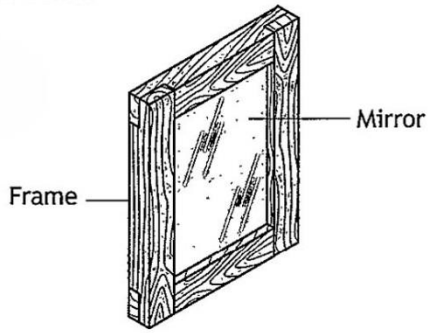
Candidate 2 evidence

MARKS | DO NOT WRITE IN THIS MARGIN

Total marks — 60

Attempt ALL questions

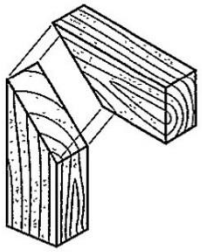
1. A mirror is shown below.



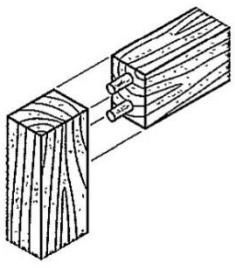
The mirror frame is made using corner halving joints.

As part of the design process various other joints were considered, three of which are shown.

(a) Name the joints shown.



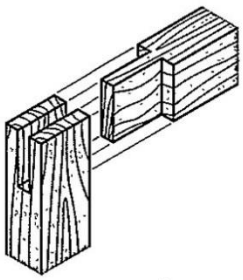
(i) Corner Joint 1



(ii) Doweled Butt Joint 1

MARKS | DO NOT WRITE IN THIS MARGIN

1. (a) (continued)



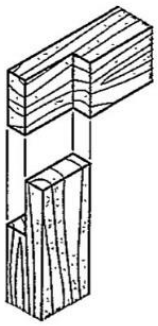
(iii) Mortice and Tenon Butt Joint 1

[Turn over

MARKS | DO NOT WRITE IN THIS MARGIN

1. **(continued)**

The corner halving joint used in the mirror frame is shown below.



An important part of making any joint is marking out.

There are four stages in the marking out process.

(b) Describe three stages in the **marking out** process in the table below. You may use sketches to support your answer.

The stages must be in the correct order.

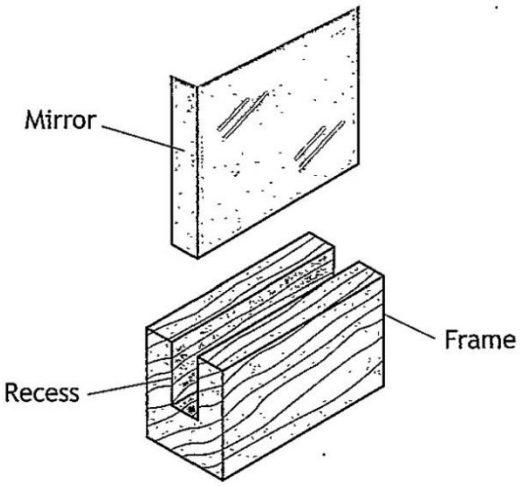
The final stage is completed for you. 3

Sequence	Process
Stage 2	Check the wood is Square with tqSquare
Stage 3	use Smoothing plane to make it Square if not
Stage 1	Check the dimension on wood
Stage 4	Mark the waste wood.

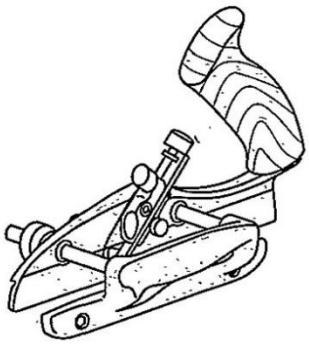
MARKS | DO NOT WRITE IN THIS MARGIN

1. (continued)

The mirror frame is recessed to allow the mirror to be fitted, as shown below.



The tool shown below is used to cut the recess.



(c) Name this tool. 1

plough plane

[Turn over

MARKS | DO NOT WRITE IN THIS MARGIN

1. **(continued)**

Various types of woods were considered to make the mirror frame.

(d) Complete the table below identifying if the woods listed are hardwood **or** softwood.

