

Candidate 3

Section 1

Question 1(a)

The candidate was awarded **6 marks**.

- ◆ 'ABS...durable'
- ◆ 'its also chemically resistant...cleaned hygienically.'
- ◆ 'Mild steel...strong enough to not warp under the users weight'
- ◆ 'Carbon fiber is extremely light for its strength'
- ◆ 'Stainless steel is corrosion resistant'
- ◆ 'Nylon is self-lubricating...due to Nylon properties.'

Additional marks could have also been awarded for:

- ◆ 'Aluminium is incredibly light ensuring the chair is easy to push'

Question 1(b)

The candidate was awarded **6 marks**.

- ◆ 'Extrusion could be used for the tubular aluminium frame'
- ◆ 'constant cross section'
- ◆ 'the tube could then undergo bending'
- ◆ 'accurate'
- ◆ 'able to be replicated'
- ◆ 'Injection moulding could be used for the ABS footrest'

Additional marks could have also been awarded for:

- ◆ 'to provide a good surface finish'
- ◆ 'as well as the complex shape'
- ◆ 'Aluminium wheels could be die casted'
- ◆ 'Press forming of the bumper'
- ◆ 'as they are made of sheet metal'
- ◆ 'Welding has been used to join the metal wings + bumpers'
- ◆ 'Piercing used to accurately produce holes.'

Question 1(c)

The candidate was awarded **5 marks**.

- ◆ 'can be folded...make carrying easier'
- ◆ 'The handles on the back...can easily help them move.'
- ◆ 'the metal bar attached...find a good grip'
- ◆ 'Both chairs have been...move with less effort'
- ◆ 'The arm cushions...to make the chair more comfortable'

Additional marks could have also been awarded for:

- ◆ 'the bumper + wings...provide better protection'
- ◆ 'also stops other chairs getting trapped'

Question 1(d)

The candidate was awarded **4 marks**.

- ◆ 'reliability of sub-contractor...find a alternative.'
- ◆ 'It limits the designing of the chair'
- ◆ 'It is cheaper to use them than custom designing/manufacturing pieces'
- ◆ 'It also speeds up the design process...to spend time making them'

Question 1(e)

The candidate was awarded **4 marks**.

- ◆ 'Chair is light enough...strain/overworking of muscles.'
- ◆ 'Any foldable components...collapsing without any trouble.'
- ◆ 'grips on handles... so consumer is comfortable while holding it.'
- ◆ 'the grip size/diameter...grips for someone pushing it.'

Additional marks could have also been awarded for:

- ◆ 'the depth of gap between...can easily fit + not get caught.'
- ◆ 'the height of the back...upper body (hips to shoulders)'
- ◆ 'the anthropometrics for the height...close/far from main seat'

Section 2

Question 2(a)

The candidate was awarded **2 marks**.

- ◆ 'because it is done with thin plastic sheets'
- ◆ 'Uses templates/moulds that allow accurate replication'

Additional marks could have also been awarded for:

- ◆ 'as the process is accurate ensure if two pieces will fit/lock together'
- ◆ 'textures seen to be incorporated to the design'

Question 2(b)

The candidate was awarded **3 marks**.

- ◆ 'Polypropolene'
- ◆ 'It comes in a variety of colors'
- ◆ 'scratch resistant...resiliant to damage so that food items remain unharmed.'

Question 2(c)

The candidate was awarded **2 marks**.

- ◆ 'Cost – depending on how much...you can use'
- ◆ 'Fitness for the job...the chosen materials.'

Question 3(a)

The candidate was awarded **3 marks**.

- ◆ 'So its quicker + easier to make changes.'
- ◆ 'Means than the softwear...doing test rigs.'
- ◆ 'Can be easier shared with people across the world.'

Additional marks could have also been awarded for:

- ◆ 'Orthographics/dimentionts of products can be easier worked out off of a CAD model'
- ◆ 'Allows...rapid prototyping'

Question 3(b)

The candidate was awarded **2 marks**.

- ◆ 'quality of product, so company/product are more trustworthy to consumers'
- ◆ 'Big companies/brands...boosting sales'.

Additional marks could have also been awarded for:

- ◆ 'Means aesthetics of the product are instantly recognisable'
- ◆ 'allows for brand to charge more for products'

Question 3(c)

The candidate was awarded **2 marks**.

- ◆ 'trade mark'
- ◆ 'protects the logo'

Additional marks could have also been awarded for:

- ◆ 'Registered design'
- ◆ 'allows you to protect products particularly Aesthetics'

Question 3(d)

The candidate was awarded **3 marks**.

- ◆ 'Introduction is stage A...lots is invested'
- ◆ 'Stage B is growth...lots of profit'
- ◆ 'Stage C is the mature...market saturation'

Additional marks could have also been awarded for:

- ◆ 'In marketing...financially viable.'
- ◆ 'Stage d is decline...product from market.'

Question 4(a)

The candidate was awarded **4 marks**.

- ◆ 'The use of the colour blue...target market.'
- ◆ 'The contrast between the blue + black of the second raiser makes it stand out more and have a more bold feel'
- ◆ 'The curved shape/form of the blue razor gives it a sleeker feel'
- ◆ 'The texture found on the grip of both razors makes them look more robust'

Question 4(b)

The candidate was awarded **5 marks**.

- ◆ 'Sketch models'
- ◆ 'used in early stages of design to better communicate a idea'
- ◆ 'Prototypes'
- ◆ 'fully functioning models...test rigs'
- ◆ 'used to check product for any changes right before production.'

(No marks would be awarded for the ergonomic statement as it would disadvantage the candidate – marks can only be awarded for two model types).

Question 5(a) (i)

The candidate was awarded **1 mark**.

- ◆ 'this specification give...general Aesthetics.'

Question 5(a) (ii)

The candidate was awarded **1 mark**.

- ◆ 'this contain information...or specific components (gear etc).'

Question 5(b)

The candidate was awarded **1 mark**.

- ◆ 'Send out a survey...want in product'
- ◆ 'find the popular aesthetic trends/price range of products aimed at target market.'

Question 5(c)

The candidate was awarded **0 marks** because they do not attempt to answer the question – no response.

Question 6(a)

The candidate was awarded **3 marks**.

- ◆ 'symbols on the product that could indicate what materials are in it.'
- ◆ 'compare it to another piece of material which is known to see if they are similar enough to be the same.'
- ◆ 'Look at the Aesthetic of the material its colour, texture, finish to see if it looks like a specific known material.'

Question 6(b)

The candidate was awarded **2 marks**.

- ◆ 'Ribs + webs allow for greater strength'
- ◆ 'bosses are used to help locate internal parts so that they are place in right place + held firm.'

Question 6(c)

The candidate was awarded **2 marks**.

- ◆ 'Allows them to know if it is suitable for particular purpose, will it melt if exposed to heat/be damaged be cleaning products.'
- ◆ 'labels allow specific parts of items to be identified, either so they can be replaced easily, or assembled correctly.'

Question 7

The candidate was awarded **8 marks** because they displayed extensive knowledge and understanding of how graphics can be used during the design process. Detailed information was given about different types of graphics and how they are used to support designing.

Total – 69 marks out of 80