

FOR OFFICIAL USE

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Total

0600/401

NATIONAL
QUALIFICATIONS
2007

THURSDAY, 10 MAY
1.15 PM – 2.15 PM

CRAFT AND DESIGN
STANDARD GRADE
Foundation Level

Fill in these boxes and read what is printed below.

Full name of centre

Town

Forename(s)

Surname

Date of birth

Day Month Year

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Scottish candidate number

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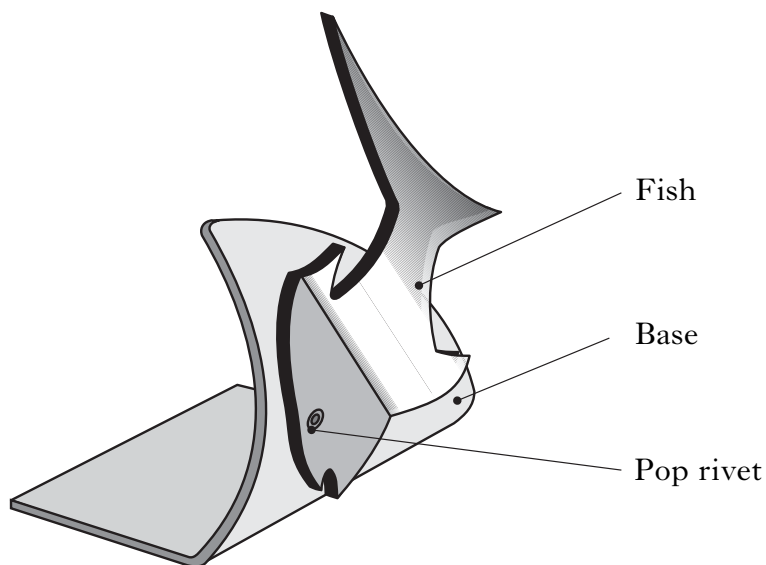
Number of seat

- 1 Answer all the questions.
- 2 Read every question carefully before you answer.
- 3 Write your answers in the spaces provided.
- 4 Do **not** write in the margins.
- 5 All dimensions are given in millimetres.
- 6 Before leaving the examination room you must give this book to the invigilator. If you do not, you may lose all the marks for this paper.



ATTEMPT ALL QUESTIONS

1. A fishing trophy made from acrylic is shown below.



(a) Acrylic is a thermoplastic.

Tick (✓) the statement that describes a thermoplastic.

- It is magnetic
- It conducts electricity
- It rusts when left outside
- It can be heated and re-shaped

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(b) The shape of the fish was cut from card to help with the marking out.

Tick (✓) the name given to this card shape.

- Former
- Template
- Mask
- Jig

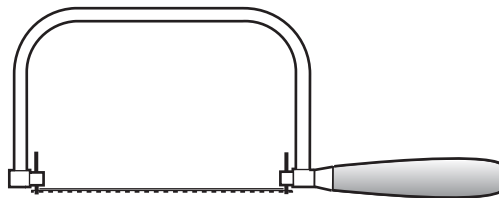
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1. (continued)

(c) The tool shown below was used to cut out the fish shape.

Tick (✓) the name of this tool.

- Hacksaw
- Tenon saw
- Coping saw
- Panel saw

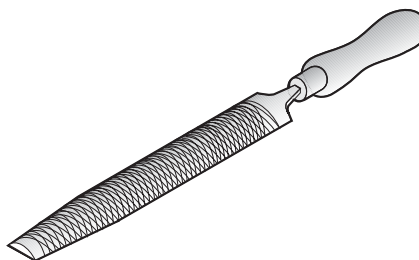


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(d) The file shown below was used to shape the acrylic.

Tick (✓) the name of this file.

- Abra
- Square
- Round
- Half round

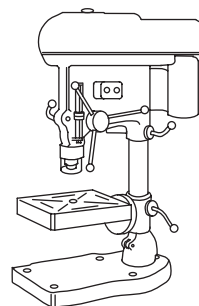


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(e) (i) The machine shown below was used during the manufacture of the trophy.

Tick (✓) the name of this machine.

