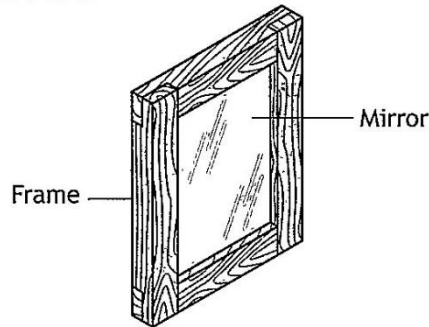


Candidate 6 evidence

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Total marks — 60
Attempt ALL questions

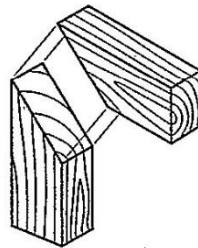
1. A mirror is shown below.



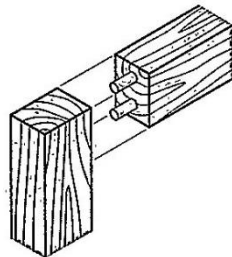
The mirror frame is made using corner halving joints.

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

(a) Name the joints shown.



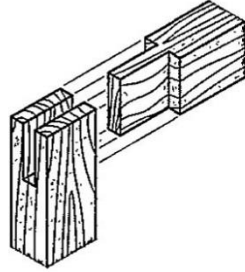
(i) mitre joint 1



(ii) Dowel joint 1

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1. (a) (continued)



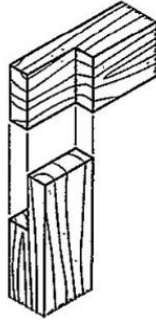
(iii) Bridle joint 1

[Turn over

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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.

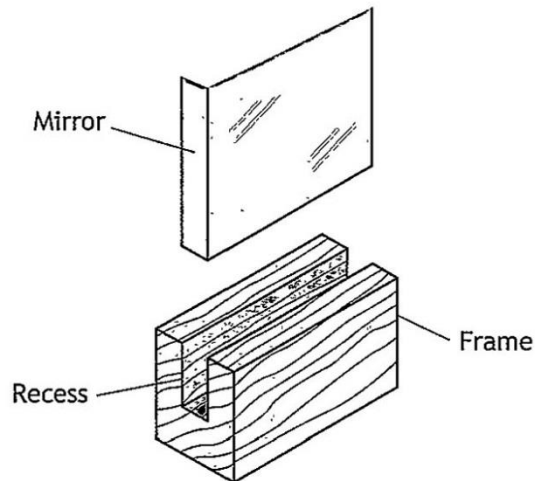
Find the side parallel to the bit of wood ³

Sequence	Process
Stage 1	Use a marking gauge to find the centre of the wood. Get other bit of wood and put it up to the edge of the other bit of wood and mark how far down it goes.
Stage 2	Find the side you want to be your front and mark it out.
Stage 3	Mark out where your marking gauge lines are and put a saw line down them.
Stage 4	Mark the waste wood.

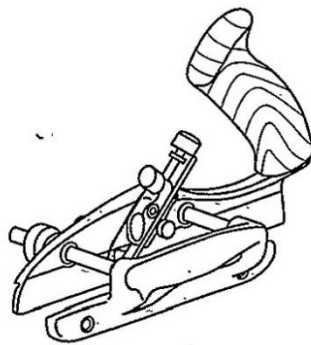
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1. (continued)

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

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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)	Softwood
Larch	(iv)	Softwood Hardwood

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 Softwoods can be grown locally

2 Softwoods tend to grow faster

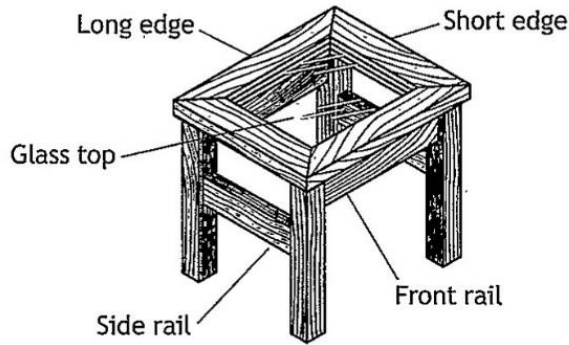
The mirror frame requires a finish to be applied which will protect the wood and show off the natural wood grain.

