

## CANDIDATES No

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# THE INSTITUTE OF CARPENTERS



## Member Examination

# 15th June 1999

## Associated Vocational Technology Paper Section A

**The following instructions should be read by ALL CANDIDATES before they commence work**

Candidates are advised to spend **NOT more than 1 HOUR** on this section. Total time allowed for both papers A and B **THREE HOURS**

To obtain full marks Candidates must answer **ALL** questions which carry equal marks

Answers **MUST** be submitted on the question paper immediately below the question  
Your candidate number **MUST** be written clearly in the top right hand corner of this sheet

This question paper remains the property of the **Institute of Carpenters**  
and all USED AND UNUSED PAPERS **MUST** BE RETURNED after the examination

TO BE COMPLETED BY CANDIDATE  
BLOCK LETTERS PLEASE

**Name:**  
**Date of Birth:**  
**Occupation:**

[illegible]

1. State, with regard to electrically powered portable tools.

a) **TWO** safety checks to be carried out prior to their operation.

b) **THREE** safety precautions to be observed during their use.

- a) 1. \_\_\_\_\_  
 2. \_\_\_\_\_
- b) 1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_

2. Fig. 1 shows a side elevation of a newel post and string. Illustrate on the drawing to indicate how the string is jointed to the newel post.

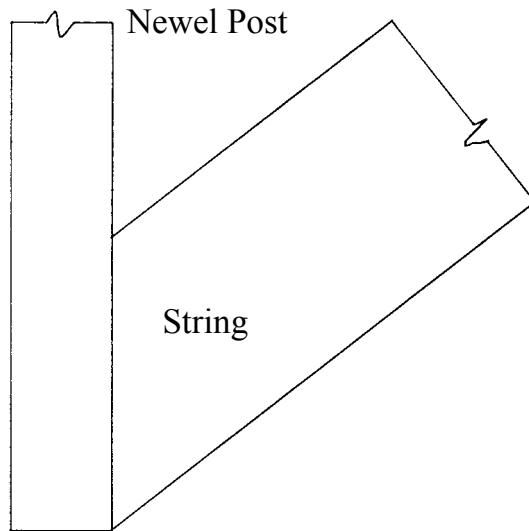


Fig. 1

3. List **Three** causes for wood binding on handsaws and state **TWO** corrective measures to be taken.

1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_

1. \_\_\_\_\_  
 2. \_\_\_\_\_

4. Name the various bevels shown on the line diagram of the roof in Fig. 2.

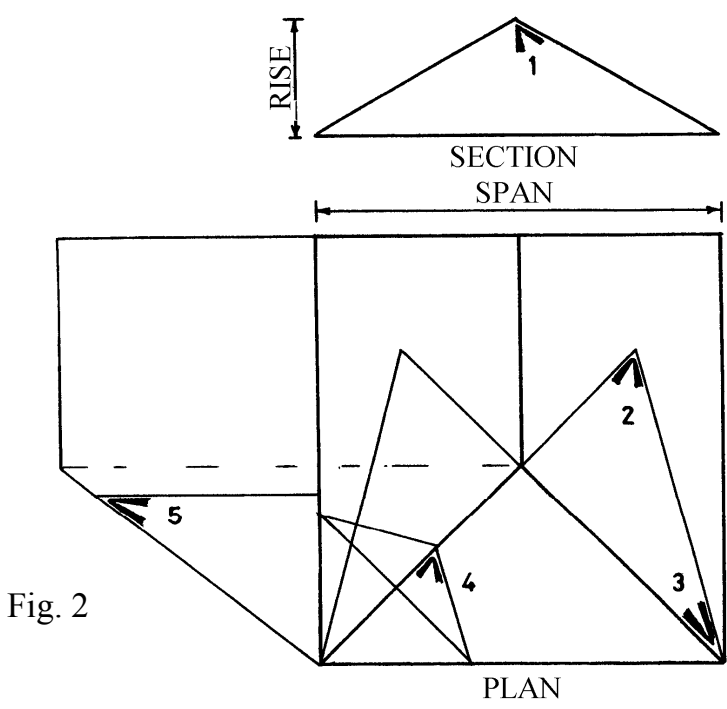


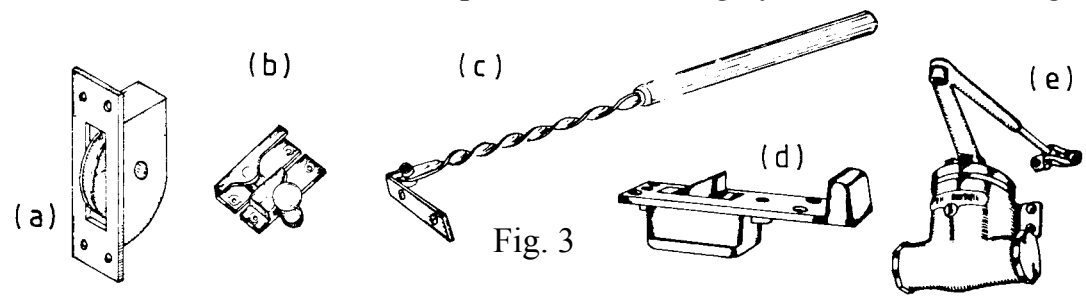
Fig. 2

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

5. (a) State:-  
    (i) the three groups of timber preservative;  
    (ii) a situation to which each is best suited.  
(b) List **FIVE** properties of an ideal preservative.

