



Junior Certificate Examination, 2013

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

Monday, 17 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 Router Jig Saw



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

USE

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

ANSWER

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

USE



3. Using a tick (✓) identify whether the following trees are **Softwoods** or **Hardwoods**.



Softwood	Trees	Hardwood
	Ash	
	Norway Spruce	
	Sycamore	
	Cherry	
	Scots Pine	



4. In the manufacture of exterior grade plywood, what do the letters **WBP** stand for?

W

B

P



5. The four stages in the lifecycle of a common furniture beetle (woodworm) are **Adult, Larva, Egg** and **Pupa**.



List these stages in the correct order below starting with the egg.

1. 2. 3. 4.

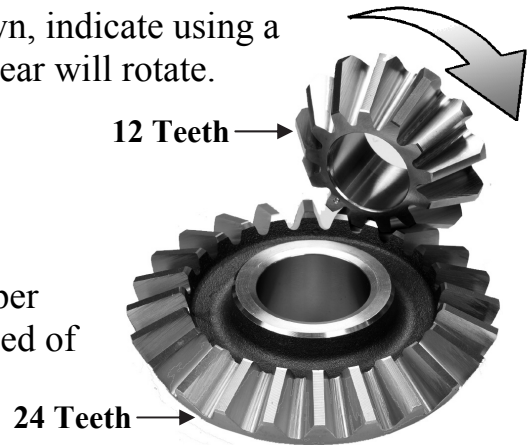
6. The diagram shows bevel gears which are commonly used in woodworking tools.

- (i) If the small gear rotates clockwise as shown, indicate using a tick (✓), the direction in which the large gear will rotate.

- CLOCKWISE
 ANTI-CLOCKWISE

- (ii) If the small gear rotates at 35 revolutions per minute (R.P.M.), what is the rotational speed of the large gear?

SPEED **R.P.M.**



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

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

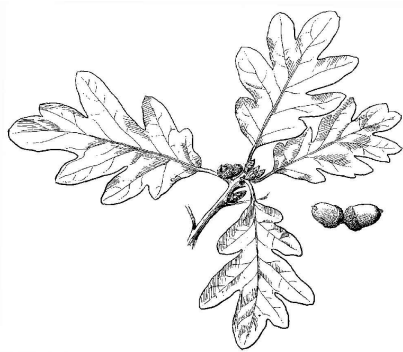
AREA A

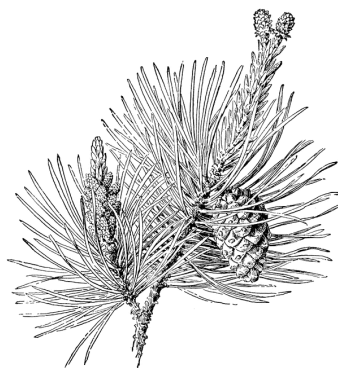
AREA B

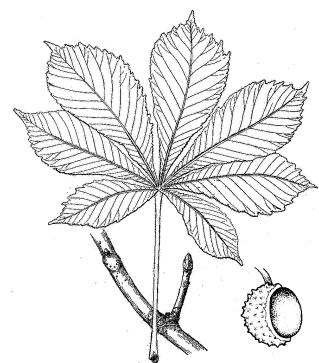


8. The diagrams show the leaves of three common Irish trees.

In the spaces provided, name the trees.







9. (i) Name the **TWO** main categories into which **Plastics** can be divided.

CATEGORY 1

CATEGORY 2

(ii) Which category of plastic can be moulded and remoulded many times?

ANSWER



10. (i) The diagram shows a wood-holding device. What is the correct name for this device?

ANSWER

(ii) What is this device commonly used for?

USE



11. The diagram shows the cutting edge of a chisel being sharpened on an oilstone.

The steps involved in sharpening are **Oil Honing, Burr Removal and Grinding.**

List these stages in the correct order below.

1.

2.

3.



12. (i) Metals can be divided into **TWO** main categories. Name these categories.

CATEGORY 1

CATEGORY 2

(ii) What is the main difference between the two categories?