(f) State a suitable finish.

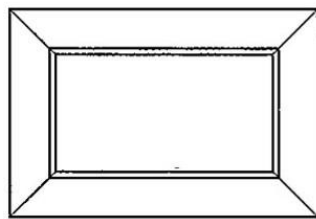
1

Clear varnish

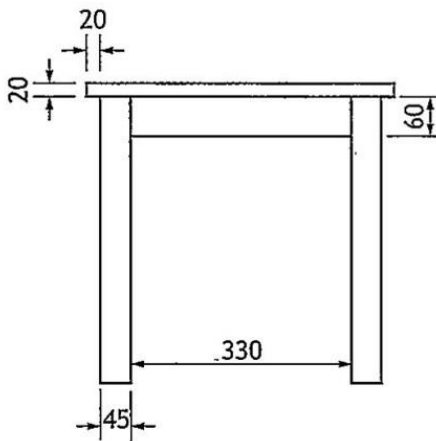
2. A table is shown below.



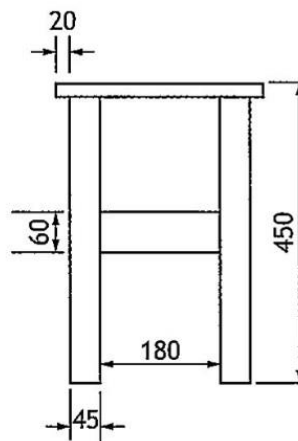
The diagram below shows the working drawings for the table.



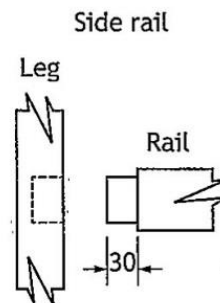
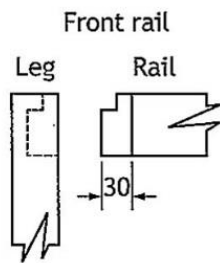
Plan



Elevation



End Elevation



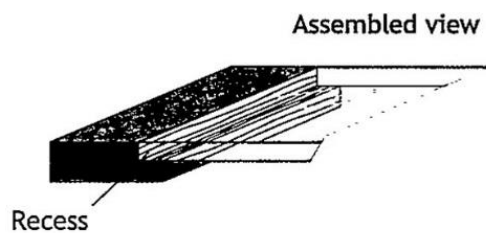
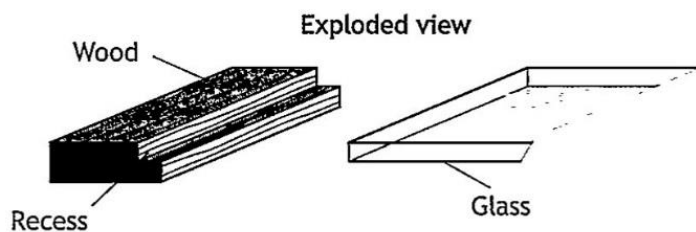
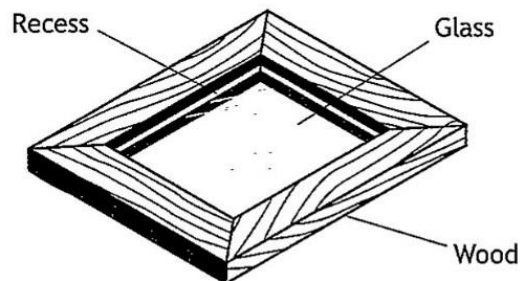
Note: The rails are joined to the legs using the joints shown in the drawings above. All sizes are in millimetres.

