

CANDIDATE NAME

CANDIDATE No						
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The Institute Of Carpenters

FOUNDATION CERTIFICATE

Wednesday May 25th 2005

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 name and number **MUST** be written clearly in
the top right hand corner of this sheet

1. State the name of the cramping device shown in Fig. 1, and state **ONE** situation where it may be used.

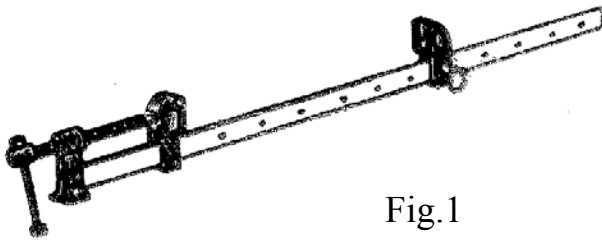


Fig.1

(a)

(b)

2. Name the wood which is close to the pith of a tree and which no longer carries sap.

3. State the colour of the wire that must be connected to the earth pin on an electric plug.

4. Define the term "Formwork".

5. Name the components indicated at "X", "Y" and "Z" on the vertical section through part of a hollow timber ground floor shown in Fig. 2 below.

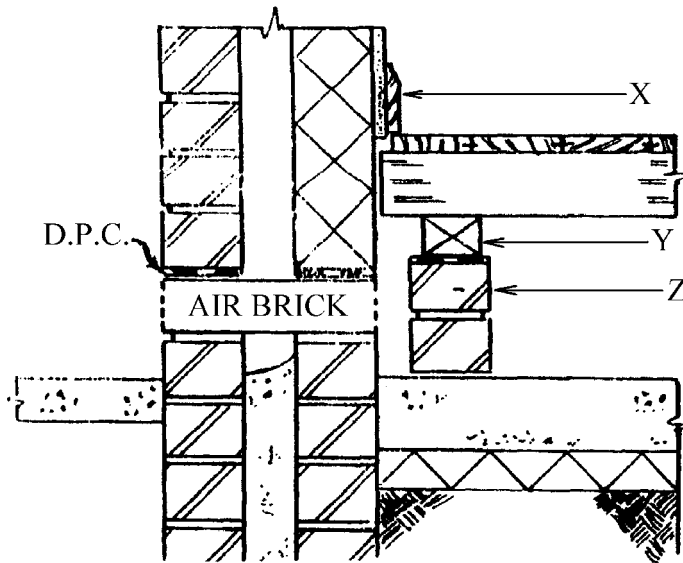


Fig. 2

X
Y
Z

6. Describe **TWO** methods of transferring a datum mark to another point within a room.

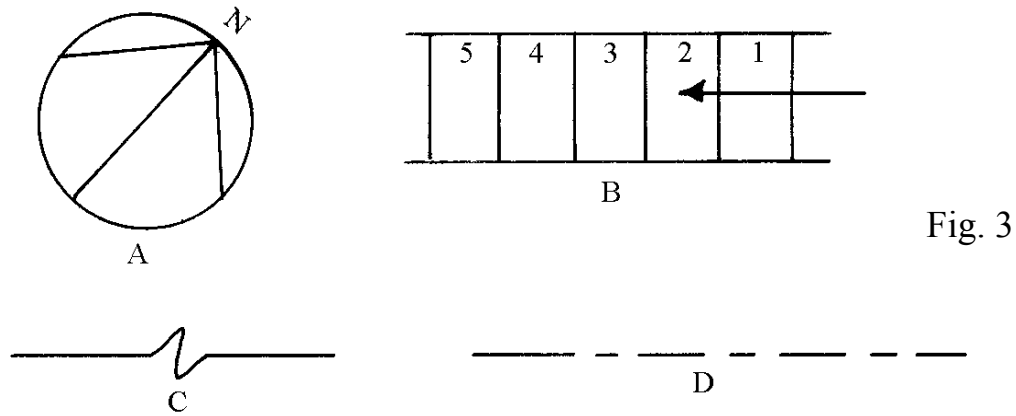
1.

2.

7. State the job title of the person who is responsible on a Building Site for the day to day Planning and Management of the Building Operations.

8. The following lines and symbols are used in construction drawing. Using the information supplied, identify the symbols represented in Fig. 3.

