



*Junior Certificate Examination, 2017*

**Materials Technology (Wood)**

**Higher Level**

**Section A (40 marks)**

*Monday, 19 June*

*Afternoon, 2:00 - 4:00*

**Instructions**

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

Examination Number



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Centre Number

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1.	Total of end of page totals	
2.	Aggregate total of all disallowed question(s)	
3.	Total mark awarded (1 minus 2)	
4.	Bonus mark for answering through Irish (if applicable)	
5.	Total mark awarded if Irish Bonus (3+4)	

**Note:** The mark in row 3 (or row 5 if an Irish bonus is awarded) must equal the mark in the **Grand Total** box on the script.

Question	Marks	
<b>Section A</b>		
1		
2		
3		
4		
<b>5A or 5B</b>		
<b>Total</b>		
<b>Irish Bonus</b>		
<b>Grand Total</b>		

## SECTION A - 40 MARKS

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

1. (i) Name the tool shown.

NAME

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

USE


2. PVA is a glue which is commonly used in MTW project work.

What do the initials **PVA** stand for?

P

V

A



3. (i) Name the woodworking machine shown.

NAME

- (ii) Identify **TWO** safety features of this machine.

FEATURE 1

FEATURE 2

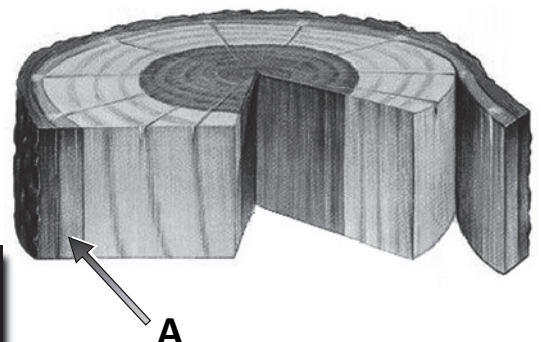


4. (i) The diagram shows a cross section through the trunk of a tree. Name the part labelled **A**.

NAME

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

FUNCTION

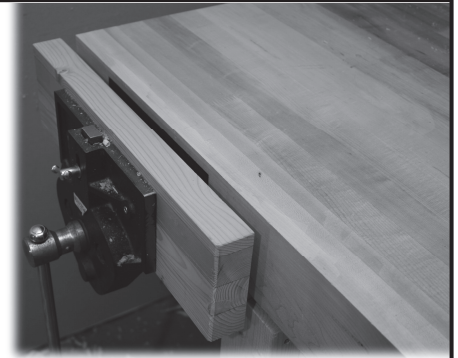
  


5. (i) Wooden jaws are usually fitted to a woodwork vice. What **specific** function do the **wooden** jaws serve in a woodwork vice?

FUNCTION

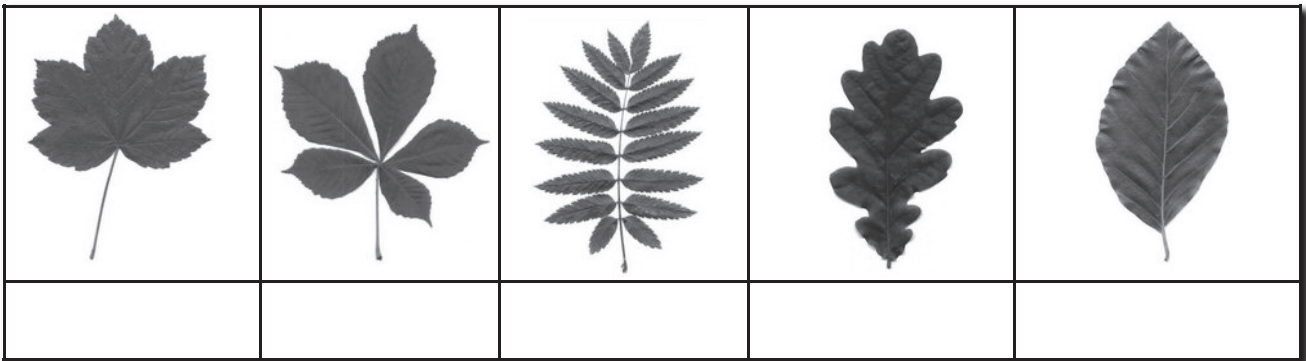
- (ii) Name the force applied to a piece of wood when it is tightened in a vice.

