

Commentary on candidate evidence

The candidate evidence has achieved the following marks for each question of this course assessment component: question paper.

It should be noted that the 2022 Advanced Higher Design and Manufacture question paper had a maximum of 65 marks available due to modifications introduced during the pandemic. This modification to the question paper consisted of optionality being introduced to Section 1 of the question paper, giving candidates the option of completing either question 1 or question 2.

Candidate 2

Section 1

The candidate chose to respond to question 1 (product analysis).

Question 1(a)

The candidate was awarded **6 marks** because they gave a clear outline of identifying features, e.g., bosses, stretching of materials, uniform cross section and clear reasons for suitability of processes, e.g., scale of production, type of material, accuracy.

Question 1(b)

The candidate was awarded **5 marks** because they clearly reference reasons for selection of their methods and give detailed description of the methods. They also give clear conclusions.

Question 1(c)

The candidate was awarded **2 marks** because they referenced aspects relating to value for money (number of functions and materials). This response is not detailed enough to gain marks in upper middle or top band.

Section 2

Question 3(a)

The candidate was awarded **4 marks** because they outlined four of the issues that may have influenced the selection of manufacturing and assembly processes for parts of the 'Snoweel': resistant to corrosion (ice and water), comfort for seat, strong but easy to move, withstand range of temperatures.

Question 3(b)

The candidate was awarded **4 marks** because they made four valid points about the issues that may have influenced the selection of manufacturing and assembly processes for parts of the 'Snoweel': ease of assembly, intricate detail/accuracy, complexity, materials used.

Question 3(c)

The candidate was awarded **0 marks** because they made no valid points about the possible benefits of using composite materials for the wheels. The answer could apply to non-composites and therefore did not demonstrate the required knowledge and understanding.

Question 3(d)

The candidate was awarded **5 marks** because there is a clear description of the use of modelling to develop the Snoweel which demonstrates a clear knowledge and understanding of the subject matter. There are clear examples of the use of modelling: sketch models, block models, CAD models and prototypes.

Question 4(a)

The candidate was awarded **2 marks** because they named a suitable method of protecting IPR of the radiator and one key feature: protects the shape of the original design.

Question 4(b)

The candidate was awarded **1 mark** because they outlined one main feature designers need to consider to ensure components can be successfully die-cast: sloping sides or round edges to allow it to be removed from mould.

Question 5(a) (i)

The candidate was awarded **0 marks** because their response does not describe the challenges of achieving a balance between function and aesthetics.

Question 5(a) (ii)

The candidate was awarded **0 marks** because they did not describe methods which could be used to achieve a balance between function and aesthetics.

Question 5(b)

The candidate was awarded **3 marks** because they demonstrated a general understanding of inclusive design and made generic reference to everyday products.

Question 6(a)

The candidate was awarded **3 marks** because they made three valid points of how physiology and psychology may have influenced the design of the Pod: weight of pod, secure look, colour of first aid kit.

Question 6(b)

The candidate was awarded **0 marks** because their response did not outline information that may have been obtained about design issues.

Question 7(a)

The candidate was awarded **0 marks** because their response did not describe two other ways in which design opportunities may be created.

Question 7(b)

The candidate was awarded **3 marks** because they gave three valid descriptions of how a company can reduce the negative impact of a product recall: notification of stockholders, replacement product, speedy recall.

Question 7(c)

The candidate was awarded **1 mark** because they describe one of the steps a company can take to successfully launch a product: utilising different forms of advertising.

Total: 39 marks