



Junior Certificate Examination, 2010

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

Monday, 21 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) Name the woodworking tool shown in the diagram.

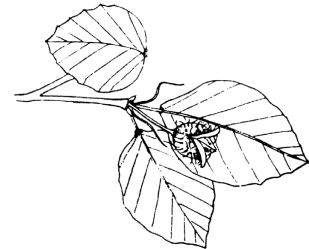
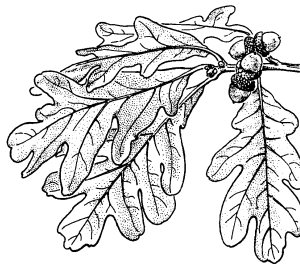
NAME



- (ii) Give one specific use for this tool.

USE

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



3. The diagram shows a coping saw. Using a tick, identify the force which is acting on the blade.

COMPRESSION

TENSION

TORSION



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

1

2

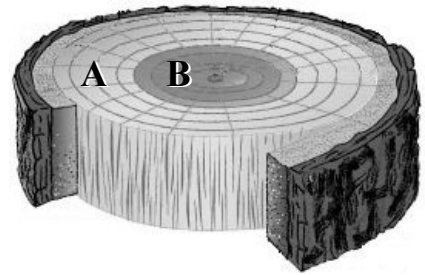
3

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

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

Area **A**

Area **B**



6. (i) Name the tool shown in the diagram.

NAME

(ii) State an appropriate use for this tool.

USE



7. Using a tick (✓), indicate whether the following trees are Hardwoods or Softwoods.

Trees	Hardwood	Softwood
Ash		
Sitka Spruce		
Douglas Fir		
Birch		
Holly		

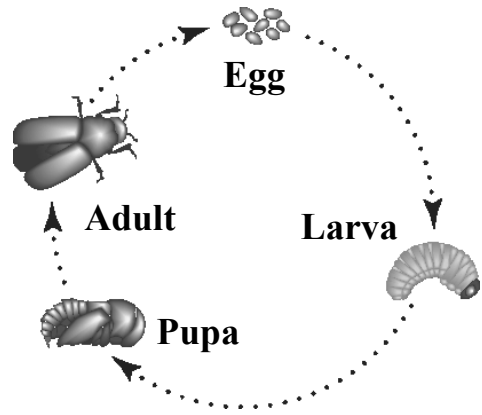
8. The diagrams show three handheld power tools. State a specific safety precaution that should be observed when using each power tool.



9. The diagram shows four stages in the lifecycle of a wood-boring beetle.

At what stage is most damage caused to the wood?

STAGE

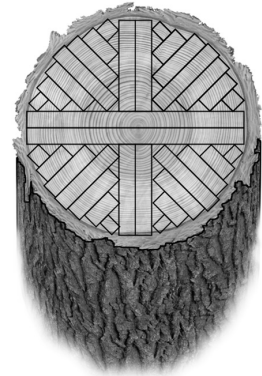


10. (i) Name the method of timber conversion shown in the diagram.

NAME

(ii) Name the grain pattern produced by sawing oak in this manner.

PATTERN



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

ANSWER

(ii) For what purpose is this tool used?

ANSWER



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

USE 1

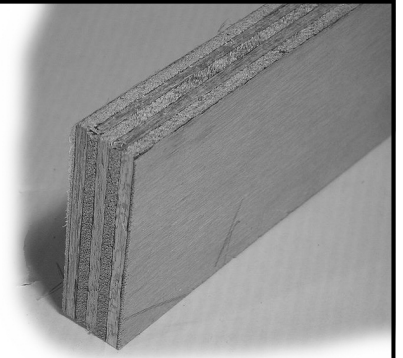
USE 2



13. (i) Name the manufactured board shown on the right.

NAME

(ii) Give **TWO** advantages of using this board instead of solid wood.



