



Junior Certificate Examination, 2012

Materials Technology - Wood
Higher Level
Section A (40 marks)

Monday, 18 June
Afternoon, 2.00 - 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	
5(a) or 5(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.

Orbital Sander **Jig Saw** **Band Saw**

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

USE



2. The board shown in the diagram has become distorted across its width.

- (i) What is this form of distortion called?

ANSWER

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- (ii) Give **ONE** possible reason for this type of distortion.

REASON

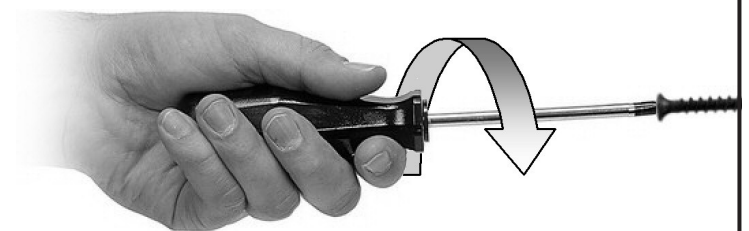


3. The diagram shows a screwdriver being used to insert a screw. Using a tick (✓) identify the force which is being applied to the screw.

Compression

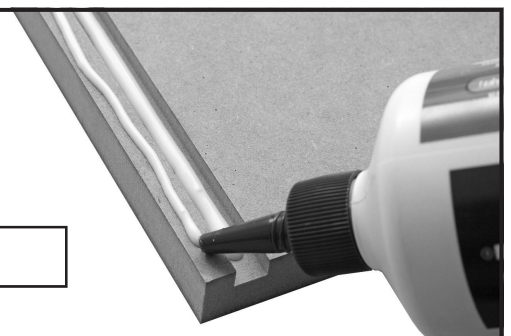
Tension

Torsion



4. PVA glue is often used in gluing MTW projects. What do the initials PVA stand for?

P V A



5. **Aesthetics** is a term that is often used when evaluating finished MTW projects.



Explain the term **aesthetics**.

EXPLANATION

6. Identify, using a tick (✓), whether the following saws cut on the **Forward** stroke or the **Return** stroke.

Saws	Forward stroke	Return stroke
Tenon Saw		
Coping Saw		
Panel Saw		
Rip Saw		
Hacksaw		



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

NAME

- (ii) Give an appropriate use for this tool.

USE



8. The diagram shows a CNC router that is controlled by a computer.

Give **TWO** reasons for using a CNC router in a workshop.



REASON 1

REASON 2

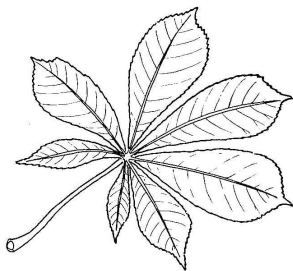
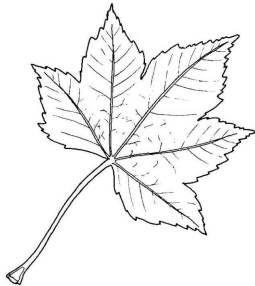
9. **Microporous** finishes are widely used on garden furniture.

Describe how **microporous** finishes protect wood.



ANSWER

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



11. (i) Name the plane shown in the diagram.

NAME



(ii) Give an appropriate use for this particular type of plane.

USE

12. (i) Name the power tool shown in the diagram.

NAME

(ii) Give an appropriate use for this power tool.

USE



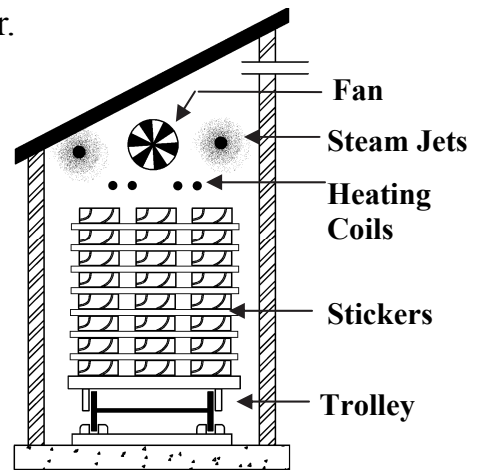
13. The diagram shows a method of seasoning timber.