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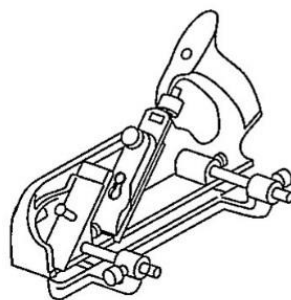
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2. (continued)

The table top has glass inserted, as shown below.



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



(c) Name this tool.

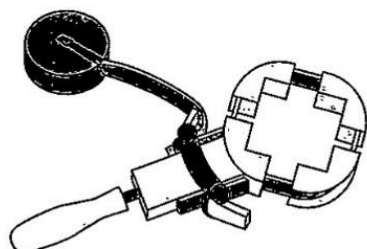
Rebate plane

1

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2. (continued)

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



(d) Name this tool.

1

Belt clamp

Before final assembly, the table top is dry cramped.

(e) Explain the purpose of dry cramping.

1

To check if the wood
is square and it fits

Glue is used to assemble the table.

(f) State the name of a wood glue.

1

PVA

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.

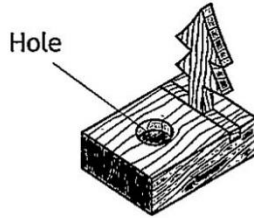
1

It makes the grain of
the wood stick up

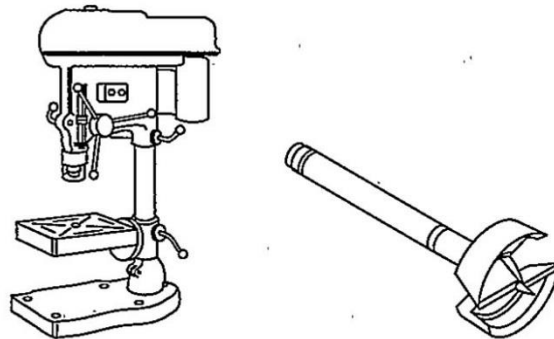
[Turn over

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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

Because it creates
flat bottomed holes

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.

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3

1 make sure the guard is
in place

2 make sure the wood is
held securely

3 make sure no-one is
in the safety line/area

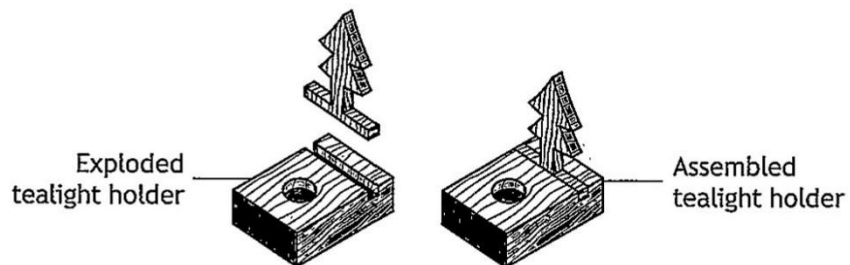
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3. (continued)

The tealight holder is joined, as shown below.



(c) Name this joint.

Housing joint

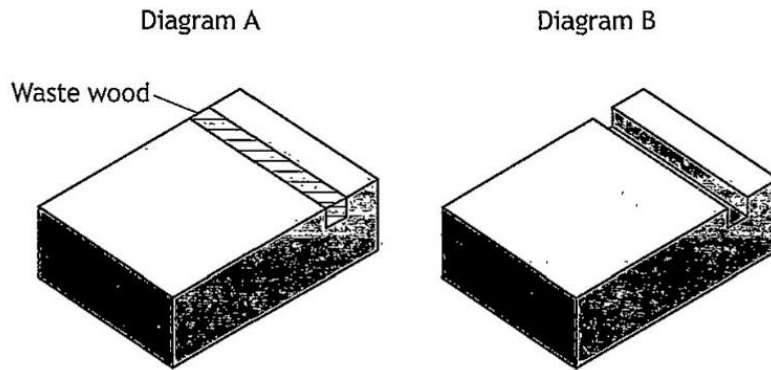
1

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3. (continued)

