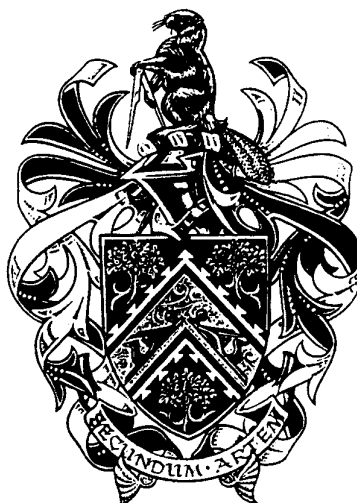


CANDIDATE NAME

CANDIDATE No					
9	9				

# THE INSTITUTE OF CARPENTERS



## PRE-VOCATIONAL CERTIFICATE

### EXAMINATION

**May 26th 1999**

### THEORY PAPER

**TIME ALLOWED ONE AND A HALF HOURS**

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

To obtain full marks Candidates must answer **ALL** questions  
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

1. State the recommended voltage when using electrically powered portable tools on site or in the workshop.

2. State the reason for using a scale ruler when producing construction drawings.

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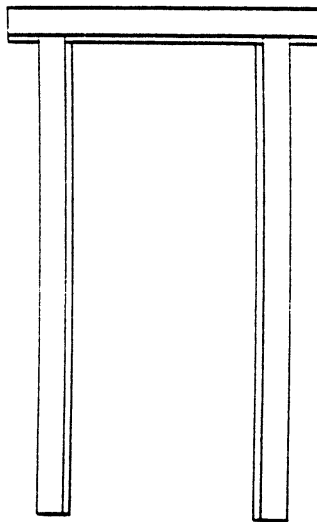
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3. Figure 1 shows an external door frame made from 100 mm by 75 mm timber. Indicate on the drawing how the frame is kept square before it is finally fixed in position.



**Fig. 1**

4. State with reference to suspended timber ground floors, why sleeper walls are honeycombed.

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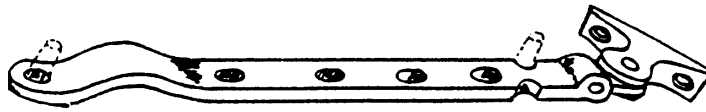
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5. Name the item of hardware shown in Figure 2 and state its use.

**Marks**



**Fig. 2**

Name	
Use	

6. When building a new domestic dwelling

(a) The plans will be drawn up by an

(b) The amount of materials and labour by a

7. Add together the following :-  $2.50 + 0.789 + 61.02$ .

Total

8. Sketch and name **THREE** different types of screw head.

9. Two examples of abbreviations which may be found stamped on plywood sheets are stated below, write the full meaning of each.

(a) W.B.P.

(b) M.R.

a.
b.

10. Sketch a cross-section through a tree trunk and indicate the following parts: - Heartwood; Sapwood; Growth Ring; Pith.

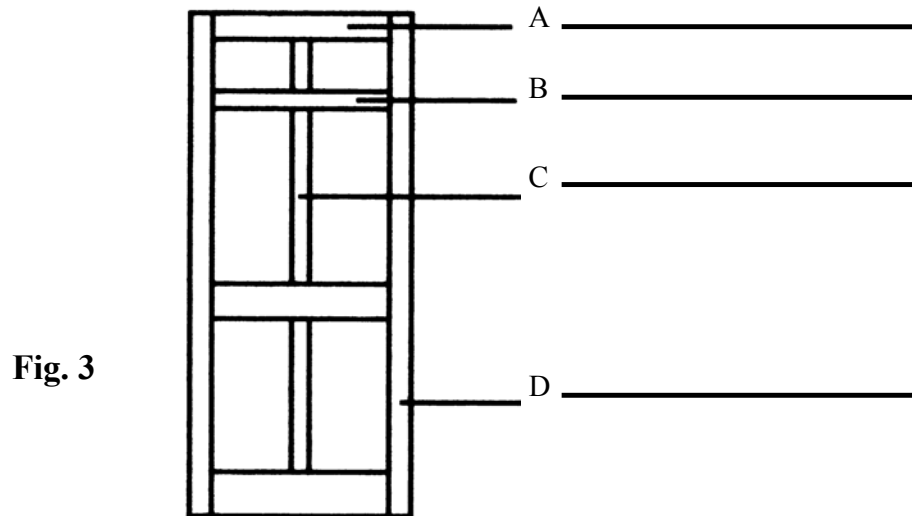
11. State **TWO** uses for each of the following handtools :-

Marking Gauge	1.
	2.
Mortice Gauge	1.
	2.

