DTBase©

Design & Technology
AQA GCSE

The use of production aids

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. What is the purpose of a reference point in manufacturing?

A To add decorative details to a product

B To ensure accurate alignment and measurement during production

C To change the colour of the material

Q2. Which of these is an advantage of using a template?

A Ensures consistency and accuracy when marking/shaping materials

B Makes materials more flexible

C Increases the cost of production significantly

Q3. What is a jig commonly used for?

A Painting surfaces evenly

B Holding a workpiece in place and guiding tools for repetitive tasks

C Measuring electrical resistance

Q4. Which tool would be best for marking out multiple identical wooden parts quickly?

A A jig

B A pattern

C A template

Q5. Explain the purpose of a template **(2 marks)**

Q6. State two ways a jig can improve accuracy during production **(4 marks)**

Answers

Q1. B
Q2. A
Q3. B
Q4. C

Q5.

- Templates are used to save time when marking out.
- You can draw round a template to produce multiple copies of a part or design.
- They are used to allow repetition and improve accuracy between identical parts.
- They are reusable so you do not have to redraw identical parts fresh each time

Q6.

- A jig improves accuracy by removing the need for measuring and marking out to take place each time a cut is made or a hole drilled. This removes the potential for human error throughout the marking out process.
- A jig can improve the accuracy of manufacturing a particular joint, by securely holding the workpiece while also guiding the cutting tool, eg when cutting a mitre joint in timber or when drilling a hole.
- A jig can be used to ensure consistency when manufacturing a product, eg guiding a router around a particular profile ensuring consistency and accuracy where two kitchen worksurfaces may join.