

## Candidate 4

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

### Question 1a

The candidate was awarded **1 mark** because the mate command was used

No further marks awarded because the candidate:

- ◆ did not make use of a 90 degree rotate (**0 marks**)
- ◆ did not make use of the tangent constraint (**0 marks**)
- ◆ used offset but the direction is unclear from the answer (**0 marks**)

### Question 1b (i)

The candidate was awarded **0 marks** because '*True Shape*' is incorrect.

### Question 1b (ii)

The candidate was awarded **1 mark** because '*Sectional*' is an acceptable answer. The answer correctly describes the purpose.

### Question 1b (iii)

The candidate was awarded **1 mark** because '*Angle with tolerance*' is an acceptable answer. The answer correctly describes the purpose.

### Question 1c (i)

The candidate was awarded **0 marks** because the answer describes a drawing format. The candidate has described '*FEA/stress analysis*' which can be used to inform edits.

### Question 1c (ii)

The candidate was awarded **1 mark** because they have correctly identified the file type and shown that it can be used to make a physical model for testing.

### Question 1c (iii)

The candidate was awarded **1 mark** because they have identified that this is a 3D modelling file type and that it can be used to aesthetically change the design.

### 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 **1 mark** because the answer illustrates how '*applied lighting*' can be used and an explanation of its function.

### 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 MPEG is an acceptable answer.

### Question 1e (ii)

The candidate was awarded **0 marks** because GIF is incorrect.

### Question 1e (iii)

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

- ◆ all colours CMYK (**1 mark**)
- ◆ fonts and images are embedded (**1 mark**)
- ◆ bleed/crop marks have been identified (**1 mark**)

### Question 2a (i)

The candidate was awarded **3 marks** because all three responses were appropriate when describing this technology:

- ◆ '*realistic movement...capturing a human*', infers recording position and movement of parts (**1 mark**)
- ◆ '*view the ergonomics*', infers capturing human data for improving the design (**1 mark**)
- ◆ '*Used in advertising*' (**1 mark**)

### Question 2a (ii)

The candidate was awarded **1 mark** because they alluded to the expense of the software and inherent need for training.

### Question 2b (i)

The candidate was awarded **3 marks** because they have correctly described the following techniques required to make the model:

- ◆ extrude the cylinder **(1 mark)**
- ◆ shell, removing faces **(1 mark)**
- ◆ fillet correctly indicated **(1 mark)**

The loft command has not been used correctly **(0 marks)**.

### Question 2b (ii)

The candidate was awarded **2 marks** because they have correctly described the following techniques required to make the model:

- ◆ loft **(1 mark)**
- ◆ shell, removing faces **(1 mark)**

### Question 2c

The candidate was awarded **2 marks** because they have correctly identified two requirements for FEA simulation:

- ◆ '*external forces*' set **(1 mark)**
- ◆ material selection **(1 mark)**.

No marks were awarded for the following:

- ◆ '*Any displacement ... set*' is an unclear answer **(0 marks)**
- ◆ '*All forces are given a strength*' is an unclear answer **(0 marks)**

### Question 2d

The candidate was awarded **3 marks** because they have correctly identified and explained the use of three pieces of information which would be included in the given orthographic views:

- ◆ tolerances **(1 mark)**
- ◆ machining symbol **(1 mark)**
- ◆ dimensioning (making reference to the function) **(1 mark)**

### Question 3a

The candidate was awarded **4 marks** because the following elements and principles were identified and explained:

- ◆ unity with the use of red **(1 mark)**
- ◆ depth through overlapping elements **(1 mark)**
- ◆ white space and its function in the document **(1 mark)**
- ◆ rhythm created through colour **(1 mark)**

### Question 3b

The candidate was awarded **3 marks** because their response addressed maintaining consistency and demonstrated good knowledge of digital and printed media.

- ◆ substrate choice **(1 mark)**
- ◆ printing method **(1 mark)**
- ◆ RGB and CMYK colour spaces **(1 mark)**

### Question 3c

The candidate was awarded **3 marks** because they described three valid requirements when producing a camera-ready copy:

- ◆ fonts are embedded **(1 mark)**
- ◆ document is converted to suitable file type (PDF) **(1 mark)**
- ◆ bleed identified with reference to ensuring that it is set to an appropriate value **(1 mark)**

### Question 3d

The candidate was awarded **1 mark** because '*roto-gravure*' is a correct printing process.

### Question 3e

The candidate was awarded **4 marks** because all explanations of the graphic techniques are relevant to the specific images.

- ◆ sans serif for easy reading **(1 mark)**
- ◆ contrasting colours (infers adding interest) **(1 mark)**
- ◆ use of consistent font creating rhythm **(1 mark)**
- ◆ font size for key information **(1 mark)**

### Question 4a

The candidate was awarded **6 marks** because the three surveys are correct and the explanations demonstrate understanding for each:

- ◆ feature **(1 mark)**
- ◆ road access and other existing structures **(1 mark)**
  
- ◆ topographical **(1 mark)**
- ◆ discussed land features such as 'rock outcrops' **(1 mark)**
  
- ◆ underground **(1 mark)**
- ◆ identifying pipes and cables as well as '*unstable land*' **(1 mark)**

### Question 4b (i)

The candidate was awarded **1 mark** because they have discussed why a 3D model might be useful but the second reason of '*destructive testing*' is not a valid answer.

### Question 4b (ii)

The candidate was awarded **2 marks** because they have described the use of FEA and CFD with justifications for each.

### Question 4b (iii)

The candidate was awarded **2 marks** because they have identified the need for required materials and to establish how the construction will look once assembled.

### Question 5a

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

- ◆ advert eye-catching through 'pop-ups' **(1 mark)**
- ◆ reaching a larger audience **(1 mark)**
- ◆ accessibility (is not always true compared with printed media) **(0 marks)**

No marks awarded for digital media seen as '*green*'.

### Question 5b (i)

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

- ◆ clear simple sections (infers grid structure) **(1 mark)**
- ◆ keeping similar information together (infers visual hierarchy) **(1 mark)**

### Question 5b (ii)

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

- ◆ '*Easy and compact*' when describing dropdown menus (**1 mark**)
- ◆ Colour use for making connections (infers visual cues to guide the audience) (**1 mark**)

### Question 5b (iii)

The candidate was awarded **1 mark** because they have explained that fact sheets are printable.