- Pedestal drill
- Hand drill
- Brace
- Countersink drill



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(ii) State **two** safety rules that should be observed when using this machine.

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2 _____

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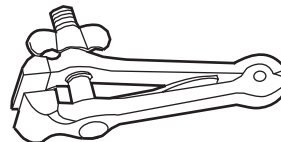
[Turn over

1. (e) (continued)

(iii) The tool shown below was used to hold the fish when drilling.

Tick (✓) the name of this tool.

- Engineer's vice
- Sash cramp
- Machine vice
- Hand vice



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(f) The stages for finishing the edges of the acrylic trophy are given below in the **wrong order**.

- Polish
- Cross file
- Use wet and dry paper
- Draw file

(i) State which stage should be completed **first**.

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(ii) State which stage should be completed **last**.

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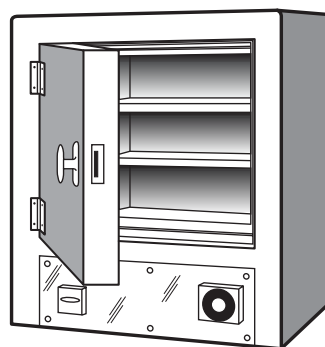
(g) State why the edges of the base were finished before the acrylic was bent.

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(h) The equipment shown below was used to heat the acrylic base.

Tick (✓) the name of this piece of equipment.

- Oven
- Anvil
- Strip heater
- Forge



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2. Several stages in a design process are listed below in the **wrong** order.

Evaluation

Ideas

Brief

Research

Solution

Specification

State the stage:

- (i) that begins the design process;

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- (ii) when a list of what the design “must” do is produced;

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- (iii) when a range of designs is produced;

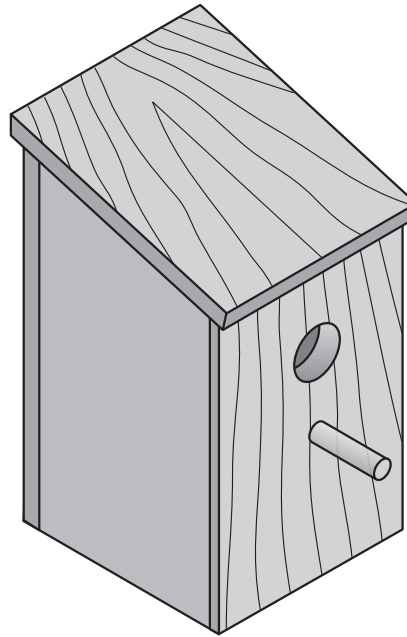
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- (iv) when the final design is tested.

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[Turn over

3. A bird box is shown below.



(a) The bird box was made from a softwood.

Tick (✓) the name of a softwood.

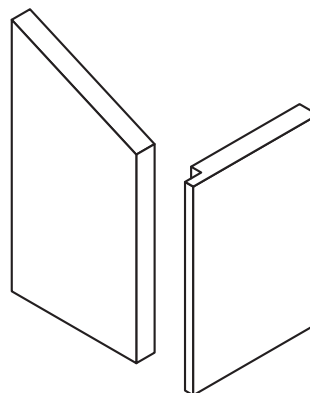
- Red pine
- Hardboard
- Beech
- Chipboard

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(b) (i) The joint shown below was used in the manufacture of the bird box.

Tick (✓) the name of this joint.

- Dowel
- Housing
- Lap
- Mortise and Tenon



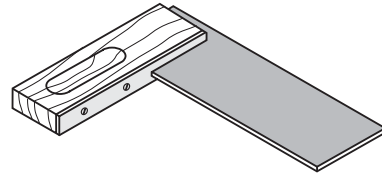
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3. (b) (continued)

(ii) The tool shown was used to mark out this joint. Select the tool name from the list below.

Marking gauge Set square Scriber Try square

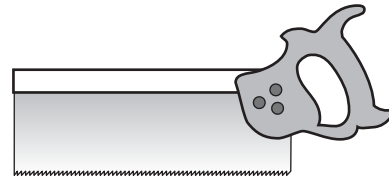
Tool name _____



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(iii) The tool shown below was used to cut this joint.
Tick (✓) the name of this tool.

