



*Junior Certificate Examination 2006*

***Materials Technology Wood***  
***Ordinary Level***  
***Section A (40 Marks)***

***Monday 19 June***  
***Afternoon, 2.00 to 4.00***

***Instructions***

- (a) Answer any **sixteen** questions.
- (b) All questions carry equal marks.
- (c) Answer the questions in the spaces provided.
- (d) This booklet **must** be handed up at the end of the examination.
- (e) Write your examination number in the box provided and on all other pages used.

***Examination Number:***

Centre Number	
Section A	
1	
2	
3	
4(a) or (b)	
5	
<b>Total</b>	

## SECTION A - 40 MARKS

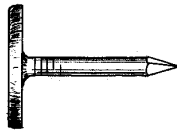
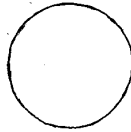
Answer any 16 questions from this section. All questions carry equal marks.

1. From the list given, identify the nails shown.

**A**



**B**



- Cut tack
- Corrugated fastener
- Staple
- Clout head nail
- Oval wire nail
- Round wire nail

**NAME A**

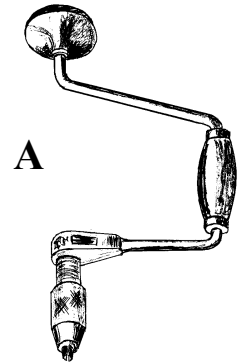
**NAME B**

2. Name the tool labelled **A** in the diagram and give its use.

**NAME**

**USE**



**A**

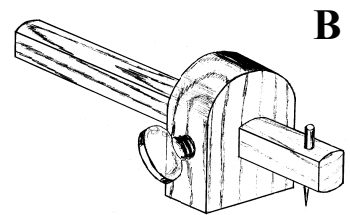
**OR**

Name the tool labelled **B** in the diagram and give its use.

**NAME**

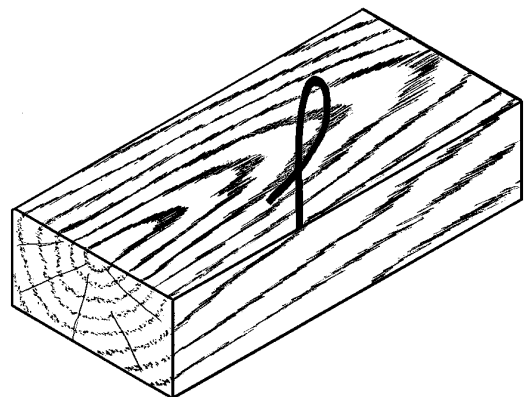
**USE**



**B**

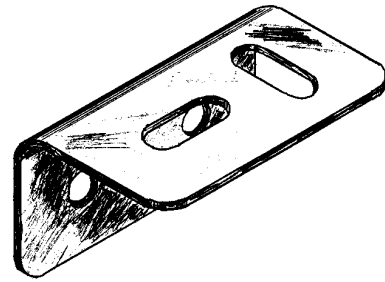
3. The diagram shows a piece of wood with a face side mark. Show the **face edge** mark in its proper place on the sketch.