12. Sketch **TWO** methods of fixing hardwood lippings to cupboard sides which are constructed using 18 mm thick blockboard.

13. Figure 3 illustrates an external six panel door. Name the parts indicated.

**Marks**



14. List the **FOUR** main ingredients used when mixing a batch of concrete.

1.
2.
3.
4.

15. Sketch a smoothing plane cutting iron and indicate the correct angles for :-

(a) Grinding; (b) Sharpening.

16. State **TWO** essential items of safety equipment that should be worn on a building site.

1.
2.

17. Name **FOUR** different types of nails.

1.
2.
3.
4.

18. Figure 4 shows a cross section through a timber floor board. Name the parts indicated.



**Fig. 4**

a.
b.

19. Using line diagrams sketch **THREE** types of pitched roof.

20. State a reason for using each of the following :-

(a) Architrave; (b) Skirting.

a.
b.

21. Concrete can be either **pre-cast** or cast **in-situ**, state **TWO** advantages and **TWO** disadvantages of the **precast method**.

a) Advantages	i) _____
	ii) _____
b) Disadvantages	i) _____
	ii) _____

22. Using notes and sketches, indicate the correct angle a ladder must be placed, before using it.

23. List the hardware/ironmongery that may be fitted to an internal flush door.

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24. State whether an odd or even number of laminates are used in plywood construction and suggest **ONE** reason for this.

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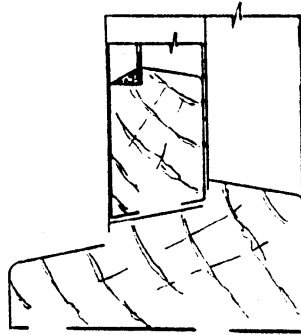
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25. Figure 5 shows an incomplete vertical section through a window cill and sash bottom rail. Complete the drawing to show the position of all weathering grooves and the groove for the window board.



**Fig. 5**

26. Name, with reference to roof construction, the joint used between a rafter and a wallplate.

27. Explain the following terms:

(a) Stud partition; (b) Hardcore.

(a) \_\_\_\_\_

\_\_\_\_\_

(b) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

28. Indicate using notes and sketches the correct method of storing **Plywood** on site.



29. State **TWO** types of screwdrivers to suit different screw heads.

1.

2.

30. Describe with the aid of sketches the following terms concerning timber :-

(a) Waney edge; (b) Shake.

31. In relation to electrically powered portable tools describe what is meant by "Double Insulation"

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32. Sketch a joint which may be used between the head and jamb of a door lining/casing.

33. List **THREE** items of information which need to be known when purchasing nails.

1.

2.

3.

**Marks**

34. State the purpose of horns on a :-

(a) Door Frame; (b) Door.

(a)

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(b)

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35. Sketch, using single line elevations, the following types of window :-

(a) Casement; (b) Splayed bay.

36. Name **TWO** types of corner joint which may be used in drawer construction

1.

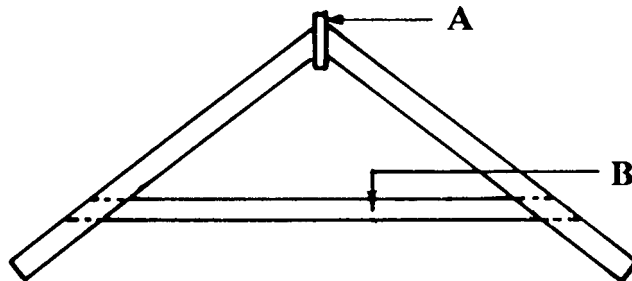
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2.

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37. Figure 6 shows a vertical section through a couple-close roof. Name the members indicated at A and B.

**Fig. 6**



(A)

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(B)

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38. Sketch a method of fixing an external door frame to a wall.

**Note:** The frame is built in as the work proceeds.

**Marks**

39. List **FIVE** items of information which should be stated when ordering wood screws.

1.

2.

3.

4.

5.

40. Describe with notes and sketches **TWO** methods of setting out a right angle on site.

## **STUDENT MEMBERSHIP**

**Student membership of the Institute of Carpenters is available to students studying Carpentry and Joinery, Shopfitting, Wood Machining or Cabinet Making.**

**Further information and application forms may be obtained from  
The Institute of Carpenters, Central Office, 35 Hayworth Road,  
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