- Bandsaw
- Junior hacksaw
- Coping saw
- Tenon saw



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(iv) The chisel shown below was used to remove the waste from the joint.
Tick (✓) the name of this chisel.

- Bevel edged
- Gouge
- Firmer
- Mortise



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(c) The bit shown below was used during the manufacture of the bird box.
Tick (✓) the name of this tool.

- Flat bit
- Forstner bit
- Countersink bit
- Auger bit

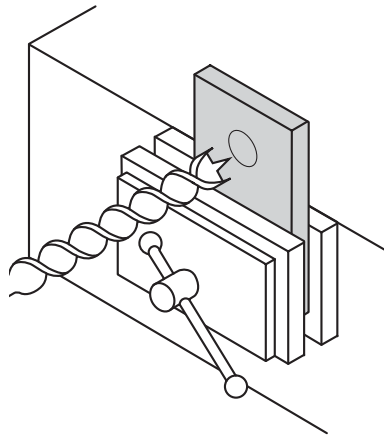


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3. (continued)

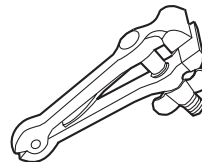
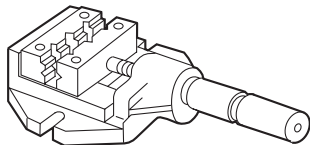
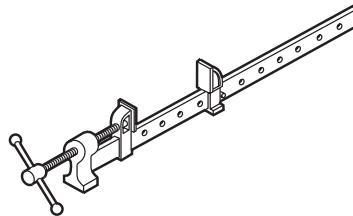
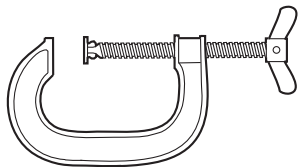
(d) When using this bit, state how to prevent the wood from splitting at the back.



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(e) The bird box was assembled using sash cramps.

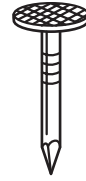
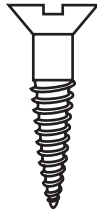
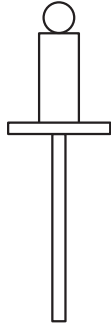
Tick (✓) the sketch of the sash cramp.



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3. (continued)

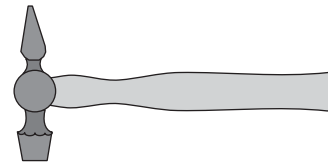
- (f) (i) Panel pins were used during the manufacture of the bird box.
Tick (✓) the sketch of a panel pin.



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- (ii) The tool shown below was used during the manufacture of the bird box.
Tick (✓) the name of this tool.

- Claw hammer
 Warrington hammer
 Ball pein hammer
 Mallet

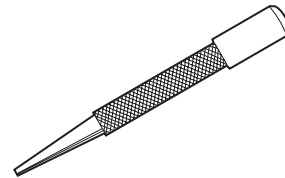


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- (iii) The tool shown below was used to sink the heads of the panel pins below the surface of the wood. Select the tool from the list below.