The first one is completed for you. 4

Wood	Hardwood/Softwood
Meranti	Hardwood
Oak	(i) Hardwood
Ash	(ii) Hardwood
Cedar	(iii) Soft wood
Larch	(iv) Softwood

It was decided to use softwood to make the mirror frame.

(e) Describe two environmental reasons for selecting a softwood **instead** of a hardwood. 2

1 The wood grows very fast unlike hardwood

2 ~~[illegible]~~ Hardwood provides more benefit to the world

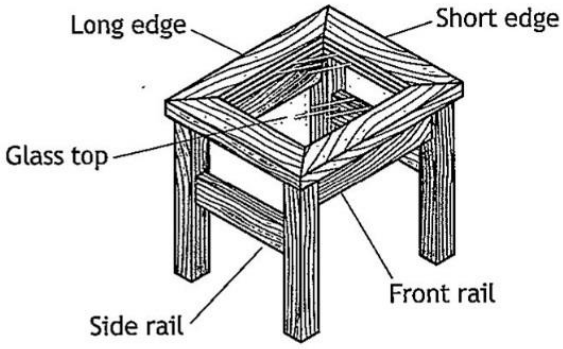
The mirror frame requires a finish to be applied which will protect the wood and show off the natural wood grain.

(f) State a suitable finish. 1

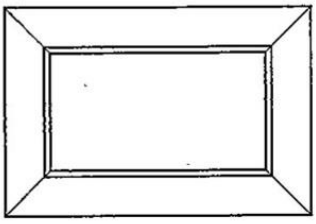
Varnish

2. A table is shown below.

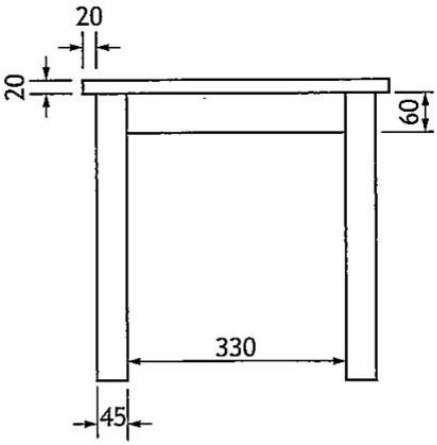
DO NOT WRITE IN THIS MARGIN



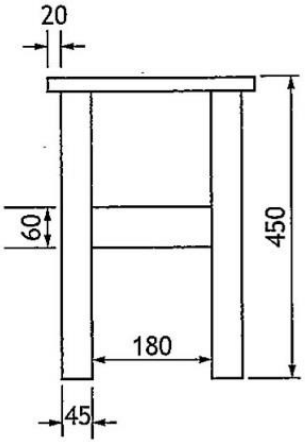
The diagram below shows the working drawings for the table.



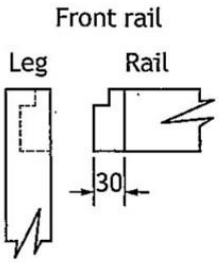
Plan

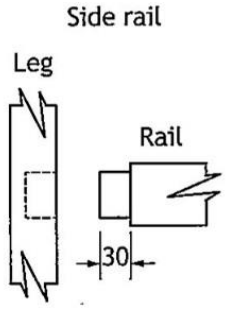


Elevation



End Elevation





Note: The rails are joined to the legs using the joints shown in the drawings above. **All sizes are in millimetres.**

MARKS | DO NOT WRITE IN THIS MARGIN

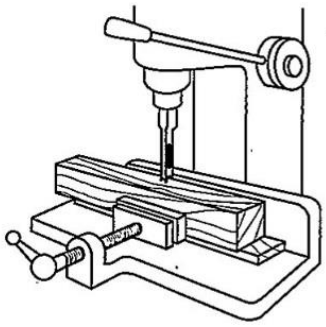
2. (continued)

(a) Complete the cutting list below, using the information provided in the working drawings shown opposite. 6

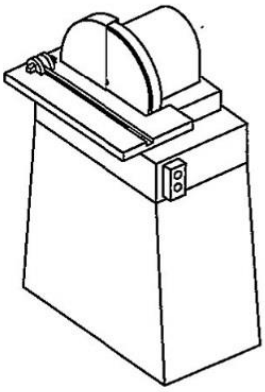
Part	Number	Length	Breadth	Thickness
Table top long edge	2	460	50	20
Table top short edge	2	310	50	20
Front Rails	2	330	60	18
Side Rails	2	180	60	18
Legs	4	430	45	45

Various machines are used to make the table.

