



*Junior Certificate Examination 2004*

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

***Monday 21 June***  
***Morning, 9.30 to 11.30***

***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.



Cut tack  
Upholstery nail  
Staple



Panel pin  
Oval wire nail  
Round wire nail

NAME A

NAME B

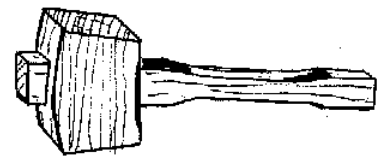
2. Name **one** of the tools labelled **A** and **B** in the diagram and give its use.

A NAME

USE


A



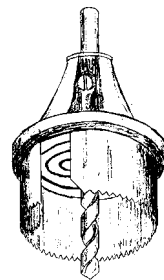
OR

B NAME

USE

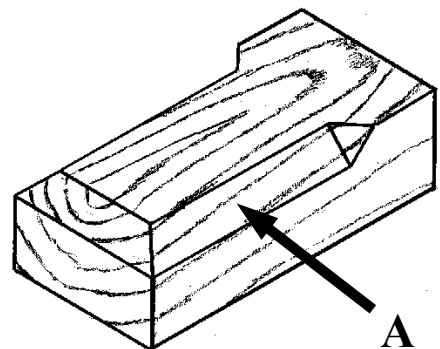
  


B



3. Name the moulding shown at **A** in the diagram.

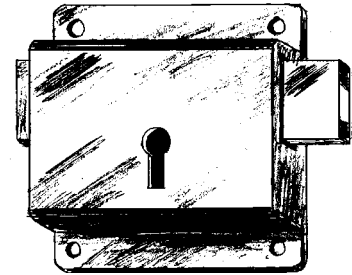
NAME



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

NAME

USE

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

A



B

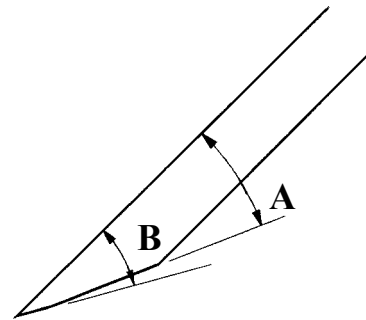


- WILLOW
- OAK
- HORSECHESTNUT
- BEECH
- ASH
- SYCAMORE

NAME A

NAME B

6. When sharpening the blade of a plane what is angle A called?



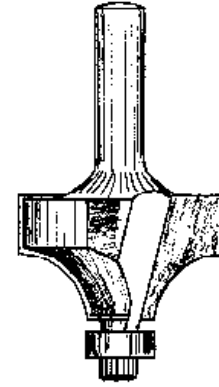
ANSWER

7. Give one **advantage** and one **disadvantage** of a cordless drill.

ADVANTAGE

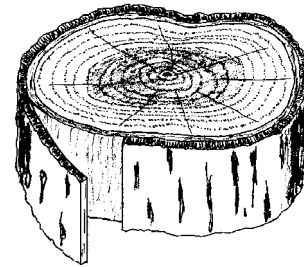
DISADVANTAGE

8. With which electric power tool is the bit shown in the diagram used?



NAME

9. What is the function of the bark of a tree as shown in the diagram?

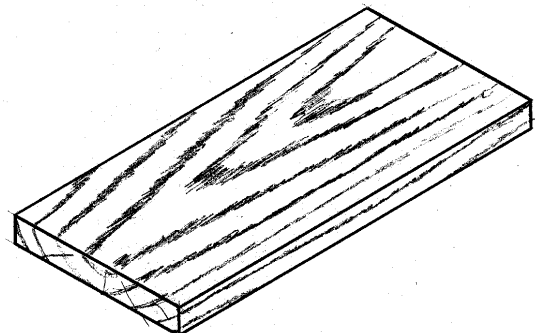


ANSWER

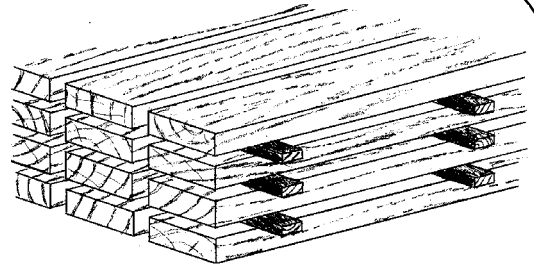
10. Some of these tools are designed for planing flat surfaces, others for planing curved surfaces. Show by means of an 'X' into which group each tool fits.