Scriber Nail punch Bradawl Centre punch

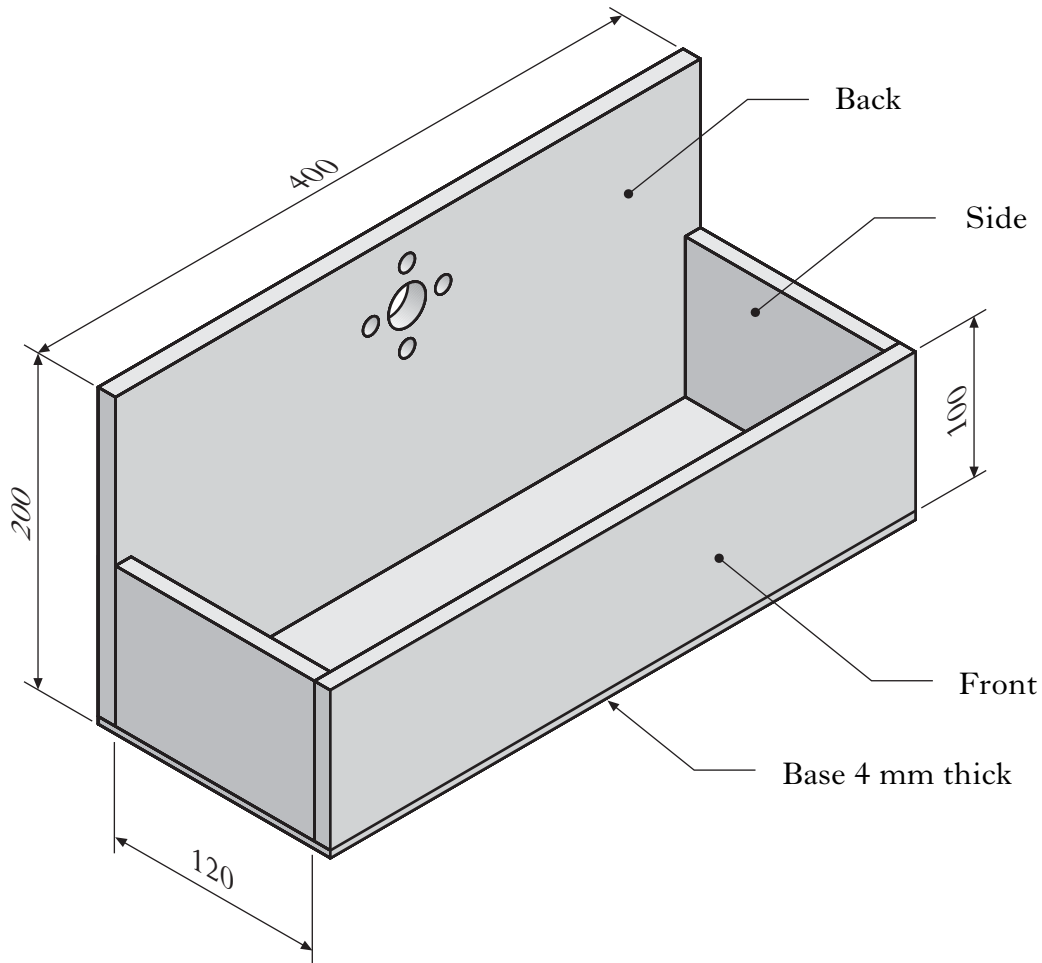
Tool _____



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[Turn over

4. A window box is shown below.



(a) Complete the cutting list shown below.

| Part | Quantity | Length | Breadth | Thickness | Material |
|-------|----------|--------|---------|-----------|--------------------|
| Front | 1 | | 100 | 12 | Red Pine |
| Back | 1 | 400 | | 12 | Red Pine |
| Sides | | 120 | 100 | 12 | Red Pine |
| Base | 1 | 400 | 144 | | Manufactured Board |

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4. (continued)

- (b) The base was made from a manufactured board.
Select the manufactured board from the list below.

Mahogany

Plywood

Ash

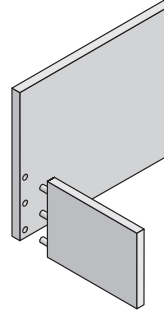
Pine

Manufactured board _____

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- (c) (i) The joint shown below was used in the manufacture of the window box.
Tick (✓) the name of this joint.

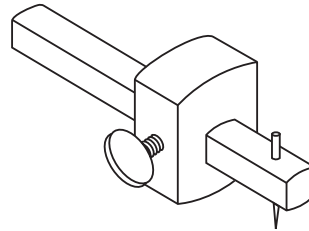
- Dowel
 Butt
 Lap
 Halving



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- (ii) The tool shown below was used to mark out this joint.
Tick (✓) the name of this tool.

- Odd leg callipers
 Marking gauge
 Scriber
 Rule



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- (d) The tool shown below was used in the manufacture of the window box.
Tick (✓) the name of this tool.