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



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

3

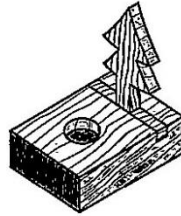
Stage 1	<p>use a tenon saw to cut down where you have marked out</p>
Stage 2	<p>use a level edge chisel to remove wood until you reach the saw line but only go 1/2 way then turn around from other side</p>
Stage 3	<p>Get a hand router and smooth off bottom</p>

MARKS

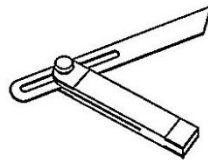
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3. (continued)

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

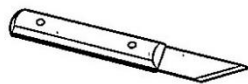
1

sliding bevel

(ii) Use

1

mark out angles on wood



(iii) Name

1

marking knife

(iv) Use

1

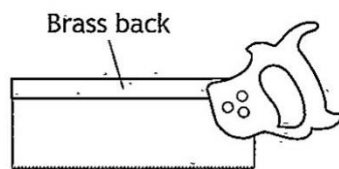
mark out wood going
across the grain for cutting

3. (continued)

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

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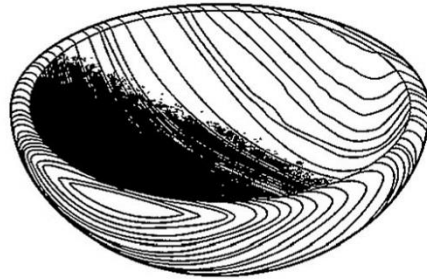
1



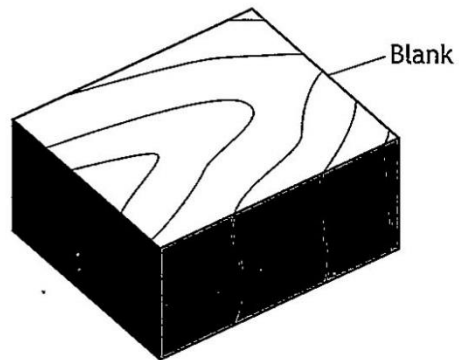
To prevent the saw from
bending

[Turn over

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.

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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

Get lines going from
corner to corner on
wood (diagonals)
plane down all 4
sides of the wood

Stage 2

Get the driving
centre of the wood
lathe and put it
on the saw lines and
hit with mallet to
mark it

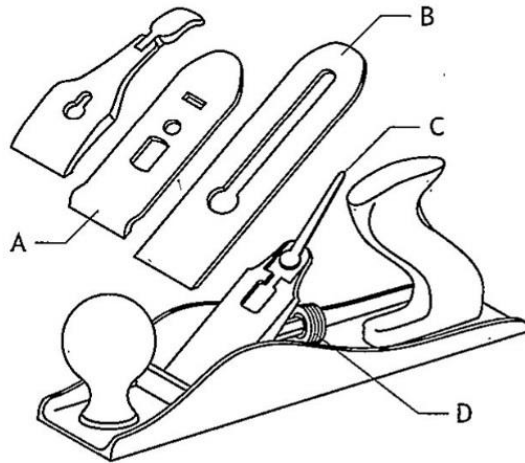
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4. (continued)

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.

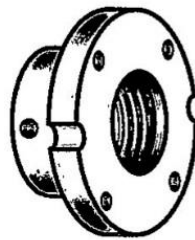


(b) Name parts A, B, C and D of the smoothing plane.