	Planing flat surfaces	Planing curved surfaces
Smoothing plane		
Compass plane		
Block plane		
Spokeshave		
Try plane		

11. With the aid of arrows, indicate on the diagram the correct direction for sanding the top surface of this piece of wood.



12. Name the pieces of wood which are placed between the planks when seasoning?



ANSWER

13. From the list given, name the lathe turning tools shown.

A



Roughing Gouge  
Skew Chisel  
Square-end Scraper  
Parting Tool  
Spindle Gouge

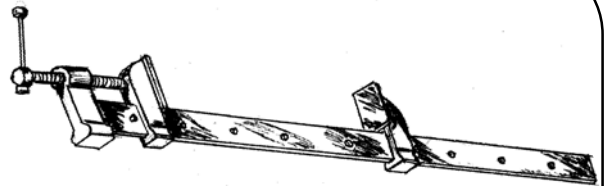
B



A

B

14. The diagram shows a sash cramp.  
Suggest a suitable use for this tool.



ANSWER

15. Name **two** manufactured boards.

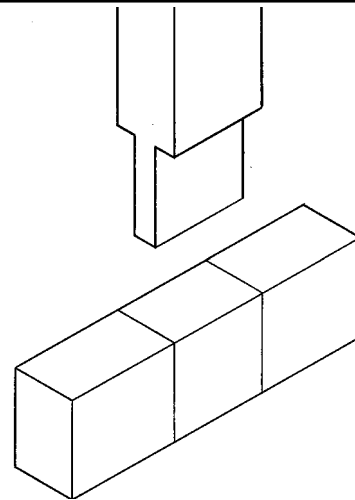
1

2

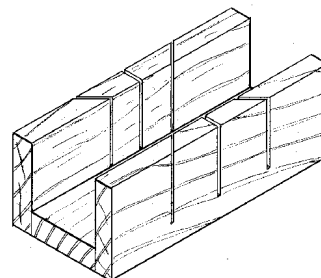
16. Why is wire wool used in preference to sandpaper when sanding between coats of varnish?

ANSWER

17. Complete the marking out of the **Mortice and Tenon** joint shown.

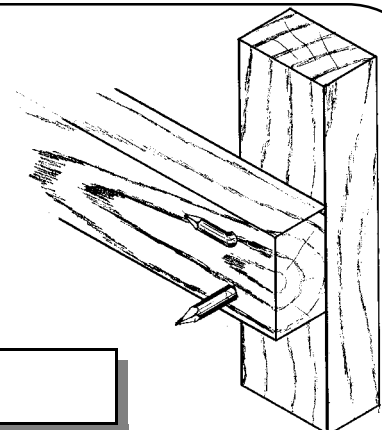


18. The diagram shows a **mitre box**. What is it used for?



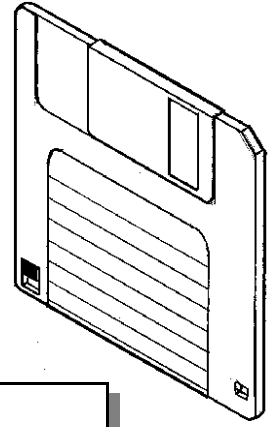
ANSWER

19. What is the correct term for bending the nail to make it safe, at the back of a piece of wood, as shown in the diagram?