FORCE



6. The leaves of five common Irish trees are shown below. From the following list, state the correct name for each tree:

*Beech, Horse Chestnut, Oak, Rowan, Sycamore.*



7. The diagram shows a kiln for seasoning wood. Identify the parts labelled 1 to 5.

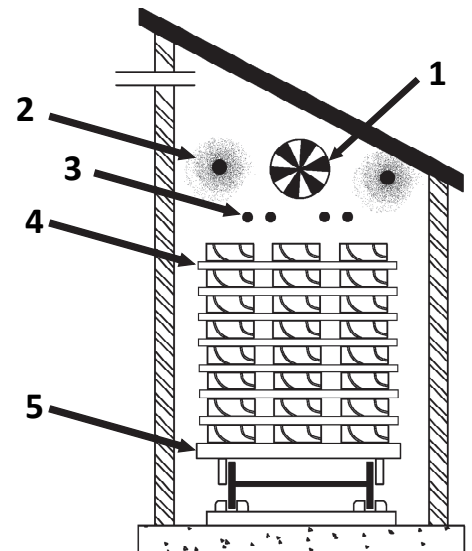
1.

2.

3.

4.

5.

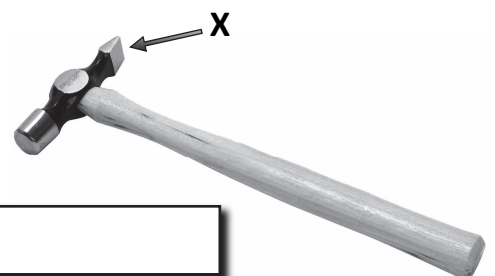


8. (i) Name the woodworking tool shown in the diagram.

NAME

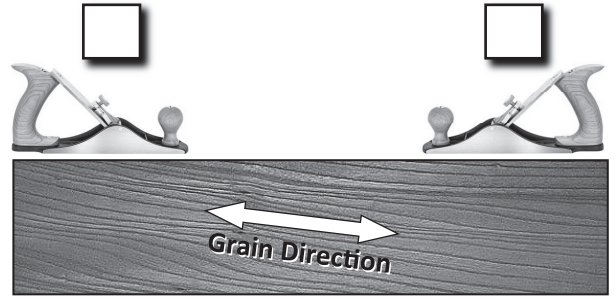
- (ii) State the function of the part labelled X.

FUNCTION



9. (i) The arrow on the diagram shows the grain direction of a piece of wood. Use a tick (✓) to indicate the correct direction for planing the wood.
- (ii) Give a reason for your answer.

REASON



10. (i) Name the woodworking tool shown.

NAME



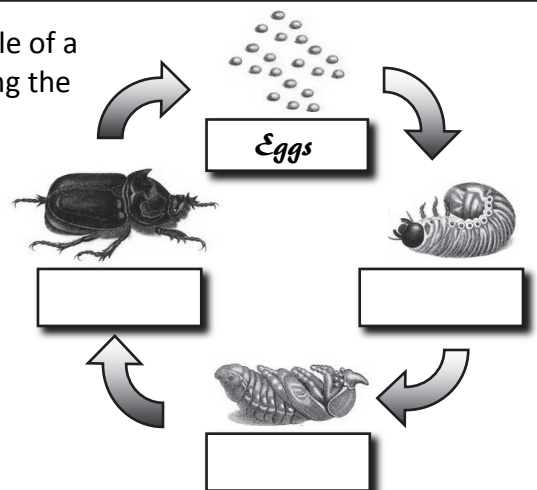
- (ii) Give an appropriate reason for using this tool when marking out an MTW project.

REASON

11. (i) The diagram shows the four main stages in the life cycle of a wood-boring beetle. Complete the diagram by labelling the other three stages.

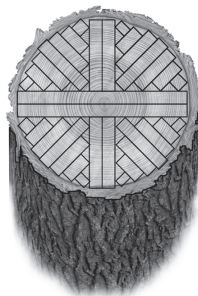
- (ii) At what stage is most damage caused to wood?

