1) allowing screens to be wall mounted / take up less space within the product / on a desk (1)</li> <li>2. Energy efficient (1) because this will reduce energy consumption (1) saving money for the user / reducing greenhouse emissions (1)</li> <li>3. Low heat emissions (1) because this helps to create a comfortable temperature within the room environment (1) with minimal impact on the year-round heating / cooling requirements (1)</li> <li>4. High definition / resolution (1) good image quality / maximises the benefits of modern streaming services (1) allowing the best possible viewing experience (1)</li> <li>5. Limited screen burn after prolonged use (1) so active screen savers are not needed (1) allowing use for displaying static images (1)</li> </ol> <p>Drawbacks:</p> <ol style="list-style-type: none"> <li>6. Limited viewing angles (1) because colours and brightness may appear distorted when viewed from certain angles (1) reducing the clarity of the image (1)</li> <li>7. Motion blur (1) because this can occur during fast paced scenes (1) reducing the quality of the viewing experience (1)</li> <li>8. Use of a backlight (1) because this produces a 'flickering' effect (1) can cause eye strain / headaches (1)</li> <li>9. Can easily be damaged (1) because the screen is thin / fragile (1) and susceptible to pressure, temperature changes thermal stress and physical impacts (1)</li> </ol> <p>Accept any other appropriate response</p> | (9)  |

| Question number | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Mark |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 11              | <p>This question asks candidates to evaluate how the designer of the covered outdoor dining area has addressed aesthetics and user requirements for outdoor lifestyles and dining.</p> <p>Candidates should analyse the covered outdoor dining area in terms of aesthetics and user requirements for all user groups / stakeholders and give reasoned justification to qualify their judgements and conclusion.</p> <p>Points of analysis:</p> <ul style="list-style-type: none"> <li>• User applies to anyone using the seating area</li> <li>• Potential ease of assembly by user</li> <li>• Use for other activities</li> <li>• Provision of shelter</li> <li>• Provision of shade</li> <li>• Shape and form</li> <li>• Functional use</li> <li>• Variety of potential activity</li> <li>• Size relative to relevant anthropometrics</li> <li>• Position and shape of table and bench seats</li> <li>• Use of specified materials</li> <li>• Potential quality issues</li> <li>• Durability and longevity</li> <li>• Finishes and maintenance</li> <li>• Aesthetic points related to the above</li> </ul> <p>Points of evaluation:</p> <ul style="list-style-type: none"> <li>• Ergonomic use by the target group</li> <li>• Proportion and size</li> <li>• Range of human movement within the target group</li> <li>• Safety for use by the target group</li> <li>• Ease of movement on entry and exit</li> <li>• Value for money</li> <li>• Features of the covered seating area</li> <li>• Effectiveness of weather / shade protection</li> <li>• Aesthetics</li> <li>• Durability</li> <li>• Sustainability</li> </ul> <p>Appropriate conclusion</p> | (12) |

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