(b) Name the machines shown below.



(i) mortise machine 1

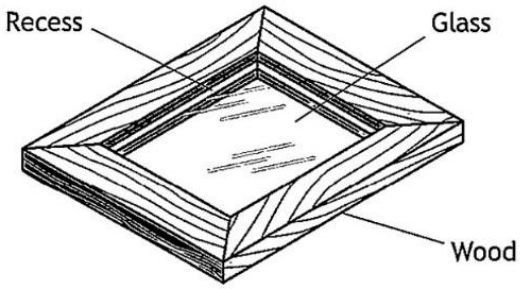


(ii) Belt Sander 1

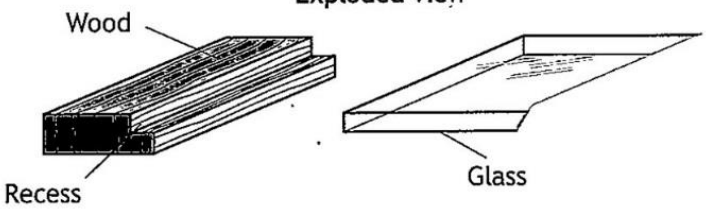
MARKS | DO NOT WRITE IN THIS MARGIN

2. (continued)

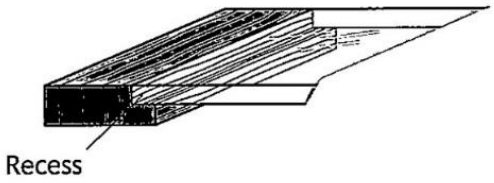
The table top has glass inserted, as shown below.



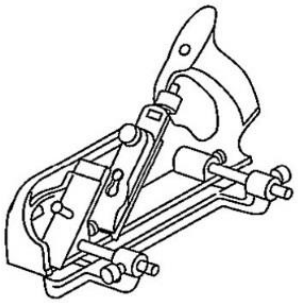
Exploded view



Assembled view



The hand tool shown below is used to cut the recess.



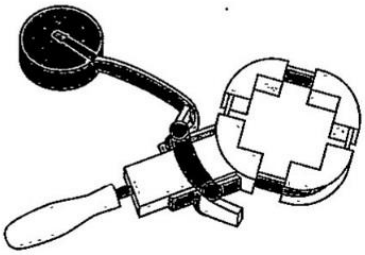
(c) Name this tool. 1

Recess Cutter

MARKS | DO NOT WRITE IN THIS MARGIN

2. **(continued)**

The tool shown below is used during the assembly of the table top.



(d) Name this tool. 1

tape grab

Before final assembly, the table top is dry cramped.

(e) Explain the purpose of dry cramping. 1

To check that everything is fitting correctly

Glue is used to assemble the table.

(f) State the name of a wood glue. 1

PVA glue

Before a finish is applied to the table it is prepared using different grades of glass paper: fine, medium and coarse.

(g) State which grade of glass paper is used **first**. 1

Coarse

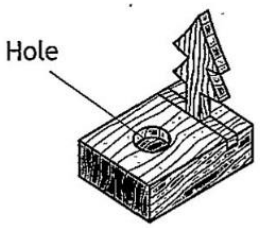
(h) Explain the purpose of wetting the wood before starting the **final** stage of sanding. 1

The water makes the wood slightly softer

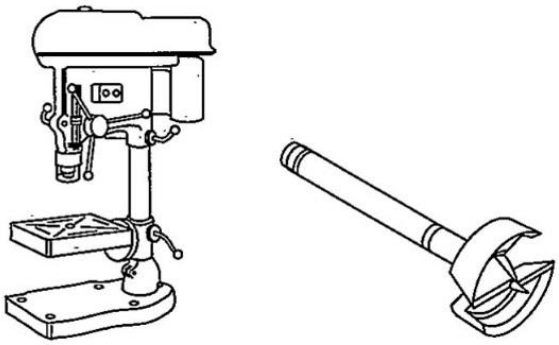
[Turn over

MARKS | DO NOT WRITE IN THIS MARGIN

3. A wooden tealight holder is shown below.



The diagrams below show the **machine** and **forstner bit** used to cut the hole in the tealight holder.



