

Candidate 4

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

Question 1ai

The candidate was awarded **1 mark** for either '*natural obstacles*' or '*the lie of the land*'. Both of these responses relate to topography and therefore no additional marks can be awarded.

Question 1aii

The candidate was awarded **2 marks**.

1 mark for '*how trees effect the view*' and **1 mark** for '*road access*'.

Question 1b

The candidate was awarded **1 mark** for '*aesthetic value of the development*' as this relates to how the development will look within the current environment.

Question 1c

The candidate was awarded **2 marks**.

1 mark for '*contour ...allowing the architect to design a stable house*' and **1 mark** for demonstrating understanding of the importance of the drainage system.

Question 1 didi

The candidate was awarded **2 marks**.

1 mark for considering the '*layout of the materials*' which relates to the construction of the roof and **1 mark** for '*type of materials*'.

Question 1 dii

The candidate was awarded **2 marks**.

- ◆ '*exterior aesthetics*' (**1 mark**)
- ◆ '*interior aesthetics*' (**1 mark**)

NB: Although the answers are very similar, the candidate made reference to two different graphics that have distinctive purposes for the sales team and therefore **2 marks** were awarded.

Question 1e

The candidate was awarded **2 marks**.

1 mark for '*widely accessed... around the world*' and **1 mark** for '*information can easily be shared through social media*'.

Question 1f

The candidate was awarded **0 marks** because the description provided was not sufficiently clear.

NB: This is a 'describe' question and not a 'compare' question. Therefore the Marking Instructions clarifies (additional guidance) that the advantages relate to the animations purpose in this context and not advantages compared to other types of animation.

Question 1g

The candidate was awarded **1 mark** for HDRI.

Question 1hi

The candidate was awarded **2 marks**.

1 mark for '*Ambient lighting*' as a type of applied lighting and **1 mark** for '*Texture mapping*' because the answer was explained.

Question 1 hii

The candidate was awarded **1 mark** for '*Rendered environment... to show a realistic representation*'.

Question 2a

The candidate was awarded **2 marks**.

1 mark for the '*STL file*' type and **1 mark** for the reference to the '*3D printer*'

Question 2bi

The candidate was awarded **1 mark** for '*structural integrity*', which relates to testing methods **0 marks** were awarded for the response about aesthetics as this can be tested on a computer model.

NB:

Question 2bii

The candidate was awarded **2 marks**.

1 mark for *'the assembly technique'* i.e. construction methods and **1 mark** for *'materials used will be suitable for the design'*.

NB: The candidate was not allocated a mark for their response regarding *'materials'* to the previous question (2bi) but the mark can be awarded here because this relates to manufacturing

Question 2c

The candidate was awarded **2 marks**.

Finite Element Analysis (**1 mark**)

Computational Fluid Dynamics (**1 mark**)

Question 2d

The candidate was awarded **2 marks**.

1 mark for explaining how the forces on the caravan affect the *'maximum speed'* of the car and caravan and, **1 mark** for explaining how the forces on the caravan affect the *'fuel consumption'* (the car pulling the caravan).

Question 2e

The candidate was awarded **3 marks**.

- ◆ representation of the *'quality of materials'* (**1 mark**)
- ◆ *'aesthetics of the exterior and interior'* (**1 mark**)
- ◆ *space in the interior'* which relates to internal rendered views (**1 mark**)

NB: *'quality of design'* was not specific enough. The candidate would need to explain which quality in the design could be made clear in a rendered computer model in order to be awarded an additional mark.

Question 2f

The candidate was awarded **1 mark**.

1 mark for '*Visualise(ation) of space*' and **0 marks** for the statement '*everyone understands a VRML image*' as this is very generic. .

NB: The candidate could have gained an additional mark if they explained the specific benefits of VRML in this context eg being able to zoom, control viewing positions etc.

Question 2g

The candidate was awarded **1 mark** for '*view every part of the product*'.

