



Pre-Junior Certificate Examination, 2011

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

Time: 2 hours

STUDENT NAME 

SCHOOL 

TEACHER 

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 name, your school's name and your teacher's name in the boxes provided and on all other pages used.

School Stamp	

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

SECTION A - 40 MARKS

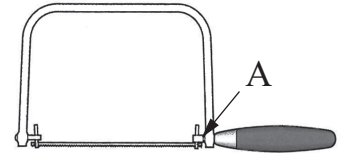
Answer any 16 questions from this section. All questions carry equal marks.

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

NAME

- (ii) State the function of part A of this tool.

USE



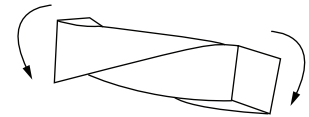
2. The diagram shows a common defect in timber.

- (i) Give the correct name for this defect.

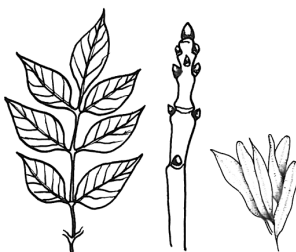
NAME

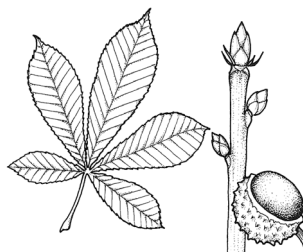
- (ii) What is the most common cause of this defect?

CAUSE



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







4. With reference to the manufacture of exterior grade plywood what do the letters **W.B.P.** stand for?

W

B

P

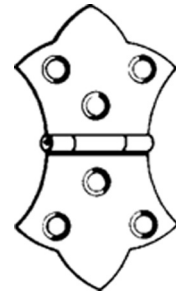
5. The diagram shows a common type of hinge.

(i) Name this hinge type.

NAME

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

USE



6. **Ferrous** metals can rust, while **Non Ferrous** metals will not.

(i) Name **TWO Non Ferrous** metals.

NAME 1

NAME 2

(ii) Name **ONE Ferrous** metal.

NAME

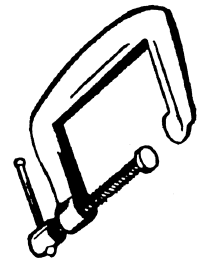
7. The diagram shows a tool commonly used for holding down timber.

(i) Name the tool.

NAME

(ii) What force is applied by the tool during its use?

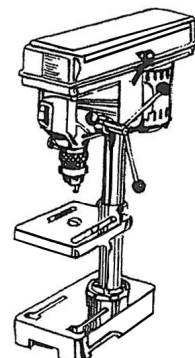
FORCE



8. State **TWO** specific safety precautions that should be observed when using the pillar drill.

1

2



9. Identify **THREE** safety features that are found in MTW school workshops.

FEATURE 1

FEATURE 2

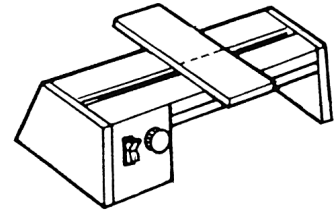
FEATURE 3

10. (i) What is the correct name for the machine shown?

NAME

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

CATEGORY



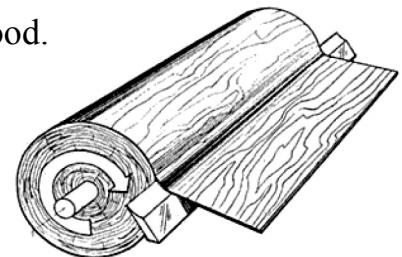
11. The diagram shows a log being peeled to produce a sheet of veneer.

(i) Suggest a suitable adhesive to bond veneers to wood.

ADHESIVE

(ii) Give **ONE** reason for your choice of adhesive.

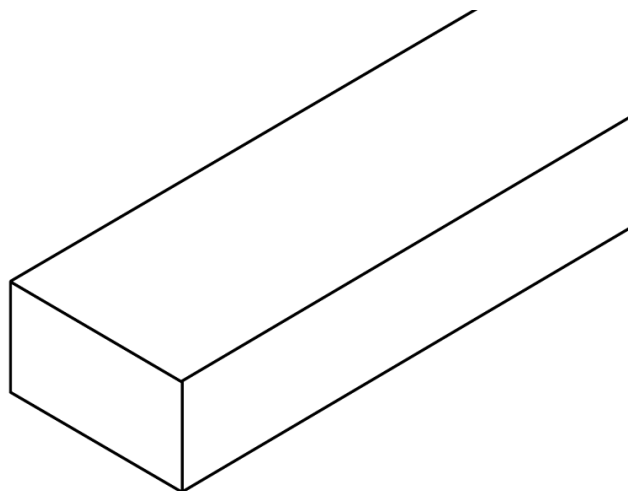
REASON



12. The diagram shows an unfinished 3D sketch.

(i) Apply a chamfer to the top surface.

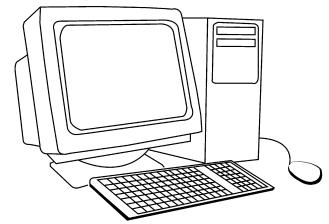
(ii) Apply grain to the sketch so that it resembles a piece of wood.



13. State **TWO** advantages of using CAD in the design and manufacture of furniture.

ADVANTAGE 1

ADVANTAGE 2



14. The diagram shows an oil stone that is used to repair a damaged blade. Place the following stages in the correct order, from **1 to 3**.