4. Name the fitting shown and give its correct use.

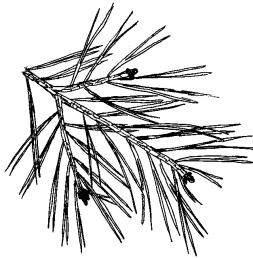
NAME

USE



5. State from which trees in the list these leaves come.

A



B

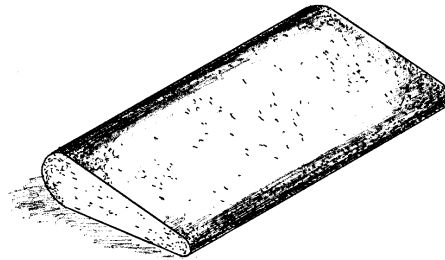


- ASH
- PINE
- OAK
- HOLLY
- SYCAMORE
- BIRCH

NAME A

NAME B

6. The diagram shows a slipstone used for sharpening tools.  
Name one tool which is sharpened using a slipstone.



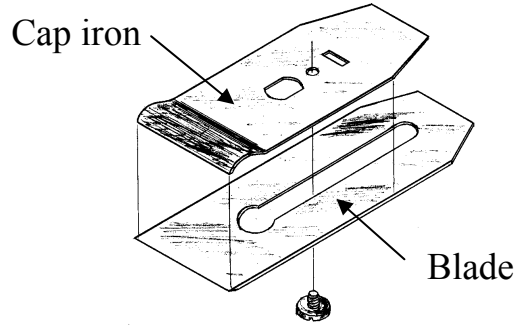
NAME

7. List **two** safety precautions that should be taken when carrying long planks in the classroom.

1.

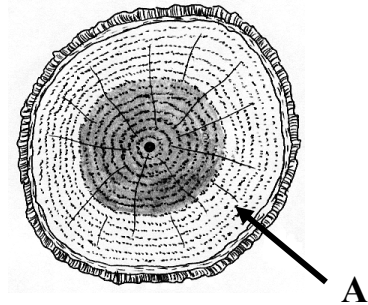
2.

8. What is the function of the cap iron in a plane?



ANSWER

9. The diagram shows the cross-section of a tree.  
What is the name of the light-coloured wood shown at A?

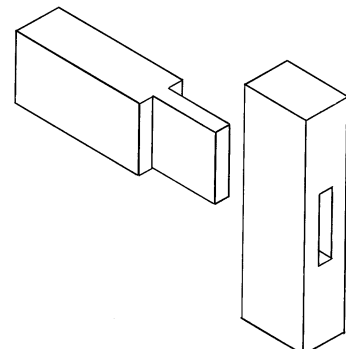


ANSWER

10. Show by means of an **X** what will happen the following metals if they get wet.

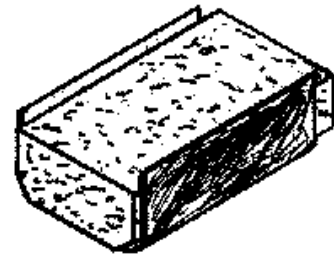
	Will rust	Will not rust
Silver		
Aluminium		
Steel		
Iron		
Zinc		

11. Name the joint shown in the diagram.



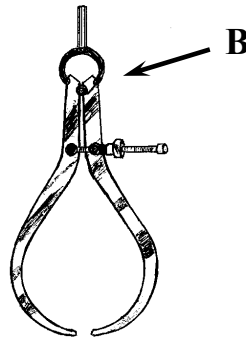
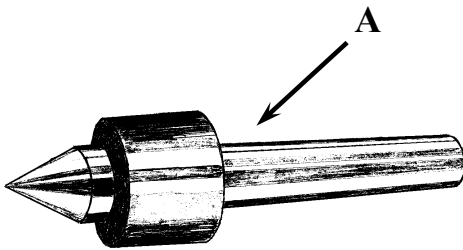
NAME

12. Why is cork used for making sanding blocks?



ANSWER

13. From the list given, name the lathe equipment shown at A and B.

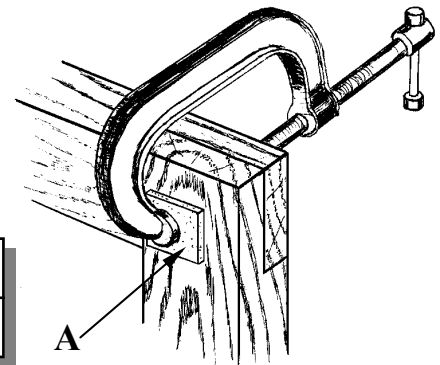


ROTATING CENTRE  
TAILSTOCK  
CALIPERS  
BED  
HEADSTOCK  
FACEPLATE

A

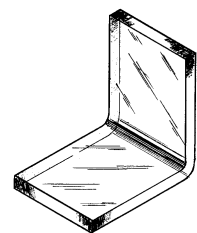
B

14. The diagram shows a corner halving joint being held together with a G-clamp.  
Why is a piece of waste wood placed at A?