ADVANTAGE 1

ADVANTAGE 2

14. Identify, using a tick (✓), which of the following saws are more suitable for curved or straight cuts.

Saws	Curved	Straight
Dovetail saw		
Band saw		
Scroll saw		
Circular saw		
Rip saw		

15. Brass is an alloy of two metals.
Name the **TWO** metals.

METAL 1

METAL 2



16. Dry rot is the most common form of decay in wood.

State **TWO** conditions necessary for its occurrence.

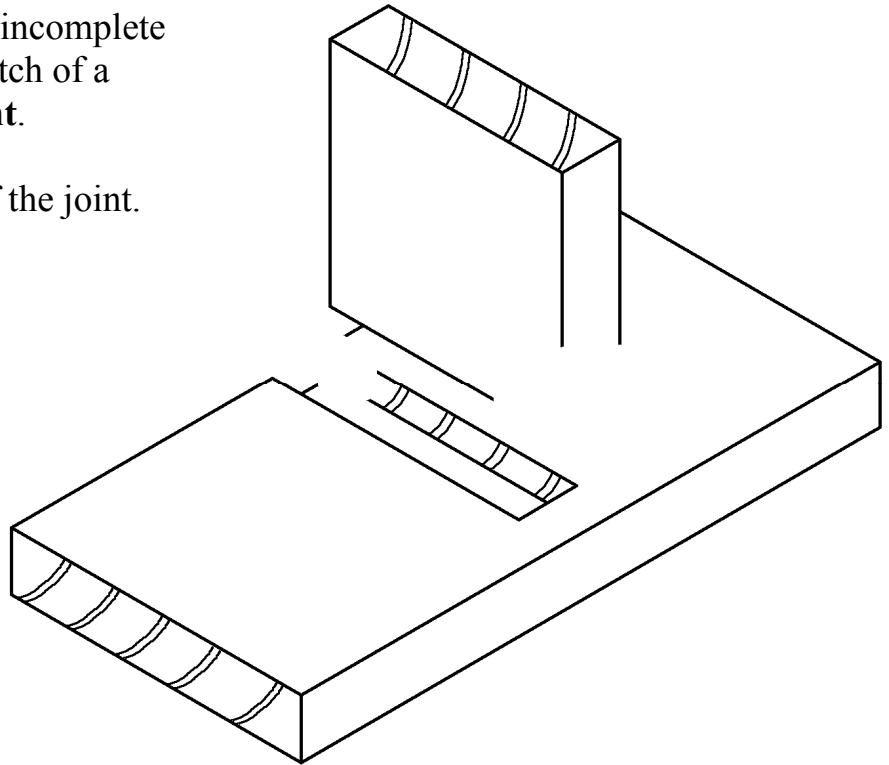
CONDITION 1

CONDITION 2

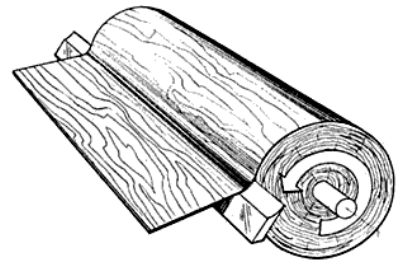


17. The diagram shows an incomplete exploded isometric sketch of a **Stopped Housing Joint**.

Complete the sketch of the joint.



18. The diagram shows a log being peeled to produce a continuous thin layer of wood which is often used in manufactured boards.



- (i) What is the layer called?

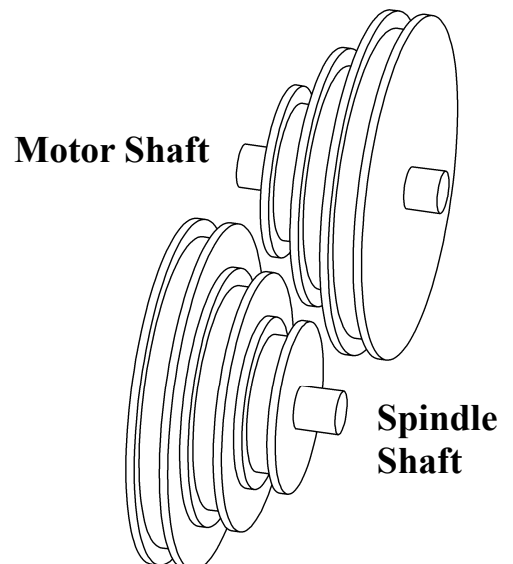
NAME

- (ii) What is the name of this method of peeling?

METHOD

19. The diagram shows a pulley mechanism which is used to change the speed of a pillar drill.

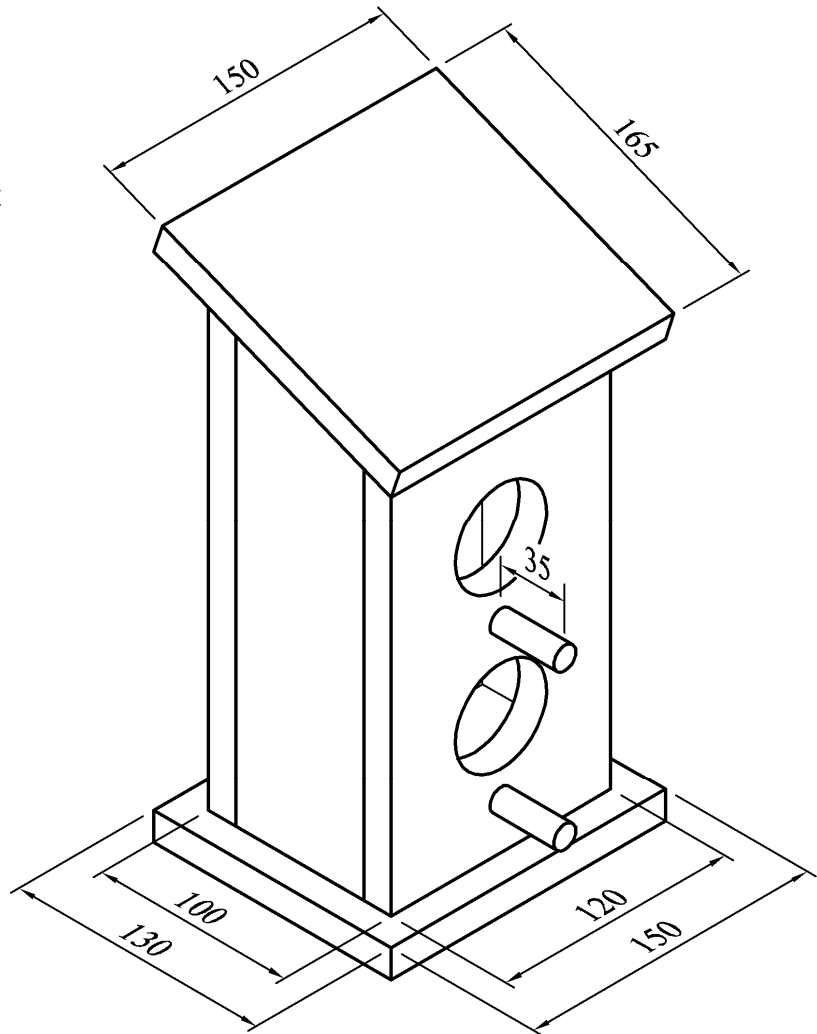
On the diagram indicate the position of the belt which will achieve minimum speed.



20. The diagram shows a bird house made from wood.

Complete the cutting list below.

Note: All material is 15mm thick.



Description	Quantity	Length	Width	Thickness
Base	1	150		15
Front		210	120	15
Back	1	250	250	15
Sides	2	240		15
Roof	1	165	150	
Dowel	2		Ø10	

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

Blank Page