(a) (i) Name this machine. 1

pillar drill

(ii) Explain why the forstner bit, shown above, was used to create the hole. 1

[illegible] it's alot bigger than other drills and can get a much better hole made.

MARKS | DO NOT WRITE IN THIS MARGIN

3. (continued)

Health and safety is a priority when using the machine shown opposite.

(b) Describe three health and safety checks that would be carried out **on the machine** before switching it on. 3

1 Check that the Safety guard is down and Secure

2 hair is tied back

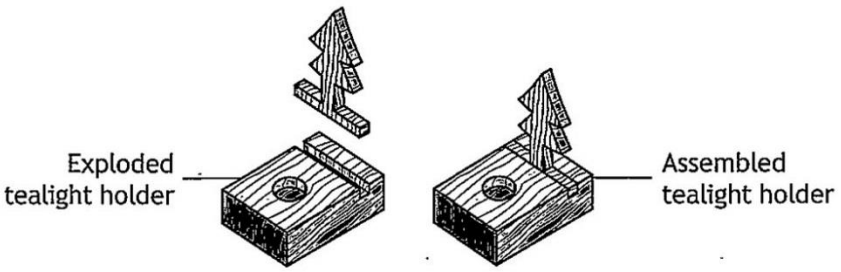
3 Nothing is in the way of the emergency stop

[Turn over

MARKS | DO NOT WRITE IN THIS MARGIN

3. (continued)

The tealight holder is joined, as shown below.



(c) Name this joint. 1

forge and groove

MARKS | DO NOT WRITE IN THIS MARGIN

3. (continued)

Diagram A shows the marked out joint used in the tealight holder. Diagram B shows the wood that is removed.

Diagram A

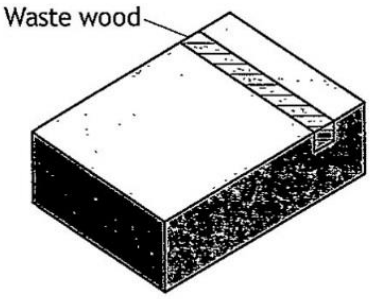
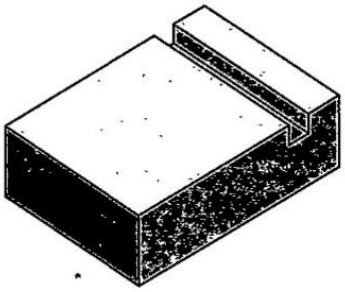


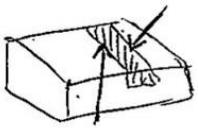
Diagram B



(d) Describe three stages in **cutting and removing** the wood from the joint shown above. You may use sketches to support your answer. 3

Stage 1

Use ~~decision~~ tenon saw and cut down both sides



Stage 2

Get a chisel and hit away small bit of wood at a time

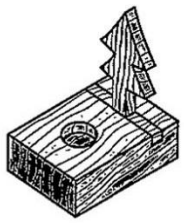
Stage 3

Go over it with a granular both to make it smooth

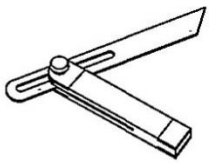
MARKS | DO NOT WRITE IN THIS MARGIN

3. (continued)

The tealight holder, shown below, is manufactured using various hand tools.



(e) Name the tools shown below and describe what they are used for.