(ai)	Preservative	(aii)	Situation where best suited
1.			
2.			
3.			
(b)	Properties		
1.			
2.			
3.			
4.			
5.			

6. State the use of each of the five pieces of ironmongery shown below in Fig. 3.



- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_

7. a) List in the table below **THREE** different types of adhesive used in Carpentry and Joinery and state a suitable use for each.

Adhesive	Use
1.	
2.	
3.	

- b) State **THREE** factors which will influence the quality of the bond when using adhesives.
- 1. \_\_\_\_\_
  - 2. \_\_\_\_\_
  - 3. \_\_\_\_\_

8. Sketch the following types of mouldings :-

- (a) Stuck mould;                      (b) Planted mould;                      (c) Bolection mould

9. Calculate the total cost of a consignment of ash 250 mm x 50 mm x 150 mm which is priced at £480 per M3, adding 34% for secondary conversion.

Sub Total =
+ 34% =
Total =

10. Set out geometrically on the line A B in figure 4 below a segmental curve having a rise of 20 millimetres.

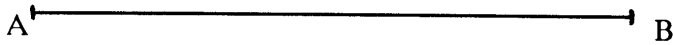
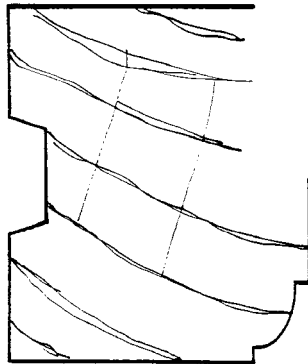


Fig. 4

11. Indicate, by means of single line diagrams, the differences between DEAD, RAKING and FLYING shoring.

12. Complete Figure 5 which shows a horizontal section through the jamb of a traditional window frame, to include the stile of an opening casement. Indicate methods of preventing the movement of moisture into the building and state the sizes of the members.

Fig. 5



13. (a) Sketch either a traditional, or a proprietary counter clamp.  
(b) Describe its function stating where and why it would be used.

(b)

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14. a) State **TWO** methods by which sound may be transmitted.

1.

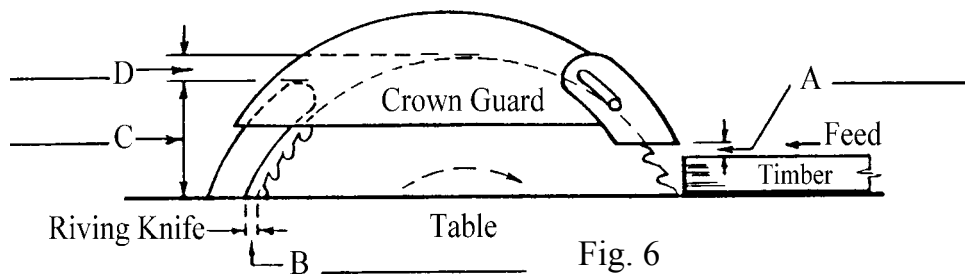
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2.

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b) Sketch a section through a timber first floor showing how it may be insulated to prevent the passage of sound.

15. a) Complete Figure 6 to illustrate the requirements of the current regulations with regard to the correct positions of the Crown Guard and Riving Knife on a circular saw bench.



b) Name the aid that should be used when cutting the final 300 mm of a length of timber on a circular saw bench.

16. Make sketches to illustrate **THREE** of the following :-

(a) furring piece; (b) pitch board; (c) draw-boring; (d) tilting fillet.

17. a) State **THREE** general principles to be observed when designing and producing a joint in timber.

1.

2.

3.

b) Sketch **TWO** of the following :-

i) a lengthening joint; ii) a framed angle joint; iii) a cogged joint.

18. Sketch **THREE** of the following and state where each may be used:

(a) gravity toggle; (b) shrinkage plate; (c) framing anchor; (d) joist hanger.



## **MEMBER Membership**

Member membership of the Institute of Carpenters is available to candidates achieving success in the Institute's Member Examination, also to Teachers/Lectures/Instructors of Woodcrafts possessing a trade background.

Further information and application forms may be obtained from

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