- Brace
 Hand drill
 Pedestal drill
 Bradawl



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[Turn over

4. (continued)

(e) (i) State a reason for using waterproof glue during the manufacture of the window box.

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(ii) Describe how excess glue should be removed.

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(iii) State **one** reason why the excess glue should be removed.

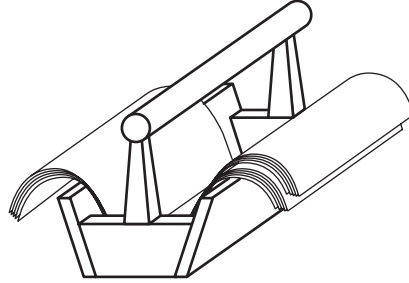
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(f) Name **one** type of finish that could be applied to the window box to show the natural colour of the wood.

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5. State the fault in each of the following designs.

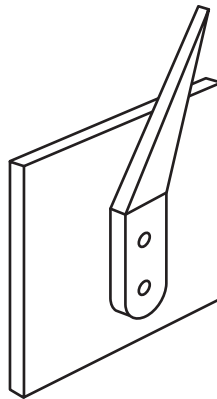
(a) Magazine rack



Fault

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(b) Coat hook

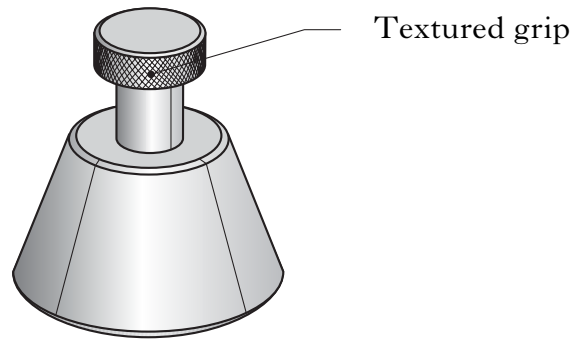


Fault

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[Turn over

6. A paper weight is shown below.



(a) The paper weight is to be made from a silver coloured metal which doesn't rust.

Tick (✓) the name of this metal.

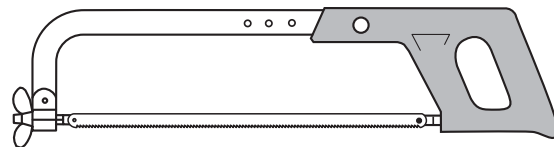
- Brass
- Mild steel
- Copper
- Aluminium

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(b) The tool shown below was used during the manufacture of the paper weight.

Tick (✓) the name of this tool.

- Tenon saw
- Coping saw
- Panel saw
- Hacksaw

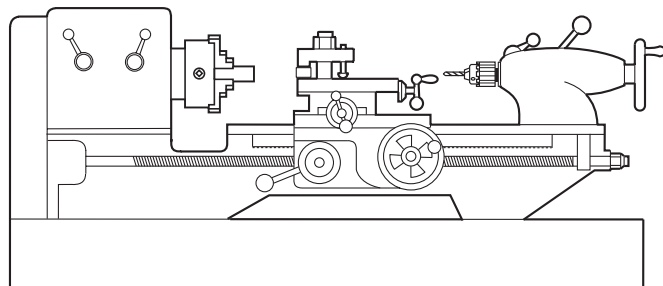


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(c) The paper weight was manufactured using the machine shown below.

Tick (✓) the name of this machine.

- Metal lathe
- Mortise machine
- Wood lathe
- Pedestal drill

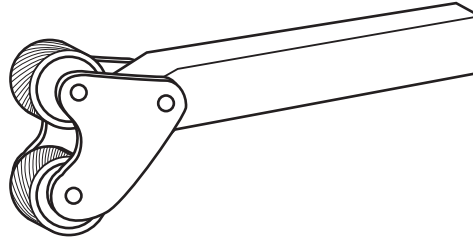


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6. (continued)

(d) The tool shown below was used to add texture to the paper weight.
Tick (✓) the correct name of this tool.