DIFFERENCE

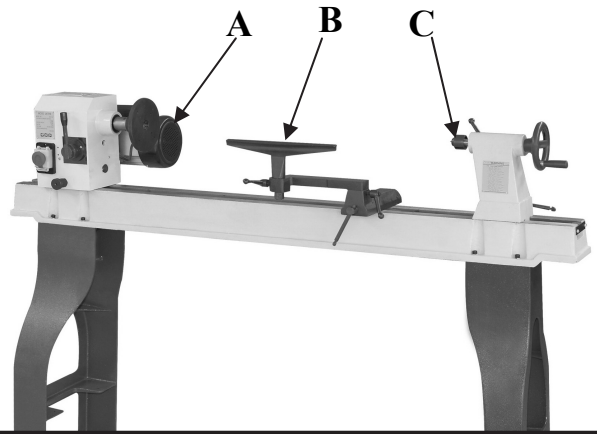


13. Name the parts of the woodturning lathe labelled **A**, **B** and **C** in the diagram.

A

B

C

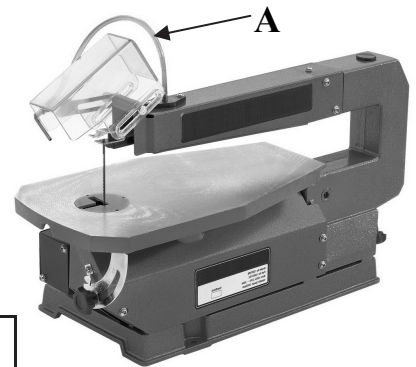


14. (i) Name the woodworking machine shown in the diagram.

NAME

(ii) What is the function of the plastic tubing, labelled **A** in the diagram?

FUNCTION



15. (i) When converting timber, the natural edge is often left on boards to give a more rustic look to pieces of furniture. What is the correct name for this feature?

NAME

(ii) Name **ONE** method of timber conversion.

METHOD



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

NAME

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

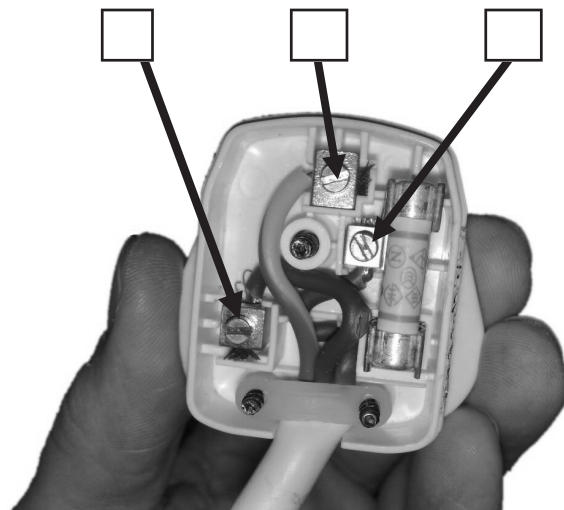
USE



17. The diagram shows the wiring terminals of a three-pin plug.

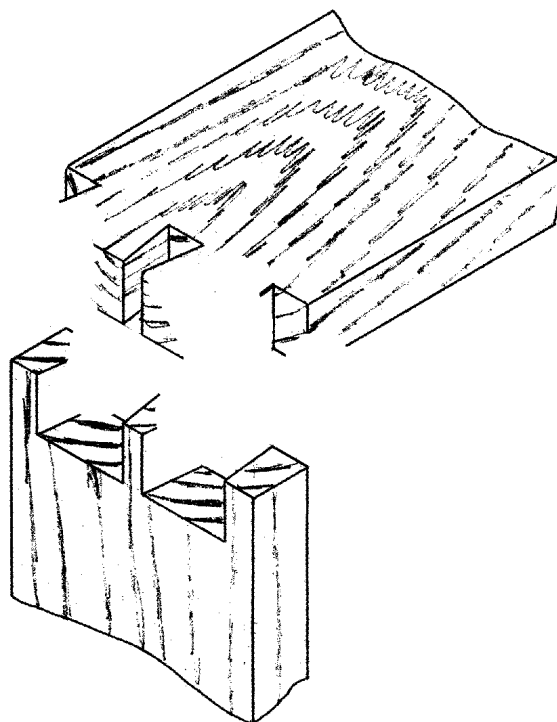
- (i) Indicate, using a tick (✓), the **NEUTRAL** terminal.
- (ii) State the correct **COLOUR CODING** for the wire connected to the **neutral** terminal.

COLOUR CODING



18. The diagram shows an incomplete exploded isometric sketch of a **BOX DOVETAIL JOINT**.

Complete the sketch of the joint.



19. The term **DRY ROT** refers to decay caused by certain species of fungi which attack wood.

- (i) Name any such species of fungus.