NB: It is worth noting that the candidate's point about viewing the images '*from home*' indicates VRML's files appropriateness for online images. However as this was a 1 mark question no further marks can be awarded.

Question 3a

The candidate was awarded **2 marks**.

1 mark for their response relating to scale and quality and, **1 mark** for '*file size compared with raster images*'.

Question 3b

The candidate was awarded **1 mark** for reference to '*using a colour match system such as Pantone*'. *No further marks were awarded as the candidate did not provide an explanation of Pantone.*

Question 3c

The candidate was awarded **2 marks**.

1 mark for demonstrating understanding of the term '*calendared*' and the importance of '*papers density*' (**1 mark**) which is relevant to both paper weight and paper opacity.

Question 3d

The candidate was awarded **3 marks**.

- ◆ Description of using printing plates (**1 mark**)
- ◆ Consideration of crop-marks (**1 mark**)
- ◆ Understanding CMYK (**1 mark**)

NB: Although registration is inferred the specific term is not used and so no further marks can be awarded.

Question 4a

The candidate was awarded **1 mark** for stating that the coke logo/brand is '*Easily recognisable*'. The candidate's reference to copyright is not a valid response to this question.

Question 4b

The candidate was awarded **3 marks**.

- ◆ protection from 'False advertising' (**1 mark**)
- ◆ product protection ensuring that no one can copy the product (**1 mark**)
- ◆ role of intellectual property rights in ensuring a product /company maintains its '*reputation*' (**1 mark**)

Question 4c

The candidate was awarded **3 marks**.

Target Market

0 marks awarded for this section as no audiences were mentioned.

Colour

1 mark for identifying the importance of colour in brand identity.

0 marks for identifying colour contrast in Graphic 1 as only black and white were considered.

Social responsibilities

1 mark for the candidate's response to social responsibility referring to Graphics 2 and 3.

Question 5a

The candidate was awarded **5 marks**.

- ◆ correct explanation of extrusion method to create the cylindrical element (**1 mark**)
- ◆ correct dimensions used for cylindrical element (**1 mark**)
- ◆ 0 marks awarded in relation to the M10 thread
- ◆ new work plane 2mm up (**1 mark**)
- ◆ Extrude (**1 mark**)
- ◆ Fillet 20mm radius: (**1 mark**)
- ◆ 0 marks awarded for 'hole' as this is not a term used in the Course Assessment Specification.

Question 5b

The candidate was awarded **1 mark** for the extrude along a path.

0 marks for the profile, path modelling sequence. The path profile is not complete as 25mm would not be the radius of the curve on the centreline therefore **0 marks** for the M10 thread.

NB: The additional pages in the script show a series of dimensioned sketches and extrude commands that appear to give the correct solution but the threaded hole is missing. No marks could be awarded because the MI states that all 'dimensions and terminology must be correct' if the extrude command is used. The creation of the threaded hole feature must be correctly described to gain a mark in this instance.

Question 5c

The candidate was awarded **2 marks** because the axel hole was dimensioned correctly **1 mark**. The candidate chose to create a solid wheel using extrude and removed the hole using subtract later in the response which is acceptable. **1 mark** awarded for the correct tread dimensions.

NB: 0 marks could be awarded for the correct dimensions of the wheel as the position of the centre point for R23 hollow feature has not been specified (nor have the dimensions for square side of the hollow feature). The MI states: 'if using the extrude command **all** dimensions must be included'.

The following marks could not be awarded due to lack of evidence

0 marks for the fillets on the inside axel

0 marks for the position and size of the Ø8 circles

0 marks for using extrude subtract to create the Ø8 holes

0 marks for radial array

Question 5d

The candidate was awarded **1 mark** for the correct use of 'mate' command (**1 mark**).

NB: The candidates term 'radial constraint' must be 'centre axis' written in the Course Assessment Specification and therefore no further marks can be awarded.