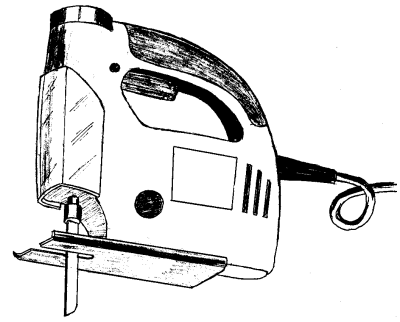
ANSWER

15. Plastics are divided into two groups, thermosetting plastics and thermoplastics.  
Which group does perspex (acrylic) fit into?



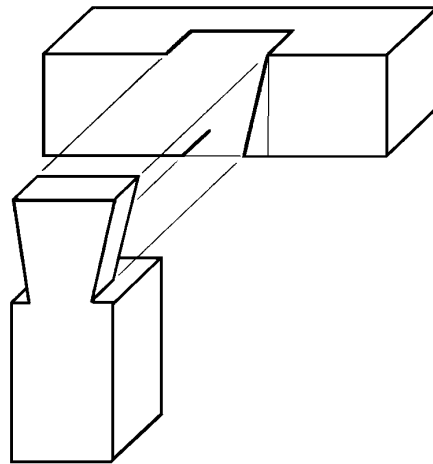
ANSWER

16. Name the power tool shown in the diagram.

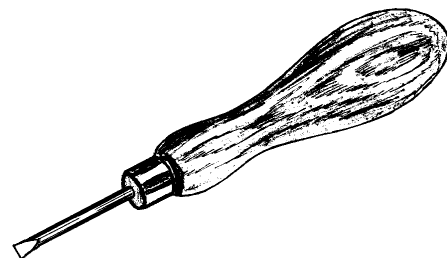


NAME

17. Complete the diagram of a dovetail halving joint.

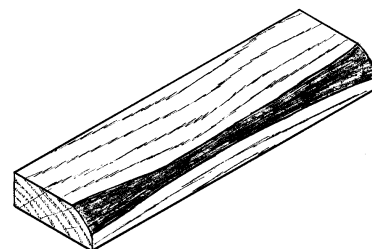


18. The diagram shows a  
bradawl.  
What is a bradawl used for?



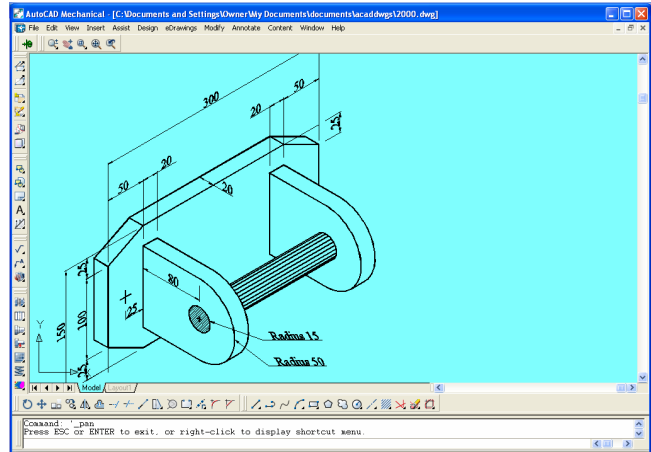
ANSWER

19. When sawing logs into planks the bark  
can sometimes be left on. When dry  
this bark often falls off.  
What is this defect called?



