



Junior Certificate Examination 2007

Materials Technology Wood

Higher Level

Section A

(40 Marks)

Monday 18 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(a) or (b)	
5	
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.

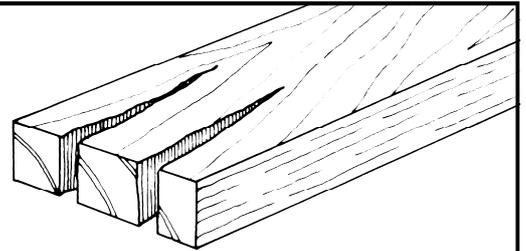
Belt Sander Orbital Sander Electric Planer



- (ii) State **ONE** reason for using this tool.

REASON

2. Splitting may occur on the end grain of a piece of timber during seasoning. Suggest **ONE** method of preventing this from happening.



ANSWER

3. (i) State **ONE** advantage of using screws instead of nails.

ADVANTAGE

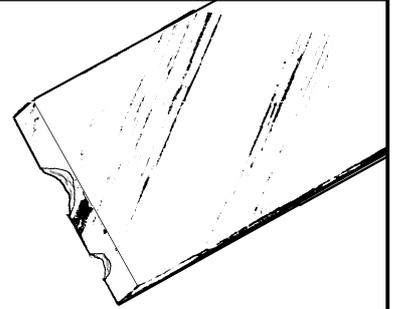
- (ii) Name the screw head shown in the diagram.

SCREWHEAD

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4. The blade of a chisel has become damaged and needs to be sharpened. Using the numbers 1, 2 and 3, place the following steps in the correct order.



HONING

BURR REMOVAL

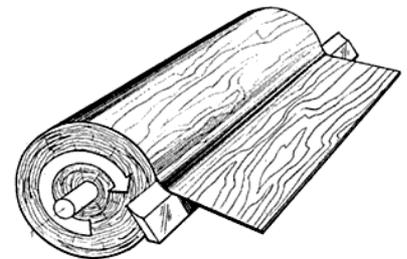
GRINDING

5. (i) The diagram shows a log being peeled to produce a continuous thin layer of wood. What is the layer called?

NAME

- (ii) What can this layer be used for?

ANSWER

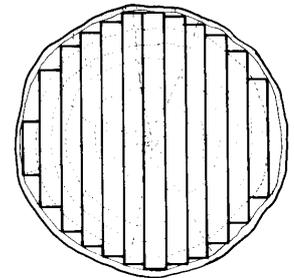


6. (i) The diagram shows a method of converting logs. Name this method of conversion.

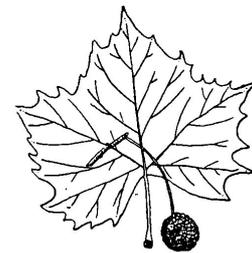
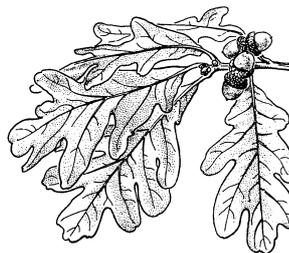
NAME

- (ii) State **ONE** disadvantage of this method of conversion.

DISADVANTAGE



7. The diagrams show the leaves of three common Irish trees. Name the trees in the spaces provided.



8. In the manufacture of exterior grade plywood what do the letters W.B.P. stand for?

W	B	P
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9. State **TWO** advantages of using CAD.

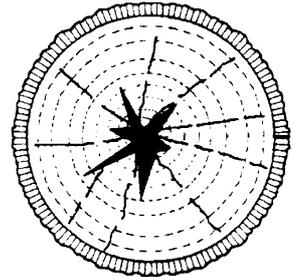
ADVANTAGE 1

ADVANTAGE 2

10. The diagram shows a common defect in timber.

(i) Give the correct name for this defect.

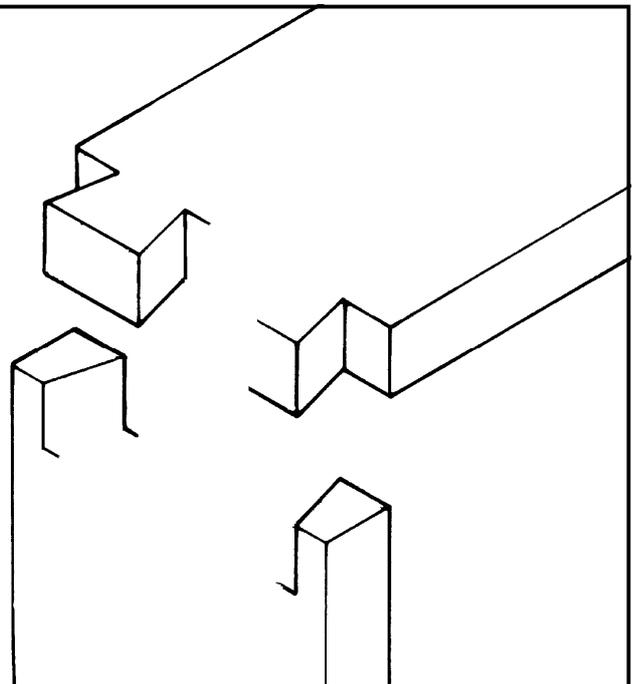
NAME



(ii) What is the possible cause of this defect?

