

CANDIDATE NAME _____

CANDIDATE No

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THE INSTITUTE OF CARPENTERS



PRE-VOCATIONAL CERTIFICATE

EXAMINATION

21st May 1997

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

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and all USED AND UNUSED PAPERS **MUST BE RETURNED** after the examination

1997 PRE-VOCATIONAL CERTIFICATE

Marks

1. Complete Fig.1. to show the "Through and Through" method of timber conversion.

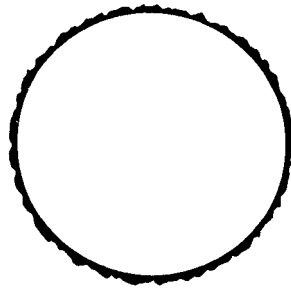


Fig.1

2. Name a type of hinge used to hang a 44 thick softwood external panelled door.

3. Complete Fig.2 to show the :-

i) Radius; ii) Diameter; iii) Chord; iii) Tangent

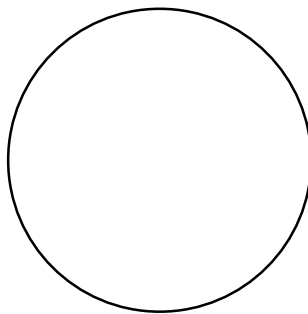


Fig.2

4. State ONE situation where a "Water Bar" may be used.

5. Apart from hardwood and softwood list **FOUR** items which a timber supplier would normally be expected to stock.

1.	2.
3.	4.

6. Describe the function of a smoothing plane back iron.

7. Sketch a casement stay which could be used on the bottom rail of a casement window.

8. Describe the term "Formwork".

9. State the type of work for which an electrically powered percussion drill is best suited.

Marks

10. Sketch details of the type of joint at "A" in Fig.3.

Marks

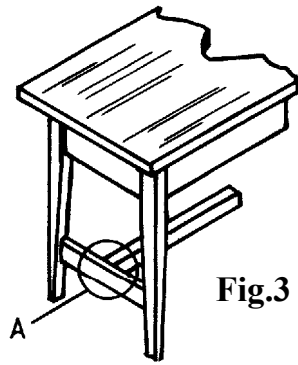


Fig.3

11. State the reason for using a scale rule when producing construction drawings.

12. Fig. 4 shows a half full size horizontal section through the frame, jamb and part of the casement of a stormproof window. Complete the detail to include the casement stile.

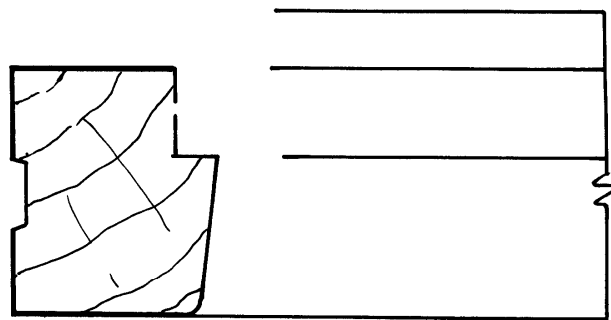


Fig.4

13. State **Four** reasons for seasoning timber before use.

1.

2.

3.

4.

14. Sketch one method of jointing floor boarding other than a butt joint.

Marks

15. State **TWO** precautions to be observed when using a chisel for vertical paring.

1. _____

2. _____

16. Name the parts indicated in fig. 5.

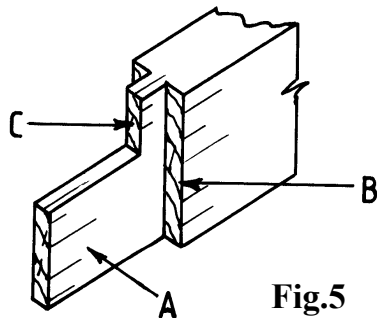


Fig.5

A. _____

B. _____

C. _____

17. Calculate the metre run of skirting required for a room 8.518 m long by 3.164 m wide. Allow for a door opening 900 mm wide and 12.5% cutting and waste in your calculation.