ANSWER

**20.** List **two** precautions that must be followed when storing floppy disks correctly.



**ANSWER**


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

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*Junior Certificate Examination 2004*

# *Materials Technology Wood*

## *Higher 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 window box with decorative flowers made from plywood.

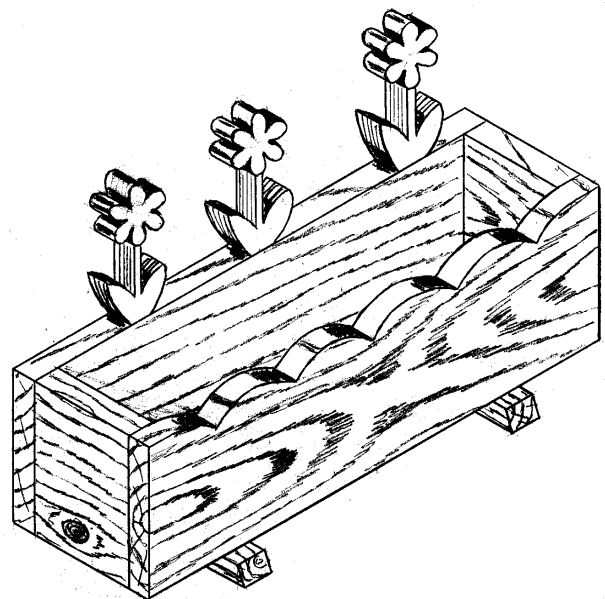
(i) Using notes and neat freehand sketches explain how the flowers could be cut out, shaped and smoothed properly.

(ii) Make a neat diagram of **two** tools that would be used in this process.

(iii) Suggest a suitable **joint** for joining

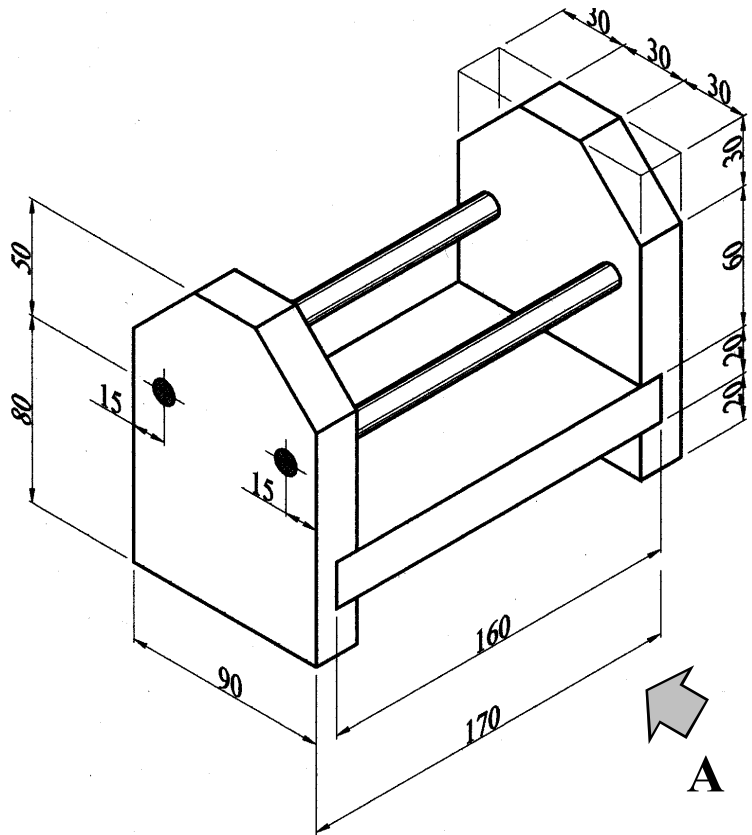
- (a) the corners of the window box
- (b) the flower decorations onto the back board.

Make a diagram of each joint and give **one** reason for your choice.



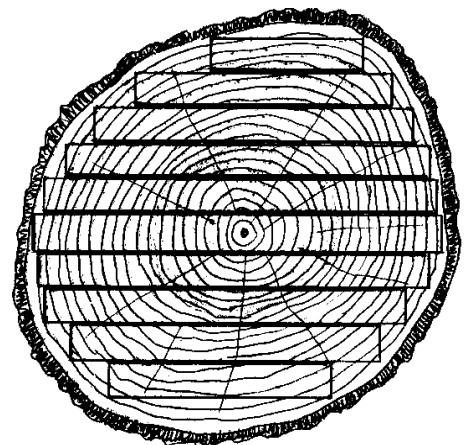
2. The diagram shows a pictorial drawing of a spice rack.  
All material is **20mm** thick.

