Commentary on candidate evidence

Candidate 1

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

Question 1a

The candidate was awarded **0 marks** because they did not use the correct command words throughout the answer, eg '*Constrain*' is not a command.

Question 1b (i)

The candidate was awarded **0 marks** because '*Angled plan view*' is not an acceptable answer.

Question 1b (ii)

The candidate was awarded **1 mark** because '*Full section Y-Y*' is an acceptable answer and their response included an accurate description of the purpose.

Question 1b (iii)

The candidate was awarded **1 mark** because they described the use and purpose of an angle dimension and a tolerance.

Question 1c (i)

The candidate was awarded **1 mark** because they made reference to the type of graphic in the supplementary sheets and correctly identified that the redesign can be updated.

Question 1c (ii)

The candidate was awarded **1 mark** because they have correctly identified that the file is used for '*3D printing*' and that this can be used in the redesign of the seat.

Question 1c (iii)

The candidate was awarded **0 marks** because whilst they have correctly identified the file type, the explanation of how this can be used in the redesign does not offer any specific editing techniques.

Question 1d (i)

The candidate was awarded **1 mark** because the explanation of the texture mapping process is correct.

Question 1d (ii)

The candidate was awarded **0 marks** because they have described '*reflections*' without demonstrating how the material properties would affect this and not the *'light source'.*

Question 1d (iii)

The candidate was awarded **1 mark** because their explanation of the bump mapping process is correct.

Question 1e (i)

The candidate was awarded **1 mark** because .AVI is an acceptable answer.

Question 1e (ii)

The candidate was awarded **1 mark** because .AI is an acceptable answer.

Question 1e (iii)

The candidate was awarded **3 marks** because all three explanations provided are appropriate considerations:

- all colours CMYK **(1 mark)**
- fonts converted to vectors **(1 mark)**
- bleed/crop marks have been identified **(1 mark)**

Question 2a (i)

The candidate was awarded **2 marks** because the two explanations provided are appropriate advantages:

- analysis for ergonomic purposes (ease of movement) **(1 mark)**
- data is stored and can be used to test again for comparisons **(1 mark)**

Simply stating that motion capture is '*realistic*' would not directly affect the manufacture. Again '*complex*' animations can be created using other technologies.

Question 2a (ii)

The candidate was awarded **3 marks** because they have described three correct disadvantages of the technology for the manufacturer.

- '*Large amounts of data'* which can be time consuming to process **(1 mark)**
- *'expensive specialist software'* **(1 mark)**
- '*post production'* **(1 mark)**

Question 2b (i)

The candidate was awarded **1 mark** because they were only able to describe the extrusion of the nozzle.

The candidate produced a good plan of how the model should be created, however, they used incorrect 3D CAD terms, eg *'Extrude… remove'* and *'extrude inwards'* are not acceptable terms.

Question 2b (ii)

The candidate was awarded **2 marks** because they correctly used the extrude and loft method **(1 mark)**. The candidate also included the loft in the model by using concentric shapes to create a thickness prior to applying a 3D modelling technique **(1 mark)**.

Question 2c

The candidate was awarded **4 marks** because they have correctly identified four requirements for FEA simulation:

- selecting materials **(1 mark)**
- fixing points **(1 mark)**
- magnitude and direction **(1 mark)**
- type of stress (infers static or dynamic) **(1 mark)**

Question 2d

The candidate was awarded **2 marks** because they have correctly identified and explained the use of two pieces of information which would be included in the given orthographic views:

- dimensions (with reference to manufacturing) **(1 mark)**
- tolerances (with reference to its function) **(1 mark)**

- detail view (duplication of dimensioning) **(0 marks)**
- wall thickness (duplication of dimensioning) **(0 marks)**
- material choice **(0 marks)**

Question 3a

The candidate was awarded **3 marks** because the following elements and principles were identified and explained:

- line used for separating the text in the document **(1 mark)**
- white space and its impact **(1 mark)**
- colour choice and how this connects the brand **(1 mark)**

No marks were awarded for texture to create depth as this is incorrect.

Question 3b

The candidate was awarded **2 marks** because their answers address maintaining consistency and demonstrate good knowledge of digital and printed media, for example:

- colour spaces **(1 mark)**
- consistent fonts **(1 mark)**

No marks were awarded for size of the logo because the candidate did not mention how this is done, for example, through a vector.

Question 3c

The candidate was awarded **4 marks** because they described four valid requirements when producing a camera-ready copy:

- vector fonts **(1 mark)**
- CMYK **(1 mark)**
- bleeds set with the appropriate size given **(1 mark)**
- crop marks and registration marks **(1 mark)**

Question 3d

The candidate was awarded **0 marks** because *'laser printing'* is not an acceptable printing process.

Question 3e

The candidate was awarded **3 marks** because they have attempted to describe the size of the numbers as bigger in bot labels which is incorrect. No further

marks can be awarded for the last point regarding layout as '*repetition of shape'* has already been awarded a mark.

- contrast using colour **(1 mark)**
- colour used to allow the text to *'stand out'* **(1 mark)**
- repetition of shape **(1 mark)**

Question 4a

The candidate was awarded **6 marks** because the three surveys are correct and the explanation demonstrates understanding for each of the following:

- topographical **(1 mark)**
- discussed land features such as trees and slopes **(1 mark)**

- drainage **(1 mark)**
- discussed flood risks **(1 mark)**

- underground **(1 mark)**
- discussed rock and soil and the impact on foundations **(1 mark)**

Question 4b (i)

The candidate was awarded **2 marks** because the use of 3D printing is correct **(1 mark)**. A further mark was awarded for the description regarding *'extracting… dimensions*' for further scaled models **(1 mark)**.

Question 4b (ii)

The candidate was awarded **1 mark** because they have only described the use of FEA and structural load to determine choice of materials.

Question 4b (iii)

The candidate was awarded **2 marks** because they have discussed information on tolerances and information regarding materials **(1 mark)** and how the model should be assembled **(1 mark)**.

Question 5a

The candidate was awarded **2 marks** because they have described the following:

- interactive vrml to engage the viewer **(1 mark)**
- up-to-date information **(1 mark)**

Question 5b (i)

The candidate was awarded **2 marks** because they have explained the following:

- laying out links in rows (grid structure) **(1 mark)**
- repetition of shapes (infers visual hierarchy) **(1 mark)**

Question 5b (ii)

The candidate was awarded **2 marks** because they have explained the following:

- *'use of arrows'* navigational cues **(1 mark)**
- '*clear boxes'* infers generous space **(1 mark)**.

'*use of identically shaped boxes'* is a duplication from Question 5bi **(0 marks).**

Question 5biii

The candidate was awarded **1 mark** because they identified and explained the use of JPEG images.