

OCR A-Level

Digital Tools and Online Collaboration in Design (4.2a)

Materials required for questions

- Pencil
- Rubber
- Calculator

Instructions

- Use black ink or ball-point pen
- Try answer all questions
- Use the space provided to answer questions
- Calculators can be used if necessary
- For the multiple choice questions, circle your answer

Advice

- Marks for each question are in brackets
- Read each question fully
- Try to answer every question
- Don't spend too much time on one question

Good luck!

Q1. Which feature of cloud-based CAD MOST directly enables concurrent development?

- A** Live model-synchronisation
- B** Automatic mesh optimisation
- C** Hardware-accelerated rendering

Q2. Why do designers often use shared digital workspaces when exchanging ideas with specialists?

- A** They allow instant co-editing of complex design data
- B** They automatically translate technical terminology
- C** They convert sketches directly into manufacturing drawings

Q3. Which digital tool is MOST effective for communicating detailed design decisions to stakeholders with limited technical knowledge?

- A** Annotated 3D walkthroughs
- B** Raw parametric constraint tables
- C** STEP file exports

Q4. When developing designs concurrently, which issue is MOST effectively reduced by real-time collaboration tools?

- A** Conflicting file versions
- B** Inaccurate stress-strain simulation
- C** Poor surface-finish rendering

Answers

Q1. A

Q2. A

Q3. A

Q4. A

Q5.

- Real-time communication → instant feedback, no delays
- Shared cloud files → everyone edits same version, no confusion
- No travel needed → saves time, faster decisions
- Faster iteration → changes seen by all immediately
- Comment/track features → clear who changed what and why
- Different time zones → work continues 24/7

Q6.

- Shorter project time → tasks done in parallel
- Problems found earlier → all specialists involved from start
- Better design integration → aesthetics + function developed together
- More creative ideas → different experts collab early
- No waiting between stages → team always working
- Easier to make changes → adjust everything at once
- Higher quality outcome → continuous checking by whole team
- Clients involved earlier → meets expectations sooner