STAGE



12. (i) In the space provided below, name the method of timber conversion shown.

- (ii) On the diagram on the right, sketch another timber conversion method and give its name.



NAME



NAME

13. Name **THREE** of the raw materials necessary for photosynthesis to take place in a leaf.

1.

2.

3.

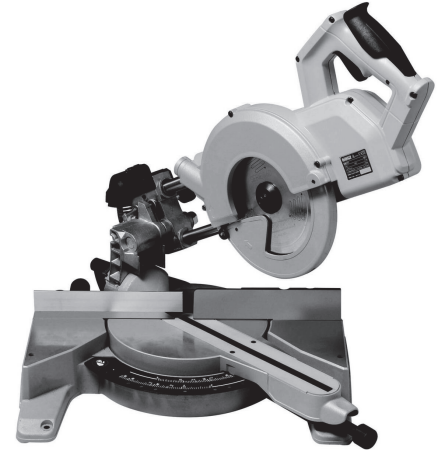


14. (i) Name the power tool shown.

NAME

(ii) Give a **specific** safety precaution to be observed when using this power tool.

PRECAUTION

15. The diagram shows a number of wooden artefacts that have been manufactured using a **CNC** laser cutter.

(i) What does the term **CNC** stand for?

C

N

C



(ii) Give **ONE** advantage of using a CNC machine?

ADVANTAGE

16. (i) The diagram shows a wooden box. The top is decorated with veneers. What is this craft technique called?

ANSWER

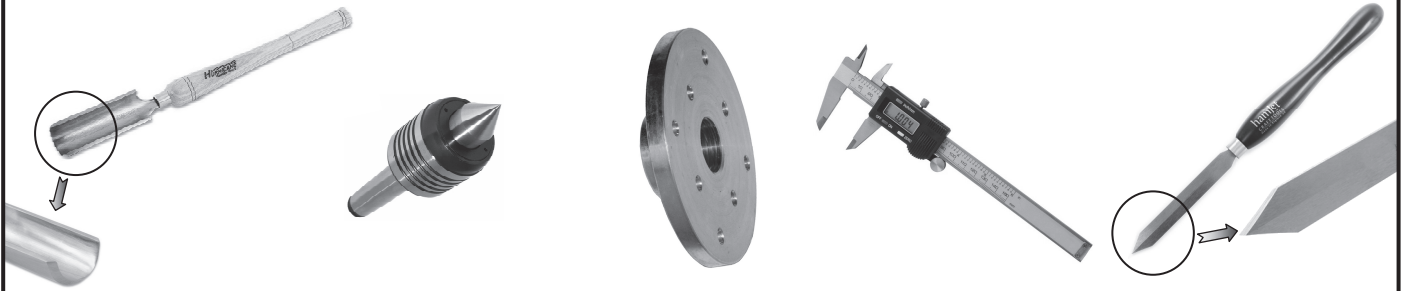
(ii) Name a tool associated with this craft technique and explain its use.

TOOL

USE



17. Name the **FIVE** items shown, which are associated with woodturning.



1.	2.	3.	4.	5.

18. Using a tick (✓) in the table below, identify whether the plastics listed are **Thermoplastic** or **Thermosetting**.