- Parting
- Facing
- Knurling
- Roughing



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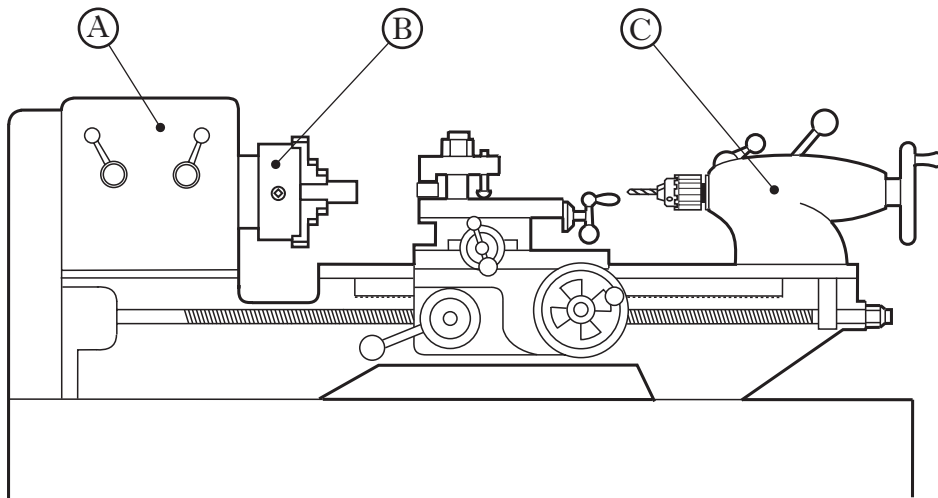
(e) Tick (✓) the speed the machine should be set to when using the above tool.

- High speed
- Medium speed
- Low speed

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(f) From the list given below, name the parts (A), (B) and (C) of the machine.

Tool post 3 Jaw chuck Tail stock Head stock



Guard has been removed for clarity.

(A) _____

(B) _____

(C) _____

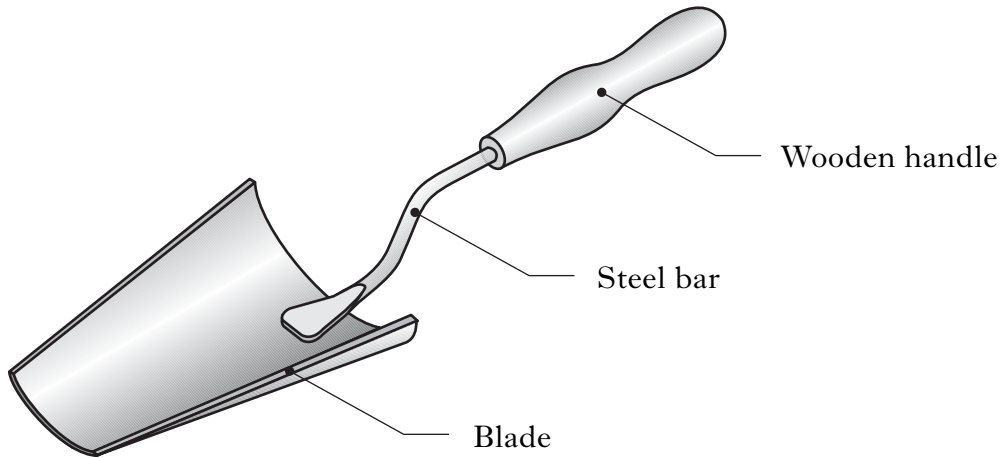
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[Turn over

7. A trowel is shown below.



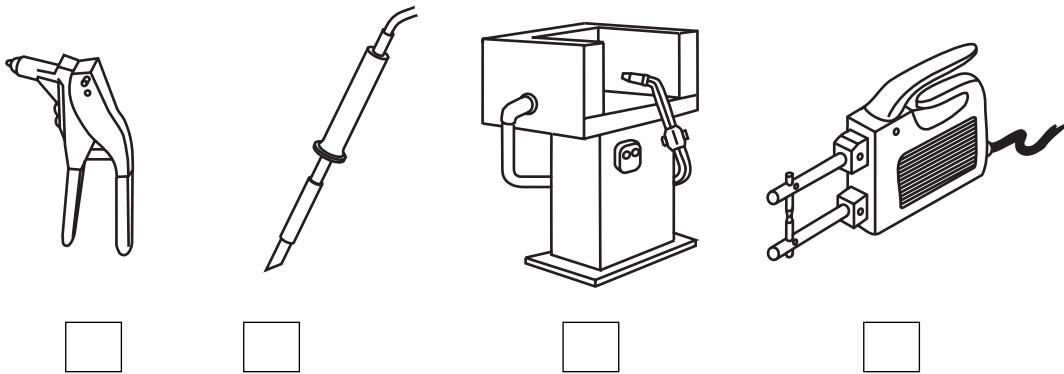
(a) The blade is made from a ferrous metal.