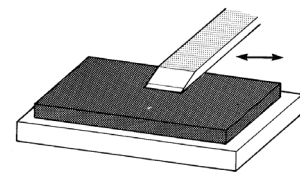
GRINDING

☐

REMOVAL OF BURR

☐

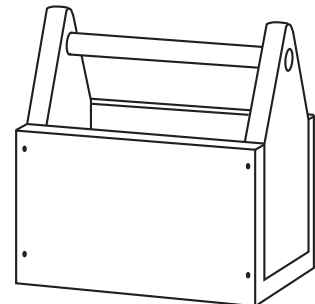
HONING

☐


15. State **TWO** reasons why it is necessary to apply a finish to the wooden toolbox shown in the picture.

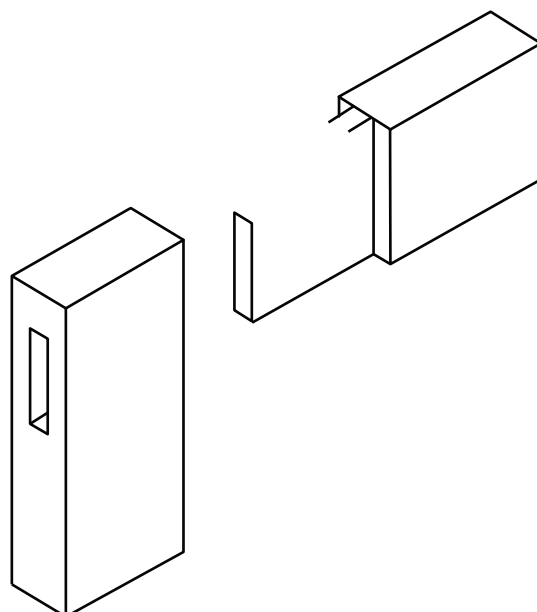
1

2



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

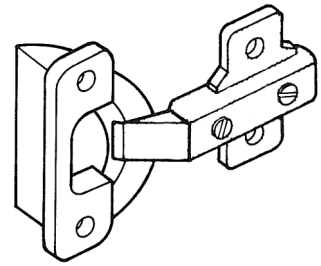
Complete the sketch of this joint.



17. The diagram shows a modern Blum hinge.

(i) State **ONE** advantage of this hinge.

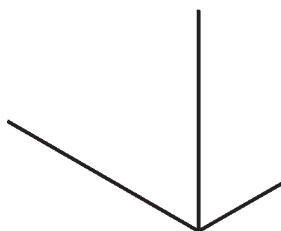
ADVANTAGE



(ii) Name **ONE** location you would use this hinge in your home.

ANSWER

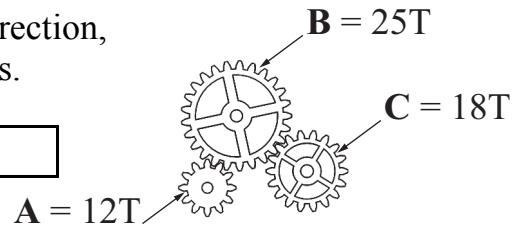
18. Make a 3D sketch of a **sliding bevel** on the given isometric axes.



19. The diagram shows a series of three gears.

- (i) If gear **A** rotates clockwise, state which direction, clockwise or anti-clockwise, gear **B** rotates.

ANSWER



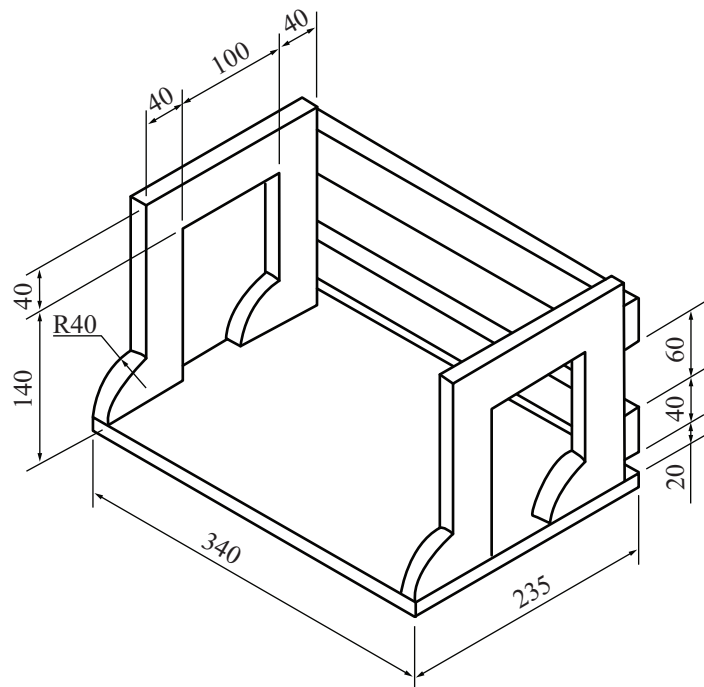
- (ii) If gear **B** rotates at 198 RPM, at what RPM does gear **C** rotate?

ANSWER

20. The diagram shows a CD storage rack made from wood.

Complete the cutting list below.

Note: All material is 15mm thick.



Description	Quantity	Length	Width	Thickness
Base	1	340		15
Side		180		
Back Piece	2	340		15

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