ANSWER

20. CAD is used to produce precise drawings on a computer, as shown.  
What do the letters CAD stand for?



C

A

D

**This booklet must be handed up at the end of  
the examination.**

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*Junior Certificate Examination 2006*

***Materials Technology Wood***

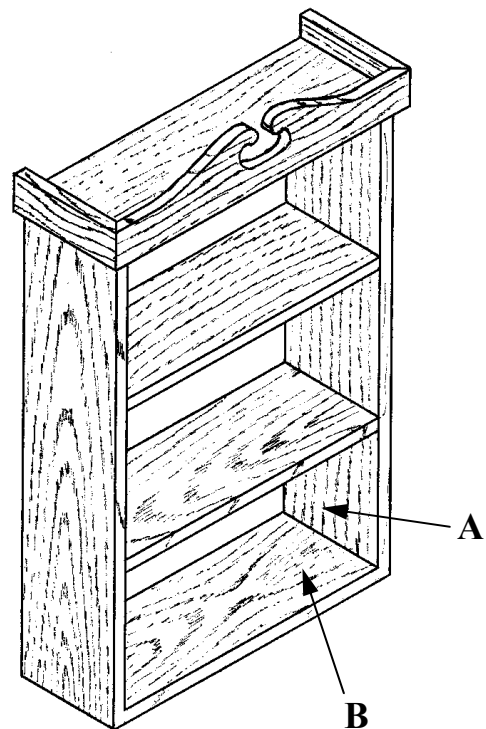
***Ordinary Level***

***Section B (60 Marks)***

***Instructions***

- (a) Answer any **three** questions. All questions carry equal marks.
- (b) Where sketches are required they may be done freehand or on the graph paper provided.
- (c) Write your examination number on the answer book and on all other pages used.

1. The diagram shows a wall mountable bookshelf. The unit is made from solid pine.
- (i) Describe, using notes and sketches, a suitable method of jointing the side **A** to the bottom **B**.
  - (ii) The shelves need to be adjustable to different heights. Using notes and sketches suggest one method that could be used to support the shelves, yet leave them adjustable.
  - (iii) The unit is to be finished with either an oil finish or varnish. Choose **one** of these finishes and describe in detail the steps involved in applying the chosen finish to the project.

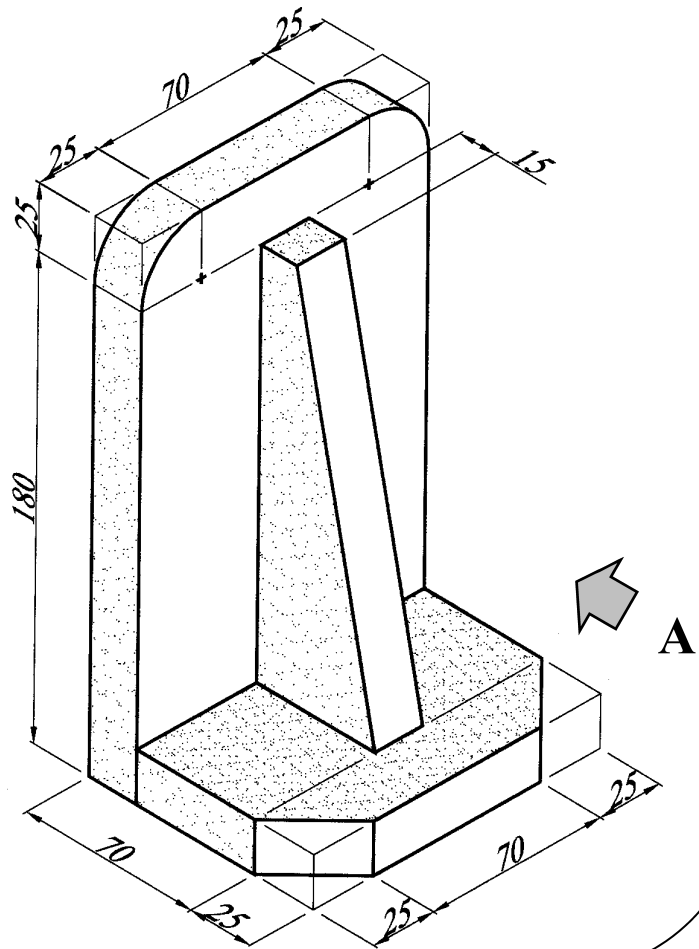


2. The diagram shows a pictorial drawing of a bookend. All material is **20mm** thick.

(i) Draw, full size, a **Front Elevation** looking in the direction of arrow A.

(ii) Project an **End Elevation** from this view.