CAUSE

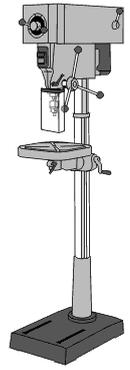
11. The diagram shows an incomplete exploded isometric sketch of a box dovetail joint. Complete the sketch of the joint



12. State **TWO** specific safety precautions that should be observed when using a pillar drill.

SAFETY 1

SAFETY 2

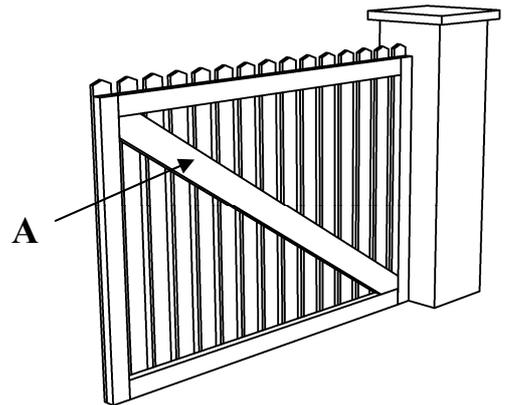


13. The diagram shows a gate. What is the correct name for the force acting in member A?

TORSION

COMPRESSION

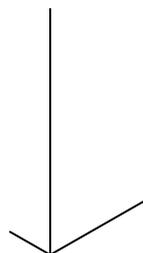
TENSION



14. Identify, using a tick, whether the metals listed below are pure metals or alloys.

Metal	Pure Metal	Alloy
Steel		
Copper		
Aluminium		
Brass		
Bronze		

15. Make a 3D sketch of a try-square on the given isometric axes.



16. Identify, using a tick, which of the following plastics are Thermoplastic or Thermosetting.

Plastic	Thermoplastic	Thermosetting
Polyvinyl Chloride		
Acrylic		
Polyester Resin		
Urea-formaldehyde		
Polystyrene		

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

NAME



(ii) State an appropriate use for this tool.

USE

18. (i) Name the hinge shown in the diagram.

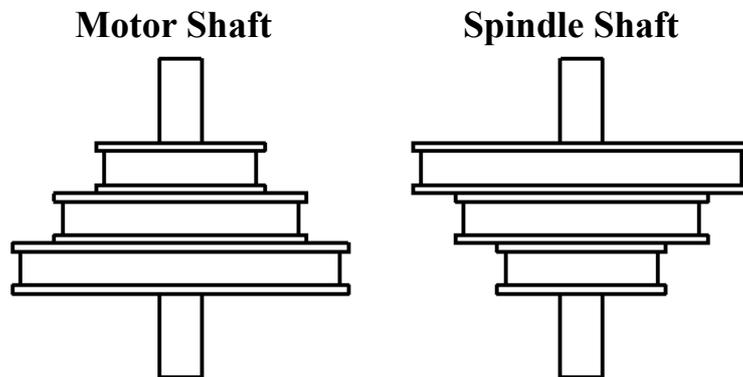
NAME



(ii) Suggest an appropriate method of preventing this hinge from rusting when used externally.

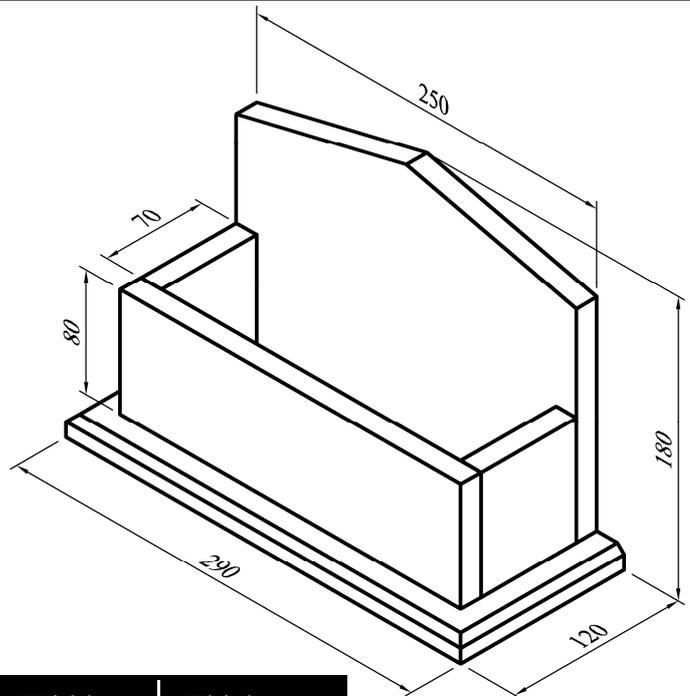
ANSWER

19. Shown in the diagram is the pulley mechanism of a lathe. Indicate, on the diagram, the position of the belt to achieve maximum speed for the lathe.



20. The diagram shows a letter rack.

Complete the following cutting list for the letter rack.
(All material is 15mm thick)



Description	Quantity	Length	Width	Thickness
Base	1		120	15
Back	1	250		15
Front	1		80	
Sides		70	80	15

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