

Answers and marking guidance

Award one mark per correct, developed point unless stated. Other valid answers should be credited.

2 Describe two benefits of using computer-generated graphics.

- Shows aesthetics realistically: colour, texture, proportion
- Easy to modify without redrawing
- Can be shared electronically with the client or team
- Can be used for marketing before the product exists
- Can be rotated to view from any angle
- The file can be sent to CAM/3D printing

No marks for: "See it in 3D" on its own; Unqualified "quick", "easy", "accurate"

3 Quick check

- a) Sectional view
- b) Non-experts find it easier to understand
- c) Changes can be made without redrawing
- d) Orthographic drawing

4 Key terms

- 1 – D
- 2 – E
- 3 – B
- 4 – C
- 5 – A
- 6 – F

5 Describe how graphics can be used to communicate during the design process.

- Quick freehand sketches to record and generate ideas
- Pictorial/3D sketches to explore form and solve problems
- Sectional views to show internal details
- Exploded views to show assembly
- Working drawings with dimensions, tolerances and parts lists for manufacture
- CAD renders to show the client a realistic finish

No marks for: Naming graphic types only

6 Discuss the graphic techniques used at different stages of the design process. You should give clear examples.

- Idea generation: quick freehand 2D/3D sketches, thumbnails, annotation
- Development: more detailed oblique/isometric/perspective sketches, orthographic sketches to check sizes, sectional and exploded views to resolve details
- Production: accurate dimensioned working drawings, orthographic, exploded, parts lists, tolerances
- Presentation: rendered illustrations and CAD renders/animations for clients and marketing
- Better answers explain WHY each suits its stage and who it is for