Centre Line; Direction of staircase; Compass point; Broken line.



A
B
C
D

9. State **TWO** examples of second fixing in a bedroom.

1. _____

2. _____

10. State **TWO** methods of applying timber preservative.

1. _____

2. _____

11. Illustrate on Fig. 4 where a dowel would be used to hold the tenon securely in the mortise.

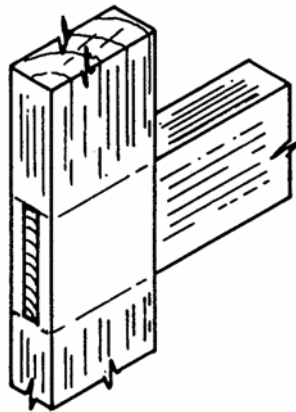


Fig. 4

12. List the sequence of operations when "conditioning" (wetting) hardboard sheets prior to fixing.

13. Using a sketch, show the 'Through and Through' method of timber conversion.

14. (a) Indicate on the end section of the 95 x 45 mm head shown in Fig. 5 the position of the tenon.
 (b) State an approximate thickness that would be suitable for the tenon

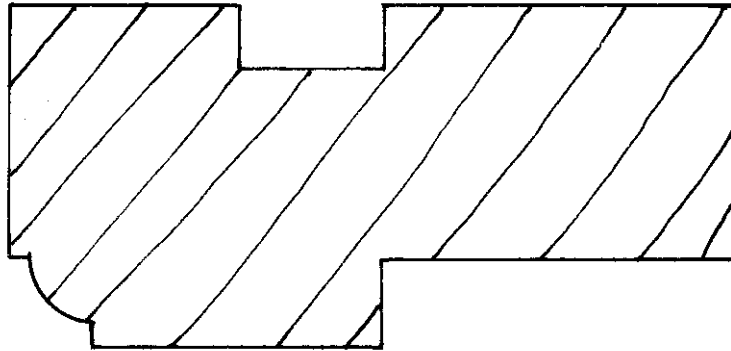


Fig. 5

(b)

15. State **FOUR** conditions that may cause an outbreak of Dry Rot in a domestic house.

1.
2.
3.
4.

16. State the type of screw head shown in Fig. 6.

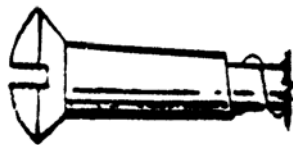


Fig. 6

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17. State **TWO** safety precautions to be observed when using petroleum based adhesives

1.

2.

18. Name the type of lengthening joint shown in Fig. 7.

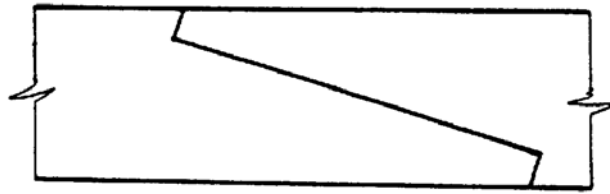


Fig. 7

19. Sketch a wire head nail and state **ONE** situation where it may be used.

20. Name **TWO** types of manufactured board other than plywood stating a use for each.

Manufactured Board	Uses

21. (a) State the meaning of the symbols shown in Fig. 8 which may be found on electrically powered portable tools.



(a)



(b)

Fig. 8

(a)

(b)

22. 25 drawing boards 700 mm x 500 mm are to be manufactured using 16 mm thick plywood. Calculate the total area of plywood required in square metres.

Total area =	
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23. Name the two methods of projection used for each of the components shown in Fig. 9.

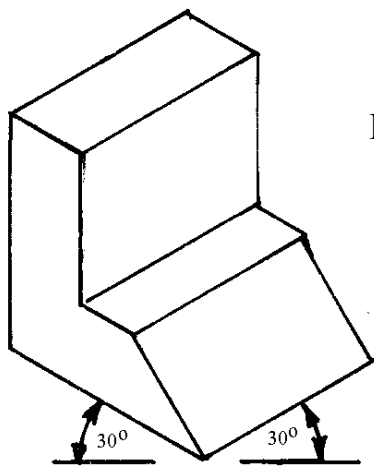
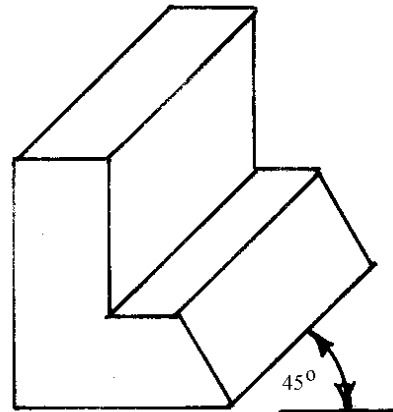