18. State the function of a plinth on a cupboard unit.

19. State **Three** safety checks to be made before using a pair of stepladders.

1. _____
2. _____
3. _____

20. Fig.6 shows a horizontal section through part of a cavity wall and window jamb. Indicate clearly on the drawing the position of;

- (a) the vertical damp proof course. (b) an external mastic fillet.

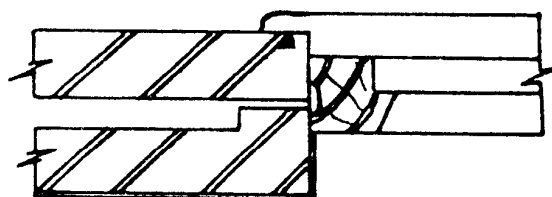


Fig.6

21. Complete the table below by ticking the appropriate box to indicate who would carry out the operations listed.

Operation	Architect	Carpenter	Shopfitter	Machinist
Install a self service counter in a Supermarket				
Machine timber to size, and/or mould/rebate it				
Prepare working drawings				
Design a building				
Fix preformed trussed rafters on a roof				

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

23. State **TWO** situations where a spirit level would be used.

1. _____

2. _____

24. Wood screws are named by the type of head, countersunk being one sketch and name **TWO** others.

1. _____

2. _____

25. Fig. 7 shows a vertical section through a mould box for a small pre-cast concrete lintel. Complete the drawing to illustrate a method used to prevent the sides from spreading when it is filled with concrete.

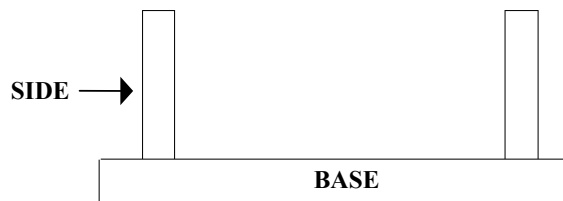


Fig.7

26. State **TWO** reasons why components such as nails and screws should always be stored correctly on site.

1. _____

2. _____

27. Fig. 8 shows the wires to a fused 13 amp plug when the top is removed. State below the colour of sheathing to each wire.

Marks

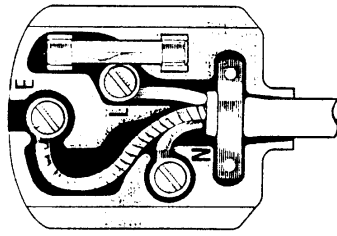


Fig.8

Live

Neutral

Earth

28. State the 1974 Act which describes the responsibility of both the Employer and Employee.

29. State a type of adhesive which may be used when fixing a plastic laminate to a work surface.

30. A timber order valued at £1450.00 is subject to discount of 12.5% and then an addition of a 5% delivery charge. Complete the sum below to include the sub and final totals.

Cost of timber	£1450.00
Discount (-12.5 %)	£ .
Sub Total	£ .
Delivery Charge (+ 5 %)	
Total Cost of Order	£ .

31. Fig. 9 shows a door frame prepared for site delivery. Explain briefly the purpose of each of the temporary components A and B.

Marks

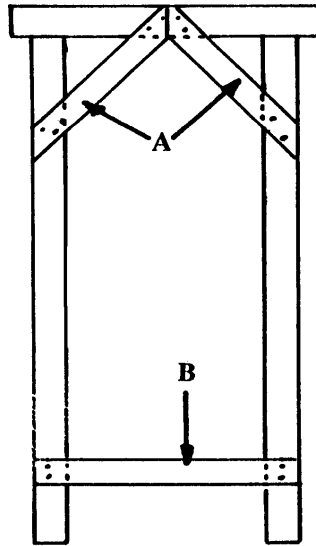


Fig. 9

A.