4

- A Guard
- B blade
- C Angle lever
- D Depth cut

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



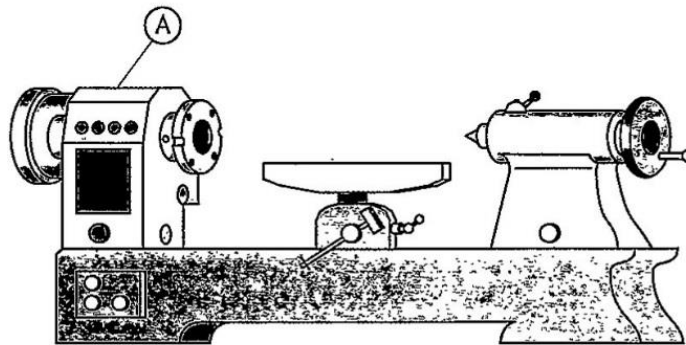
(c) Name this attachment.

1

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4. (continued)

The attachment is mounted onto the woodturning lathe shown below.



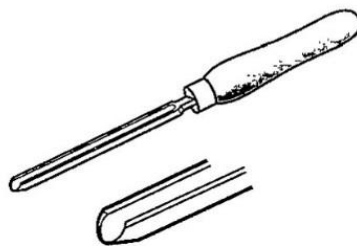
(d) Name part A shown above.

1

Headstock

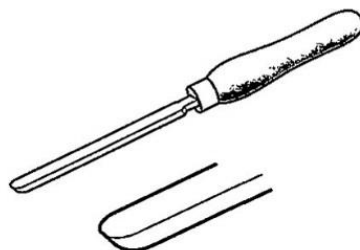
The tools shown are used to help shape the bowl on the woodturning lathe.

(e) Name the tools shown below.



(i) Firmer gouge

1



(ii) scraper

1

[Turn over

MARKS

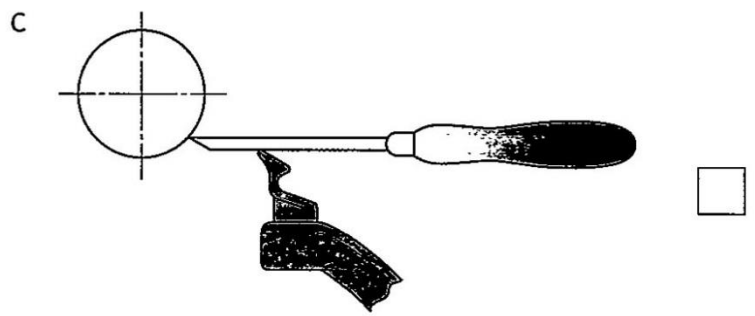
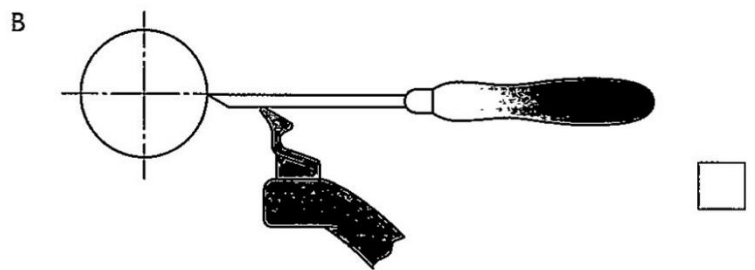
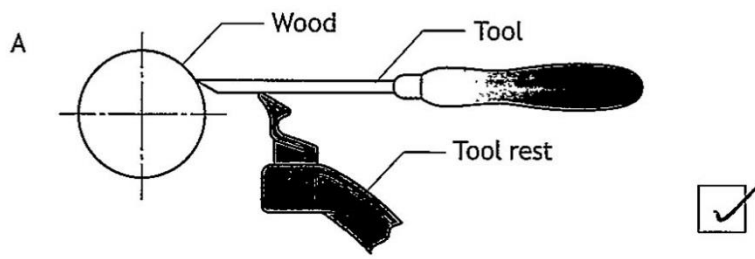
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4. (continued)

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



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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	
1	make sure it is sanded down		
2	make sure there is no shavings on the wood		
3	make sure the wood hasn't split		
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	make sure your tie is tucked in		
2	make sure you wear face/eye protection		
3	make sure no-one is in the safety square		

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4. (continued)

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

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

1

Because you are not needing
to buy more wood

[END OF QUESTION PAPER]