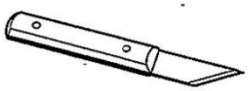


(i) Name — 1

Bevel edge tool

(ii) Use — 1

to get the correct angle/mark out - the angle



(iii) Name — 1

knife

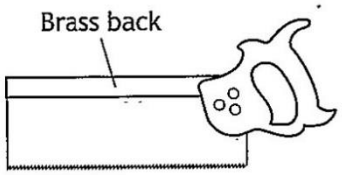
(iv) Use — 1

indent waste wood lines

MARKS | DO NOT WRITE IN THIS MARGIN

3. **(continued)**

(f) Explain the purpose of the brass back on the tenon saw shown below. 1

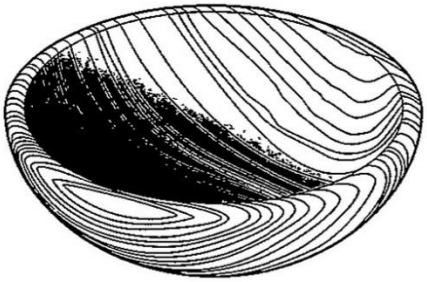


it for saw

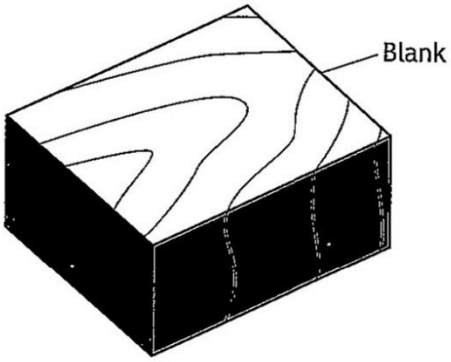
[Turn over

DO NOT WRITE IN THIS MARGIN

4. A wooden bowl is shown below.



The bowl is made from one piece of material called a blank, shown below.



The blank has to be prepared for the turning process before it is mounted on the woodturning lathe.

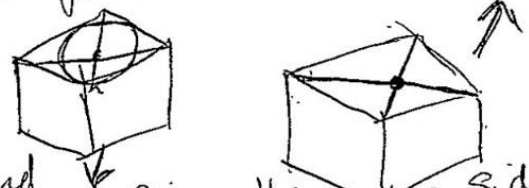
MARKS | DO NOT WRITE IN THIS MARGIN

4. (continued)

(a) Describe two stages in the process of **marking out** the blank.
You may use sketches to support your answer.
The stages must be in the correct order. **2**

Stage 1

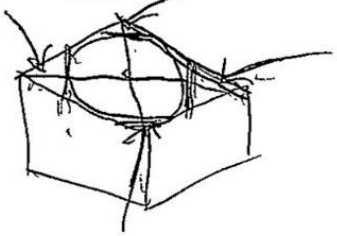
Mark out the middle of it on both sides using a pencil and steel Rule.



and on the other side do the same but use caliper to mark a circle as big as possible.

Stage 2

Cut away corners with a Tenon Saw.



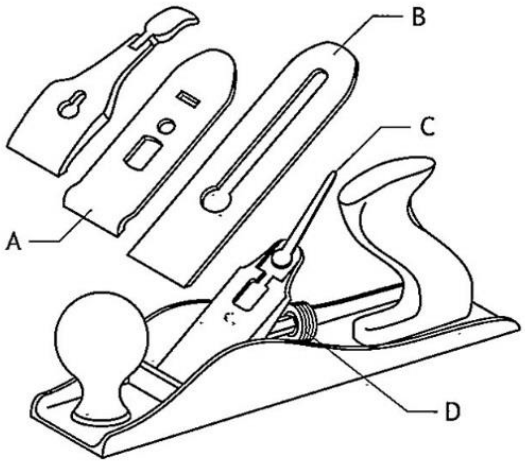
[Turn over

MARKS | DO NOT WRITE IN THIS MARGIN

4. (continued)

In preparing the top surface of the wooden blank before marking it out, a smoothing plane is used.

A diagram of the smoothing plane is shown below.



(b) Name parts A, B, C and D of the smoothing plane. 4

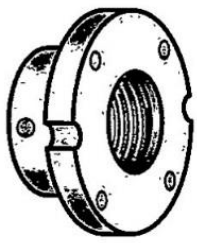
A _____

B Blade

C angle adjuster

D adjustment wheel

The attachment for mounting the bowl on the woodturning lathe is shown below.



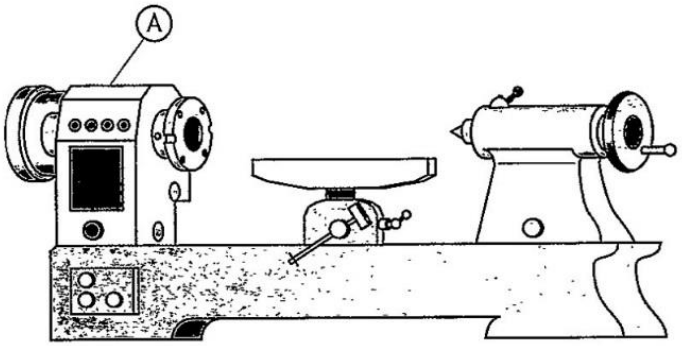
(c) Name this attachment. 1

Bowl holder

MARKS | DO NOT WRITE IN THIS MARGIN

4. **(continued)**

The attachment is mounted onto the woodturning lathe shown below.