B.

32. Complete the following statements by inserting the most suitable word from the given list.

Chamfer Grooves Mould Arris Rebates

Pencil Round

- a) When making panelled doors, the plywood panels which are fitted during assembly are inserted into _____ worked around the inside edges of the framework.
- b) When making glazed doors, the glass is fitted into _____ which are worked around the inside edges of the framework.

33. Name the item of ironmongery shown in Fig. 10 and describe a use for it.

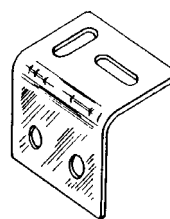


Fig.10

34. Insert the name of the components to be fitted in the following situations.

To cover the gap between the door frame and plasterwork.	
Used to protect the base of a plastered wall.	
A moulded timber, fixed on the wall at approx. 900 mm from the floor.	

35. Name **ONE** English hardwood which displays prominent medullary rays.

36. Name the components indicated at X, Y, and Z on the vertical section through part of a hollow timber ground floor shown in Fig. 11.

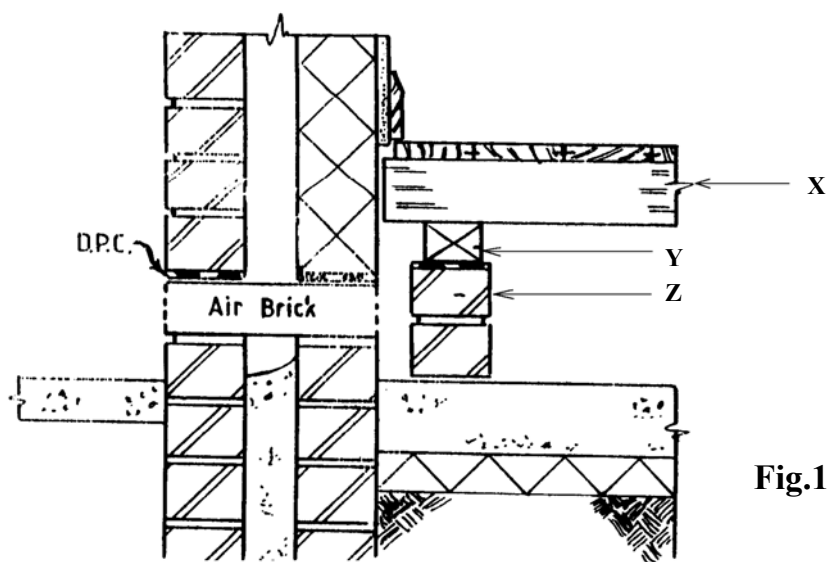


Fig.11

X.

Y.

Z.

37. Name the types of roof illustrated in Fig. 12.

Marks

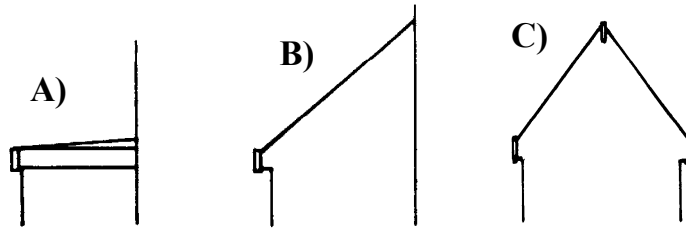


Fig.12

A.

B.

C.

38. List the operations necessary when removing a drill bit from the chuck of an electrically powered drill and replacing it with one of smaller diameter.

39. Fig.13 shows the elevation of a panelled door. Name the parts indicated.

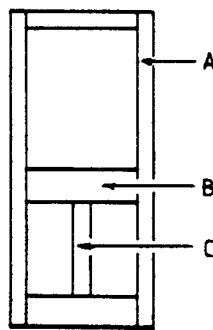


Fig.13

A.

B.

C.

40. Name the type of hand saw which is used to cut across the grain of a timber joist.