(i) What is this method called?

METHOD

(ii) Explain the function of the **stickers**.

FUNCTION



14. Using a tick (✓) indicate which of the following plastics are **Thermosetting** or **Thermoplastics**.

Plastics	Thermosetting	Thermoplastic
Acrylic		
Polystyrene		
Epoxy Resin		
Nylon		
Polythene		

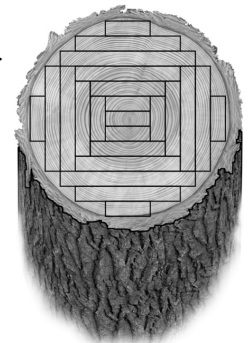


15. (i) Name the method of timber conversion shown in the diagram.

NAME

(ii) State **ONE** advantage of this method of conversion.

ADVANTAGE



16. Give **TWO** reasons why it is necessary to apply a finish to a wooden artefact.

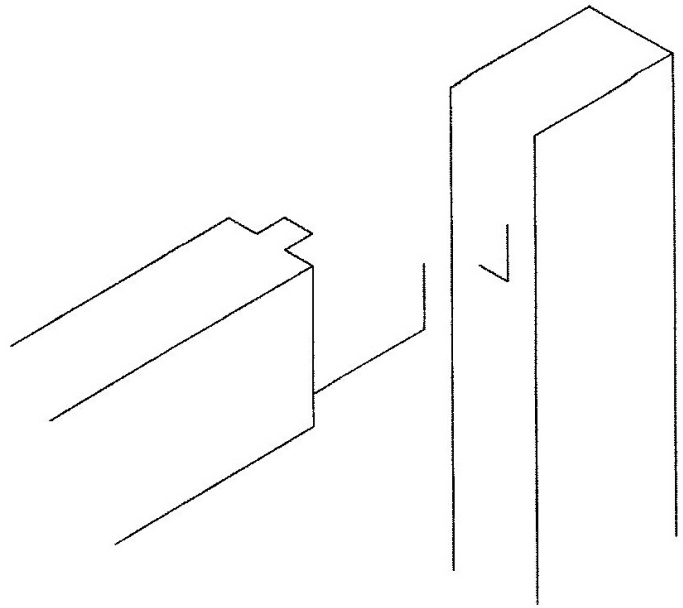
REASON 1

REASON 2



17. The diagram shows an incomplete exploded isometric sketch of a **Haunched Mortice and Tenon Joint**.

Complete the sketch of the joint.



18. (i) Name the woodworking machine shown in the diagram.

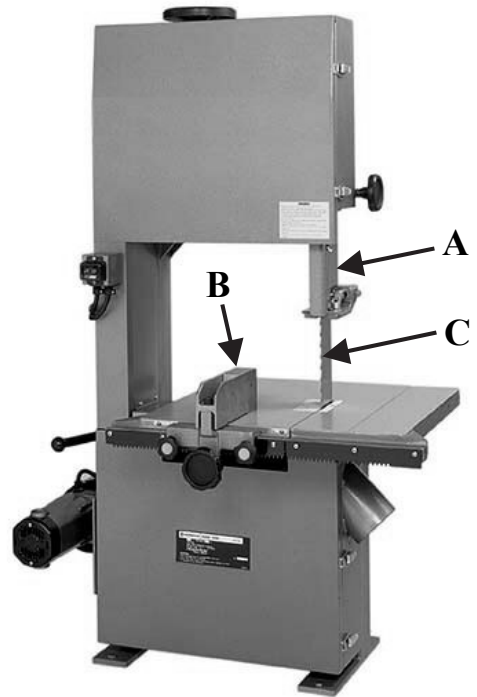
NAME

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

A

B

C



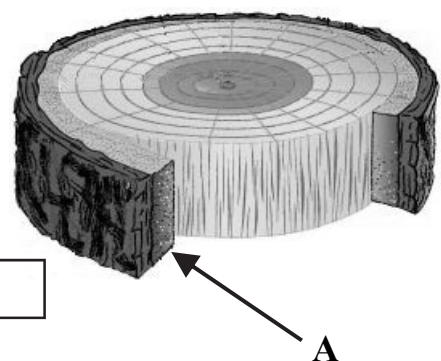
19. The diagram shows a cross section through the trunk of a tree.