Fig. 9



(a)

(b)

(a)	
(b)	

24. Describe **ONE** job which a Carpenter and Joiner may do during the construction of a house to assist the :-

(a) Plasterer; (b) Electrician.

(a) _____

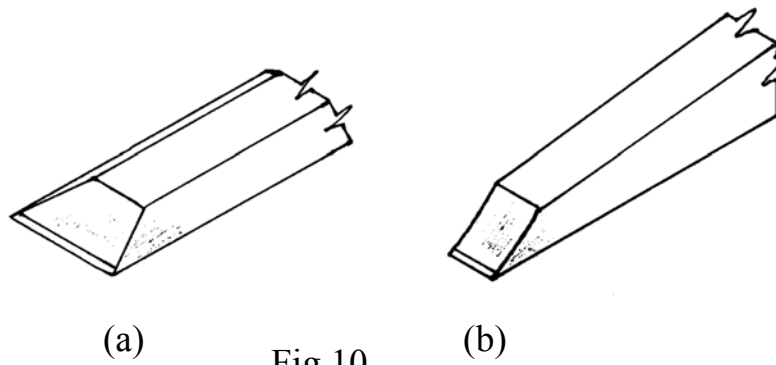
(b) _____

25. State **TWO** situations in building construction where a system of triangulation may be used to advantage.

1. _____

2. _____

26. Name the two types of chisels, the blades of which are shown in Fig.10a and 10b.



(a)	
(b)	

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

28. Excluding portable electric power tools, name **TWO** types of saw used for cutting a curve.

1.	
2.	

29. Name **TWO** timbers which are classified as softwoods.

1.
2.

30. With the aid of single line diagrams illustrate the following types of roof :-
(a) Lean-to; (b) Collar; (c) Couple.

31. Fig. 11 shows a section of a window sill. State the purpose of the grooves at A, B, & C.

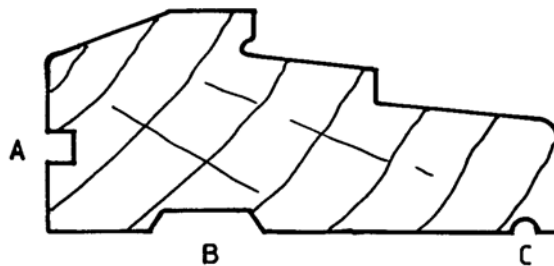


Fig. 11

A
B
C

32. State the main reason why foundations are required for a building.

33. Using a compass and a ruler, construct an octagon within the square shown in Fig.12.

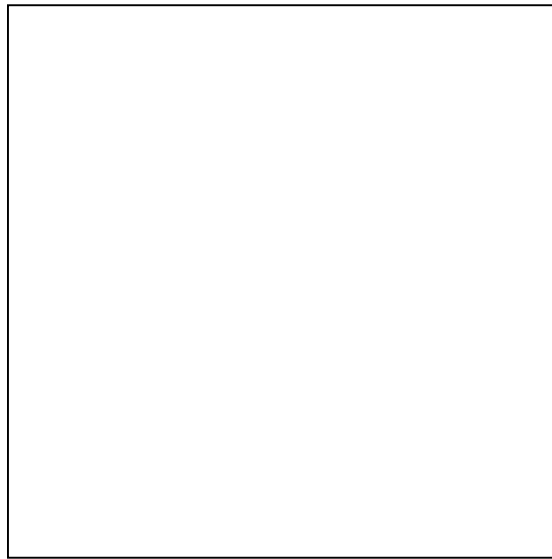


Fig. 12

34. Arrange the following operations in their probable order of construction :-
 (a) Roof; (b) Floors; (c) Finishes; (d) