



Junior Certificate Examination, 2011

Materials Technology (Wood)

Higher Level

Section A (40 marks)

Monday, 20 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

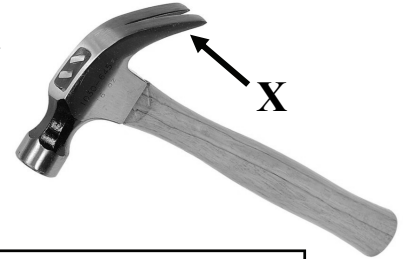
Section A	
1	
2	
3	
4	
5(a) or 5(b)	
Total	

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) State the function of the part labelled X.

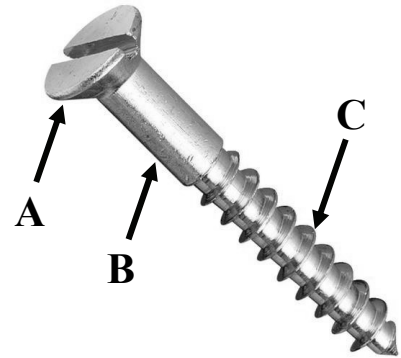
FUNCTION

2. The diagram shows a wood screw.
In the spaces provided, name the parts labelled A, B and C.

A

B

C



3. (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.

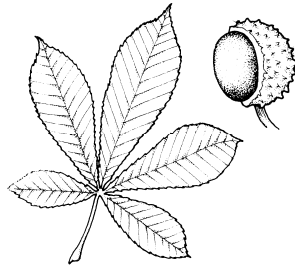
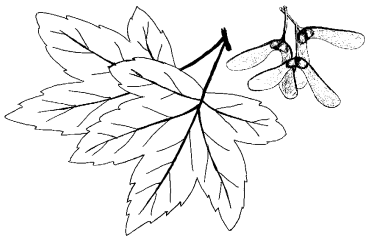
CATEGORY



4. The diagrams show **THREE** types of hinge. Name these hinges.



5. The diagram shows the leaves of three common Irish trees.
In the spaces provided, name the trees.



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

NAME

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

USE



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

NAME

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

CAUSE



8. (i) Metals are divided into two main categories, **ferrous** and **non-ferrous**.
What is the main difference between the categories?

DIFFERENCE

- (ii) For each of the following metals, state whether it is **ferrous** or **non-ferrous**.

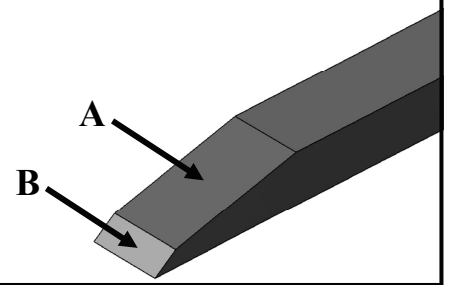
Mild Steel

Lead

9. The diagram shows the tip of a chisel.
What is the correct name for the **TWO** angles?

ANGLE A

ANGLE B



10. The diagram shows pieces of wood being held by a G-cramp while gluing.
What is the name for the force applied by the G-cramp to the pieces of wood?

COMPRESSION

TENSION

TORSION

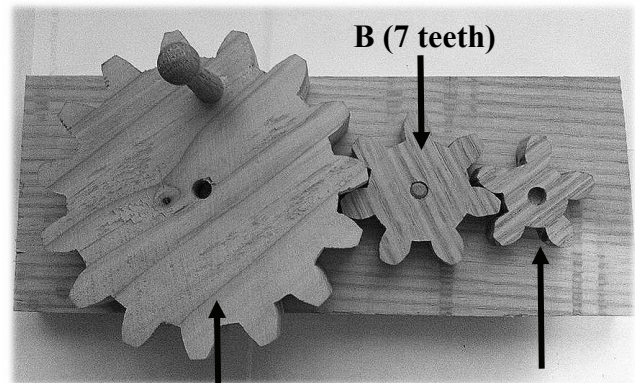


11. The diagram shows a wooden gear mechanism.
(i) If gear wheel A is rotated clockwise, indicate, by ticking the box, the direction in which gear wheel C will rotate.

CLOCKWISE ANTI-CLOCKWISE

- (ii) If gear wheel A is rotated at 42 revolutions per minute (R.P.M.), what is the rotational speed of gear wheel C?

SPEED R.P.M.



A (15 teeth)

C (5 teeth)

12. Describe **TWO** activities, in an MTW workshop, that require eye protection.

ONE

TWO



13. CAD is often used by students to design MTW projects.

(i) What does CAD stand for?

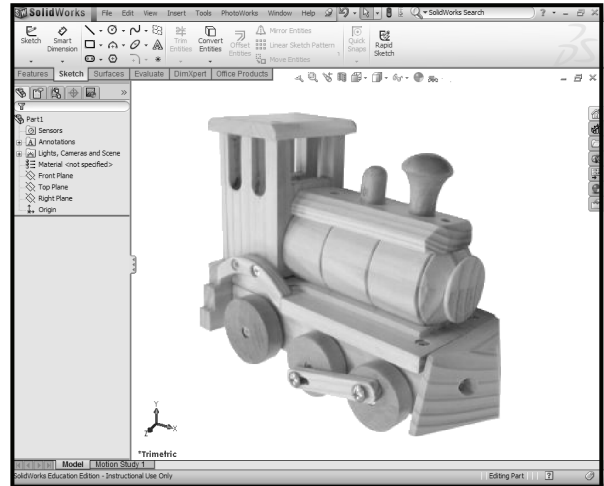
C

A

D

(ii) Give ONE advantage of using CAD for this purpose.

ADVANTAGE



14. Glues are often used in MTW projects.

Name TWO of these glues and identify an appropriate use for each.

GLUE 1

USE

GLUE 2

USE



15. (i) Name the woodworking machine shown.

NAME

(ii) State ONE specific safety precaution that should be observed when using this machine, and give ONE reason for your answer.

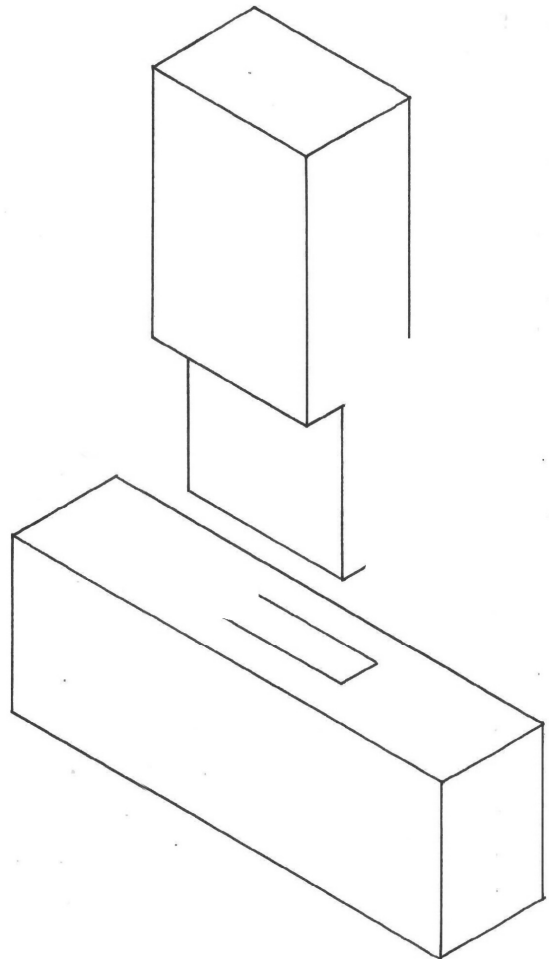
PRECAUTION

REASON



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

Complete the sketch of the joint.

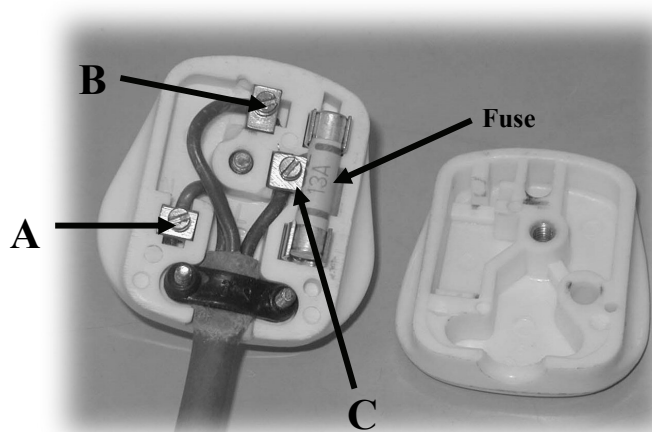


17. (i) Identify the terminals of the three pin plug labelled **A**, **B** and **C**.

A

B

C



- (ii) What is the function of the **FUSE** in a plug?

FUNCTION

18. **EMC** is a term associated with seasoning or drying of timber.
What do the letters **EMC** stand for?

E **M** **C**

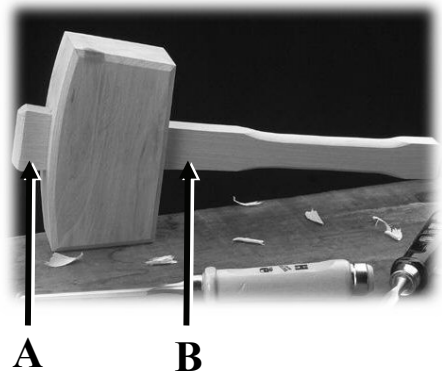
19. The diagram shows a wooden mallet.

(i) What wood is a mallet usually made from?

ANSWER

(ii) Why is the handle of the mallet wider at A than B?

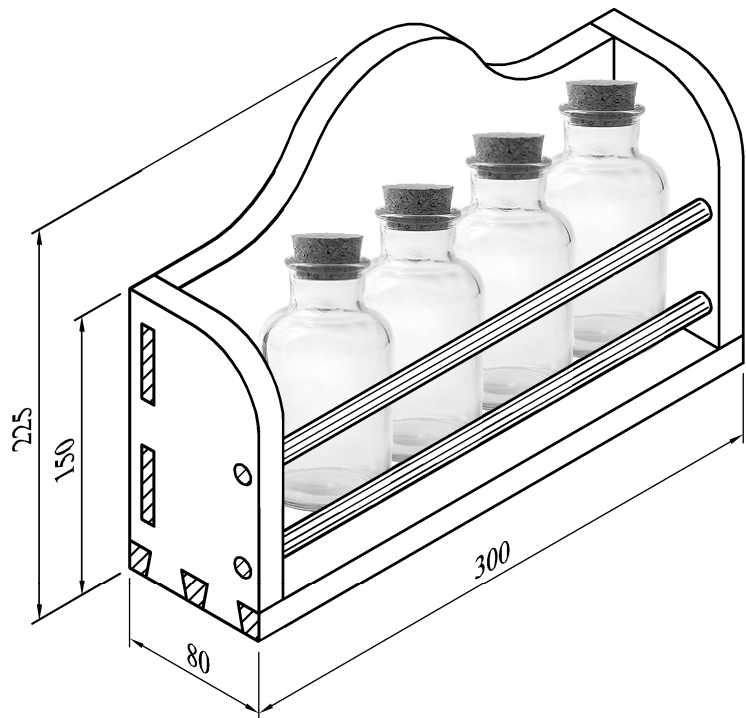
REASON



20. The diagram shows a Spice Rack made from wood.

Complete the cutting list below.

Note: All material is 15mm thick.



Description	Quantity	Length	Width	Thickness
Base	1	300		15
Ends	2		80	
Back	1	300		15
Dowel		300		Ø9

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