- (i) Draw, full size, a **Front Elevation** looking in the direction of arrow A.
- (ii) Project an **End Elevation** from this view.  
Show the centres for the holes.
- (iii) Include **four** main dimensions on the drawing, showing clearly dimension lines and arrowheads.



3. The diagram shows a method of converting (sawing) a log into planks.

- (i) Name this method of conversion.
- (ii) Give **two** reasons why logs are sawn into planks.
- (iii) When a log is sawn into planks there are thin strips of wood, bark and sawdust left over.

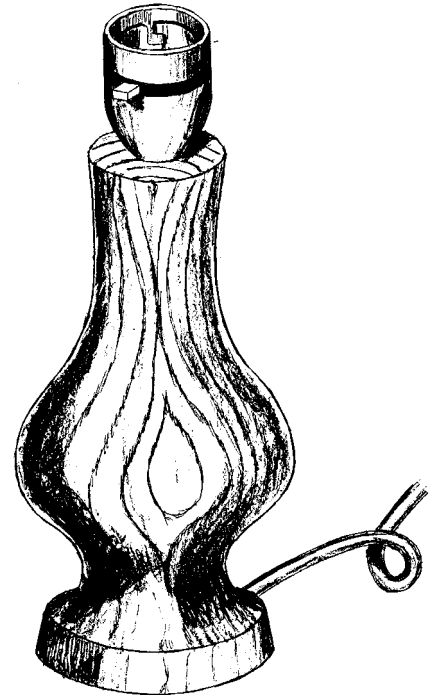


- Suggest **one** use for
- (a) the thin strips of wood
  - (b) the bark
  - (c) the sawdust.

4. Answer either A or B

4A. The diagram shows a table lamp which has been turned on a lathe.

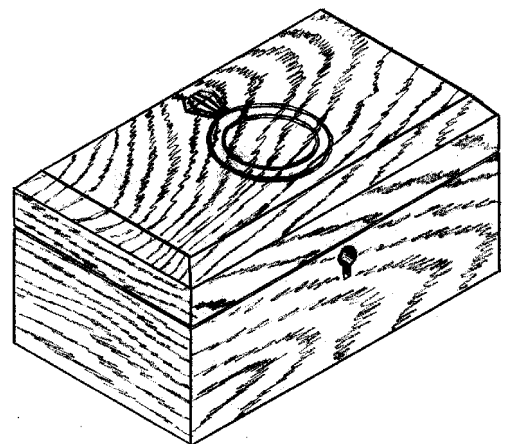
- (i) Draw another lamp base that could easily be turned on the lathe.
- (ii) Describe, using notes and sketches, how to make the hole down through the centre of the lamp for the electric cable.
- (iii) List **three** other items that can be made on a woodturning lathe.
- (iv) Give **one** reason why it is necessary to wear eye protection when using a lathe.



OR

4B. The diagram shows a small jewellery box. The top of the box has an incised carving of a ring.

- (i) The ring shape is drawn full size on a piece of paper. Describe how the design could be transferred onto the wood.
- (ii) Suggest a suitable tool to be used to carve the ring on the top of the box. Make a neat diagram of this tool.
- (iii) Other types of carving are (a) Relief carving  
(b) Carving in the round.  
Describe, using notes and sketches, **one** of these types of carving.



5. The diagram shows a rack for storing compact discs (CDs). The top and bottom are made from **acrylic** (perspex) and the middle section is made from wood.

(i) Show by means of notes and sketches how the acrylic bottom could be cut out and shaped.

(ii) Using notes and sketches describe a method that would help prevent the acrylic top from shattering when drilling the hole through the centre.

(iii) Using notes and sketches suggest a way to change the design so that the CD cases can be more easily removed.