Tick (✓) the meaning of “ferrous metal”.

- It contains iron
- It contains brass
- It contains aluminium
- It contains copper

(b) The steel bar was heated in a forge.

Tick (✓) the sketch of the forge.

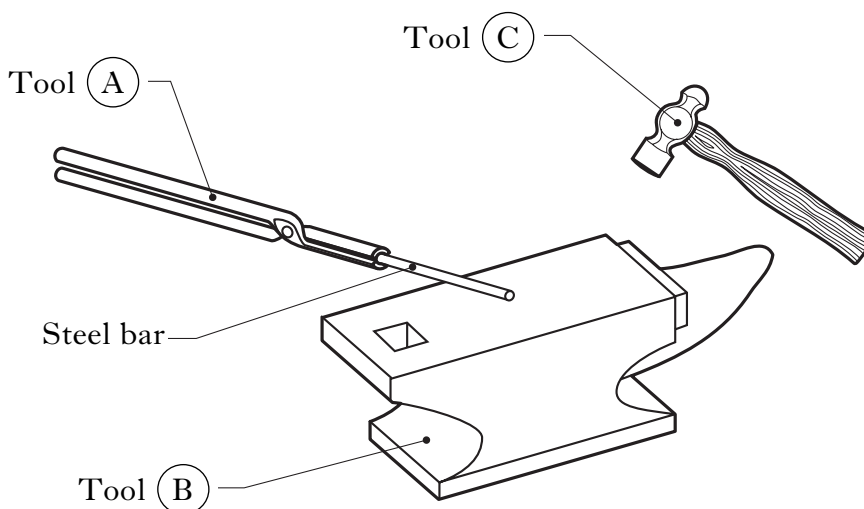


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7. (continued)

(c) The equipment shown below was used during the forging process.



(i) State the name of tool (A).

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(ii) State a reason why tool (A) was used to hold the steel bar during the forging process.

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(iii) State the name of tool (B).

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(iv) Tick (✓) the name of tool (C).

- Hide mallet
- Claw hammer
- Warrington hammer
- Ball pein hammer

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(v) Goggles and heat proof gloves are worn while working at the forge. State another piece of safety clothing which you should **wear**.

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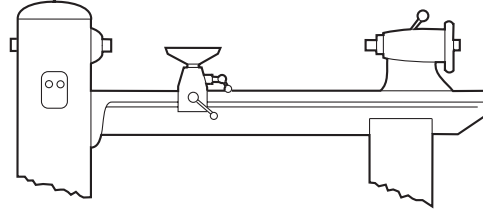
[Turn over

7. (continued)

(d) The wooden handle was made using the machine shown below.

Tick (✓) the name of this machine.

- Sanding machine
- Wood lathe
- Pedestal drill
- Mortise machine



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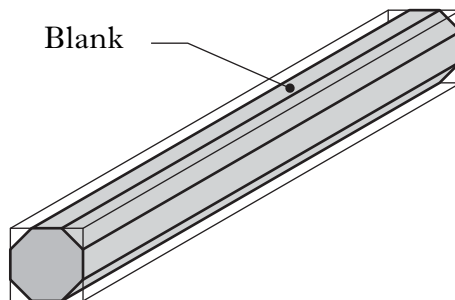
(e) State **two** safety checks that should be carried out on the above **machine**.

1 _____

2 _____

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(f) The wooden blank for the handle is shown below.



State the name of the hand tool used to remove the corners.

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[END OF QUESTION PAPER]

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