



***Pre-Junior Certificate Examination, 2014***

***Materials Technology (Wood)***

***Higher Level***

***Section A (40 marks)***

***Time: 2 hours***

**STUDENT'S NAME** 

**SCHOOL'S NAME** 

**TEACHER** 


***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 name, your school's name and your teacher's name in the boxes provided and on all other pages used.

School Stamp	

Section A	
1	
2	
3	
4	
5(a) or (b)	
Total	

## SECTION A - 40 MARKS

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

1. (i) Using a tick (✓), identify the power tool shown from the list below.

**Jig Saw** ☐ **Mortise Machine** ☐ **Scroll Saw** ☐



- (ii) Describe **ONE** specific use for this tool.

**USE**


2. (i) Name the woodworking tool shown in the diagram.

**NAME**

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- (ii) What is this tool commonly used for?

**USE**


3. (i) Name the timber defect shown in the diagram.

**NAME**




- (ii) What is the most likely cause of this defect.

**CAUSE**


4. Ergonomics is a term often encountered when considering solutions to a design brief. Explain the term Ergonomics.

**EXPLAIN**


5. The diagrams show the leaves of three common Irish trees.  
In the spaces provided, name the trees.








6. The diagram shows a wood screw.

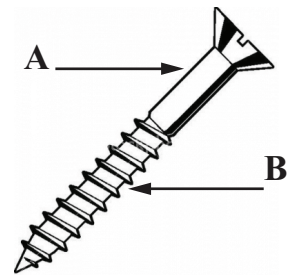
- (i) Name the screw type.

SCREW TYPE

- (ii) Name the parts labelled **A** and **B**.

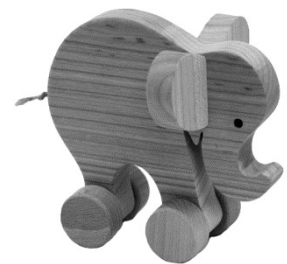
**A**

**B**



7. A clear finish is required to show the attractive grain pattern of wood.  
Identify, using a tick (✓), which of the following finishes give a **Clear** finish or a **Non-clear** finish.

Finish	Clear	Non-clear
Bees Wax		
Varnish		
Teak Oil		
Acrylic Paint		
Danish Oil		



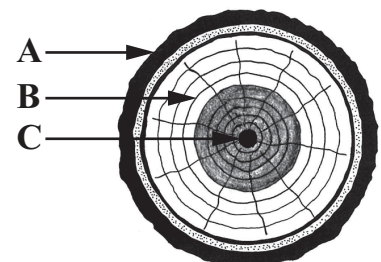
8. The diagram shows a cross-section of a tree.

Name the parts labelled **A**, **B** and **C**.

**A**

**B**

**C**



9. The pyrograph is a tool commonly used to personalise and decorate project work.

List **three** precautions that should be followed when using a pyrograph.



PRECAUTION 1

PRECAUTION 2

PRECAUTION 3

10. Identify, using a tick (✓), whether the following metals are **Ferrous** or **Non-ferrous**.

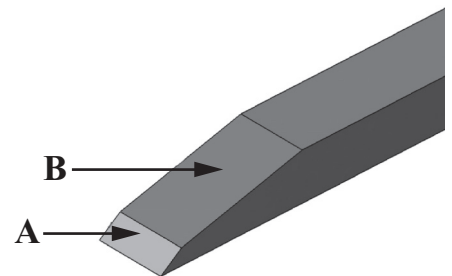
Metal	Ferrous	Non-ferrous
Iron		
Aluminium		
Brass		
Copper		
Zinc		

11. The diagram shows the tip of a chisel.

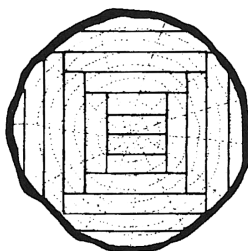
Name the angles labelled **A** and **B**.

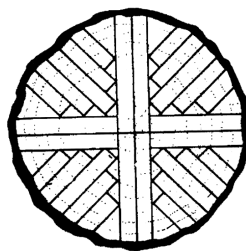
ANGLE A

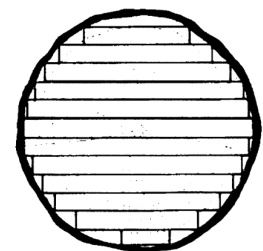
ANGLE B



12. Three methods of timber conversion are shown in the diagrams.  
In the space provided, name **EACH** method.

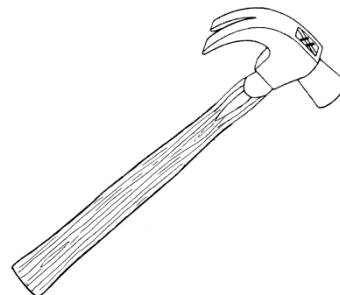






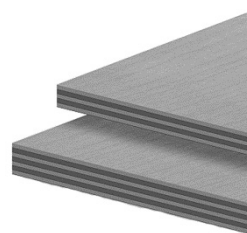
13. The diagram shows a claw hammer.  
Using a tick (✓), identify the force which is being applied to a nail when it is struck by the hammer.

TENSION	<input type="checkbox"/>
COMPRESSION	<input type="checkbox"/>
TORSION	<input type="checkbox"/>



14. (i) Name the manufactured board shown in the diagram.

NAME



- (ii) Give **TWO** advantages to the environment of using this board instead of solid wood.

ADVANTAGE 1

ADVANTAGE 2

15. (i) Plastics are divided into two main categories.  
Name these categories.