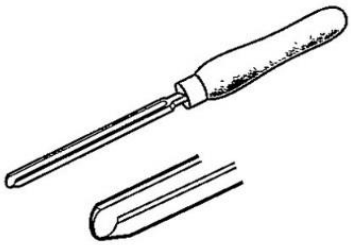


(d) Name part A shown above. 1

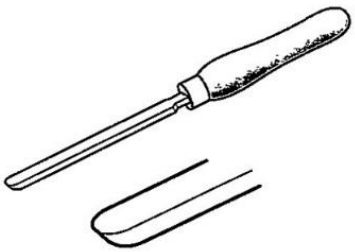
motor

The tools shown are used to help shape the bowl on the woodturning lathe.

(e) Name the tools shown below.



(i) gouge 1



(ii) grave 1

[Turn over

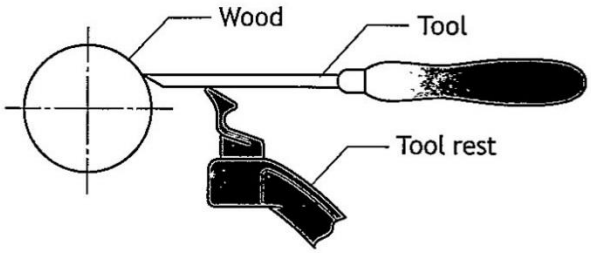
MARKS | DO NOT WRITE IN THIS MARGIN

4. (continued)

When shaping wood on the woodturning lathe it is important for safety reasons to have the cutting tool at the correct height.

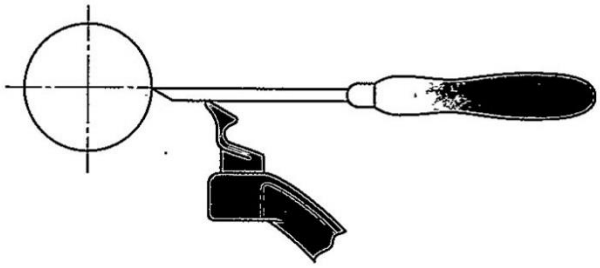
(f) Identify the correct tool height by ticking **one** of the boxes below. **1**

A



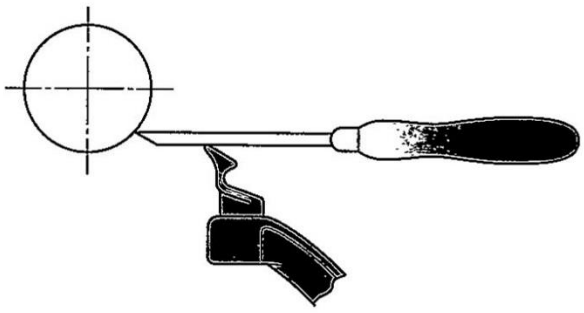
☒

B



☑

C



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MARKS | DO NOT WRITE IN THIS MARGIN

4. (continued)

A varnish finish is to be applied to the bowl. The bowl is prepared for varnishing while still on the woodturning lathe.

(g) Describe three actions that will ensure a good quality **surface finish** is achieved **before** applying the varnish. 3

2 Sand away (smooth) Rough parts with Sand paper to make it Smooth

2 Use a damp paper towel to get Rid of left over wood dust from the Sand paper

1 Use a Range sandpaper

Health and safety in a workshop is a priority.

(h) Describe three **personal** safety precautions you would take **before** switching on the woodturning lathe. 3

1 Safety goggles are worn

2 hair is tied back

3 Apron worn with and tied behind back

MARKS | DO NOT WRITE IN THIS MARGIN

4. **(continued)**

The bowl is made from wood left over from another project.

(i) Explain the reason why this is environmentally friendly. 1

its not putting wood to waste, so it saving trees being cut down.

[END OF QUESTION PAPER]