FUNGUS

- (ii) List **THREE** conditions necessary for **dry rot** to develop.

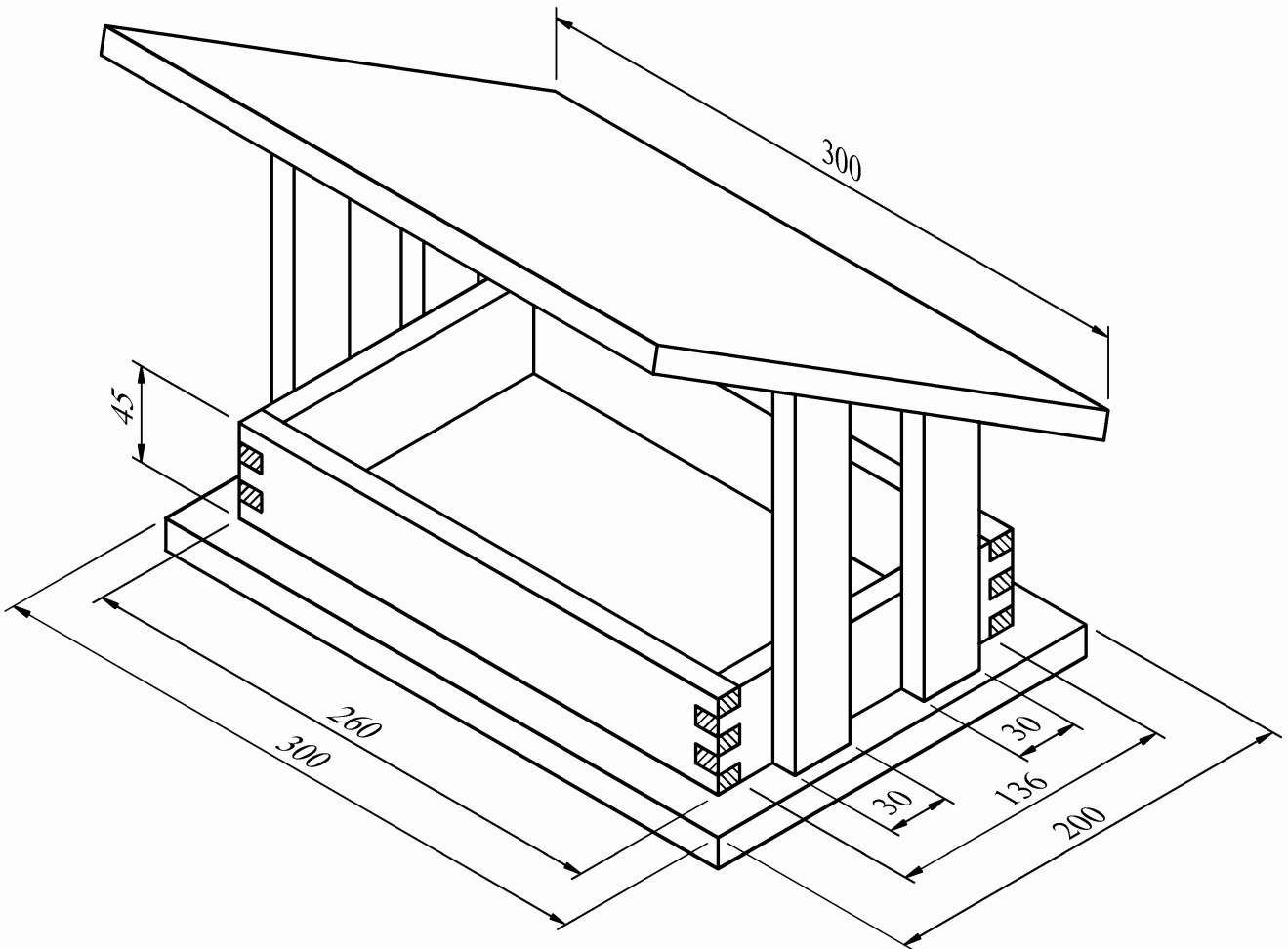
1.

2.

3.



20. The dimensioned drawing below shows a Bird Feeder Table made from oak. Complete the cutting list below. (All material is 12mm thick.)



Description	Quantity	Length	Width	Thickness
Base	1	300		12
Long Horizontal Rail	2	260		12
Short Horizontal Rail	2		45	12
Long Upright	2	180	30	12
Short Upright		150	30	12
Roof	1		240	12

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