CATEGORY 1

CATEGORY 2



- (ii) Plastic objects from one of the categories can be recycled by melting and re-shaping. Name this category.

CATEGORY

16. Give **TWO** ways in which a computer can be used when working on your Junior Certificate MTW project.

1

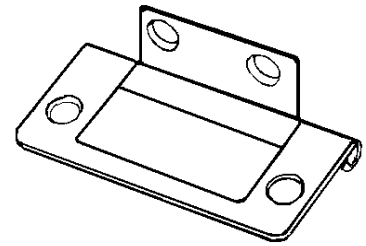

2



- 17.(i) The diagram shows a common type of hinge.  
Name this type of hinge.

NAME

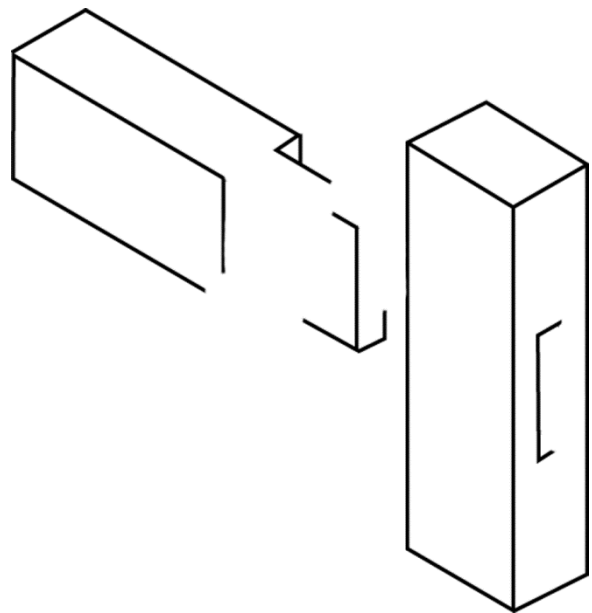


- (ii) Where would this type of hinge normally be used?

USE


18. The diagram shows an incomplete exploded isometric sketch of a **MORTICE AND TENON JOINT**.

Complete the sketch of the joint.



19. Wood products marked with the FSC logo indicate that wood has originated in a sustainably managed forest.

State **THREE** advantages of a managed forest.

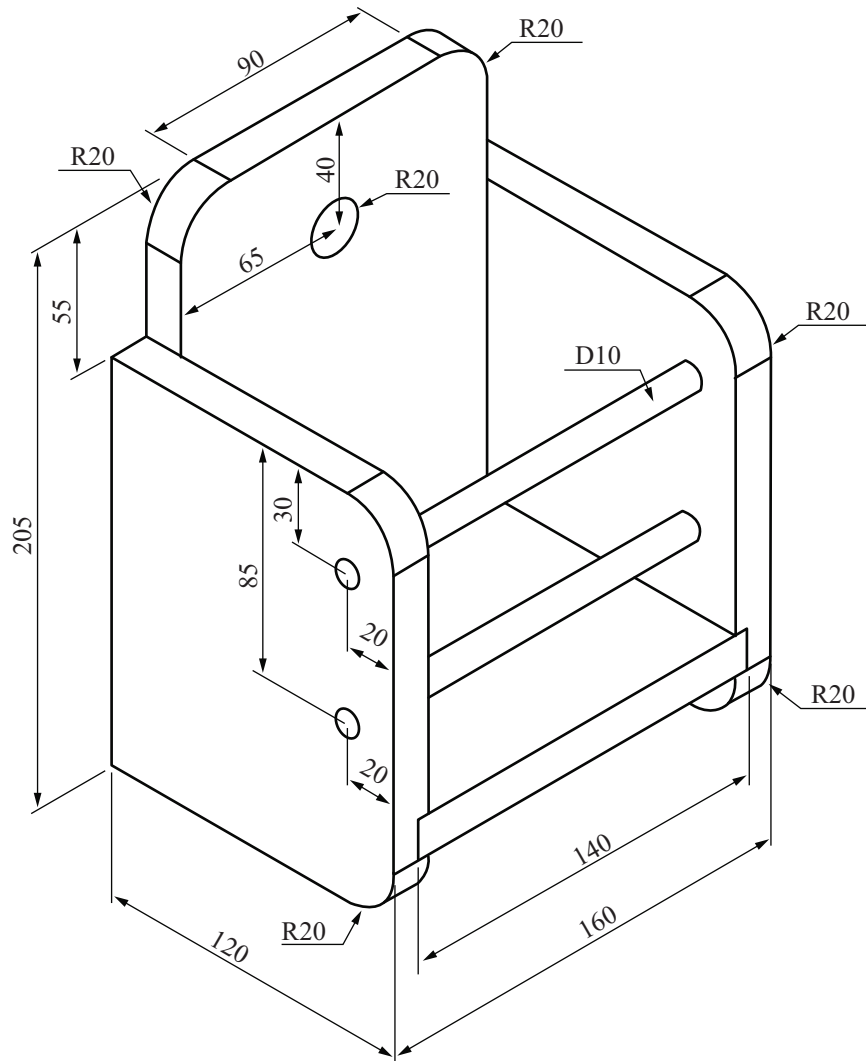


ADVANTAGE 1


ADVANTAGE 2


ADVANTAGE 3


20. The dimensioned drawing shows a storage rack made from wood.  
Complete the cutting list below. *(All material is 15mm thick.)*



Description	Quantity	Length	Width	Thickness
Sides	2		120	15
Dowel		160	10	10
Base	1	140		15
Back	1	205		

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