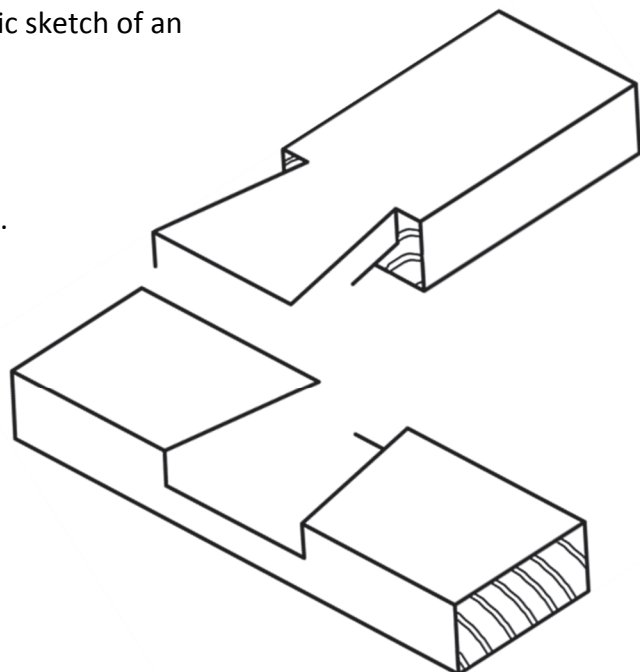


Thermoplastic	Plastic	Thermosetting
	uPVC	
	Nylon	
	Epoxy Resin	
	Acrylic	
	Polythene	



19. The diagram shows an incomplete isometric sketch of an exploded **Dovetail Halving** joint.

- (i) Complete the sketch of this joint.
- (ii) Colour or shade the completed sketch.

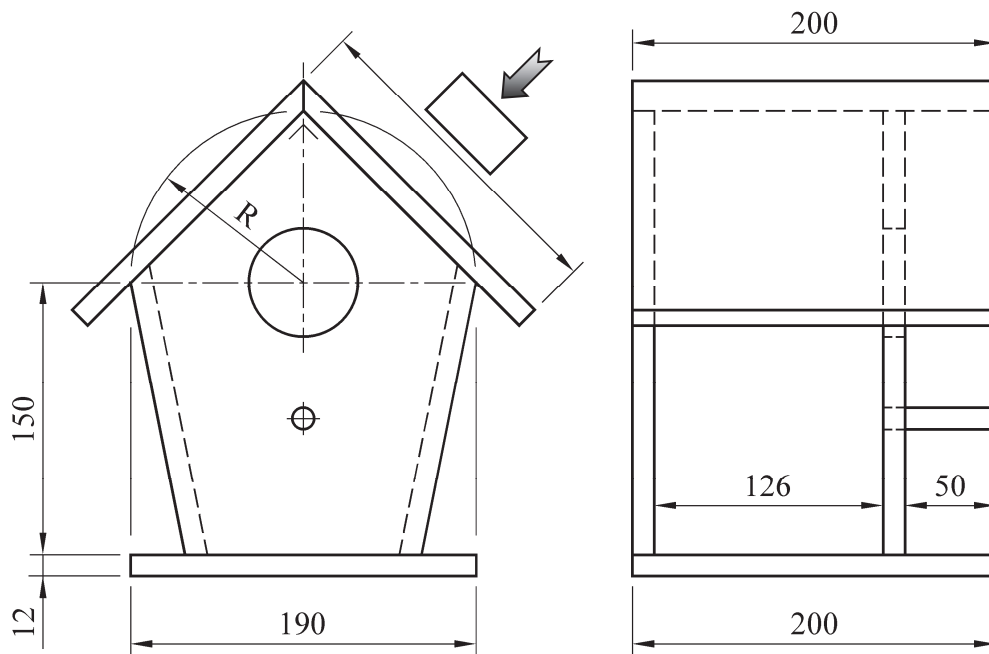


20. The image on the right shows a Bird House which was made by a student as an MTW project.

An Elevation and End View of a similar Bird House are shown in the dimensioned drawing below.

All board material is 12mm thick.

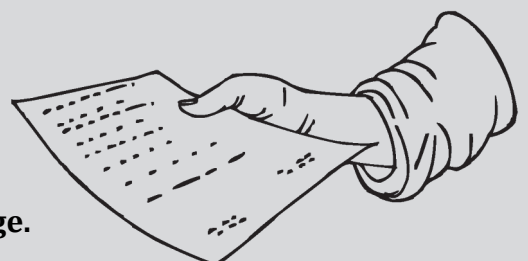
- (i) Complete the given cutting list in the table below.
- (ii) Insert the dimension for the sloping roof surface in the box indicated by the arrow in the elevation.



Description	Quantity	Length	Width	Thickness
Base	1	200	190	
Sides	2	165		12
Front/Back	2		190	12
Roof	2	180	200	12
Dowel	1			∅12

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

Make sure your Examination Number is on the front page.



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