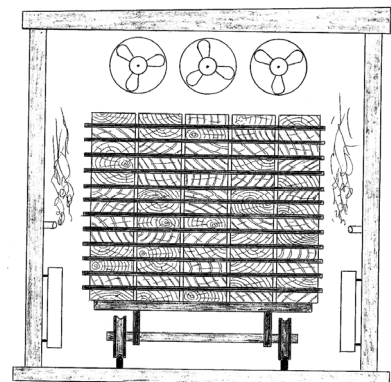
(iii) Include **four** main dimensions on the drawing, showing clearly dimension lines and arrowheads.



3. The diagram shows a stack of wood being kiln seasoned.

(i) Name the pieces of wood which are used to separate the planks.  
Explain why these pieces of wood are used.

(ii) Planks that are seasoned too quickly can develop several types of defect.  
Using notes and sketches describe any **two** of these defects.

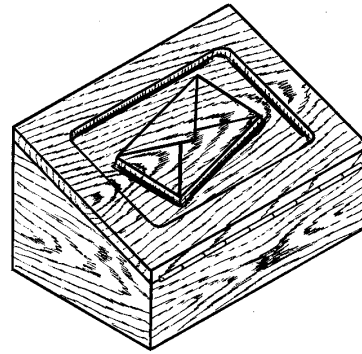


(iii) The other method of seasoning is air or natural seasoning.  
Compare both methods of seasoning under the following headings:

- (a) Moisture content
- (b) Time
- (c) Cost.

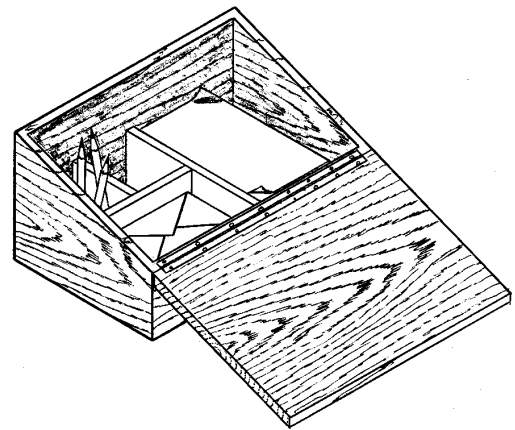
4. Answer either A or B

4A. The diagram shows a storage box for letter writing materials.  
The lid of the box is to be carved.



(i) Describe using notes and sketches how the envelope design could be transferred from paper on to the lid.

(ii) Draw a neat sketch of a suitable carving tool to carve this design.  
Name this tool.



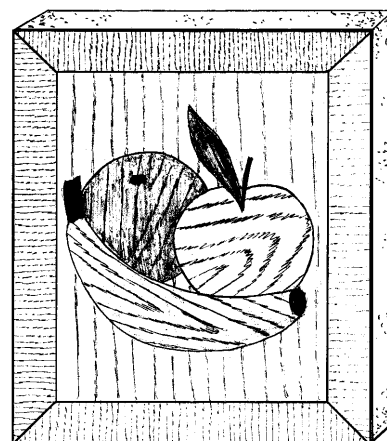
(iii) A piano hinge is used for the lid.  
Give **two** reasons why a piano hinge is used.

OR

4B. The diagram shows a picture made using veneers applied to an M.D.F. base board.

(i) Using notes and diagrams describe, in detail, how veneers are cut from logs.

(ii) The picture is to be placed on a desk.  
Using notes and sketches design a suitable support.



(iii) Explain how using veneers saves on the use of rare and expensive timbers.

5. When carrying drawing equipment to and from school it can get broken easily. The diagram shows a storage box with a perspex (acrylic) lid that could be used to protect the equipment.

(i) Suggest a suitable material to make:

(a) The sides of the box

(b) The base of the box.

In each case give **two** reasons for your choice.

(ii) The inside of the box is to be divided to hold the equipment shown. Make a neat diagram suggesting a good layout of the divisions and equipment in the box.

(iii) Suggest **three** precautions to be taken when drilling the hole in the lid to prevent the perspex cracking.