(i) Name the part labelled **A**.

NAME

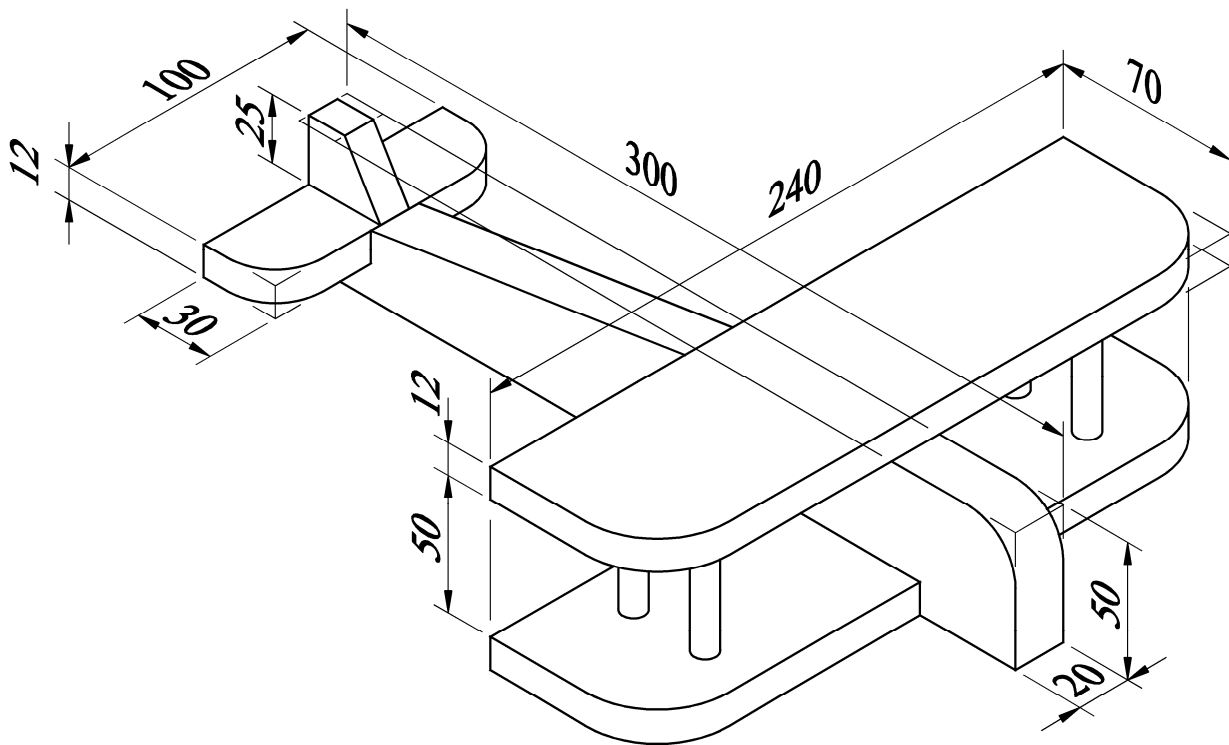
(ii) State the function of part **A**.

FUNCTION



20. The dimensioned drawing shows a toy aeroplane made from wood.

Complete the cutting list below.



Description	Quantity	Length	Width	Thickness
Body	1	300	50	
Wings	2	240		12
Tail	1	100	30	
Fin	1		25	12
Dowels		62	Ø6	

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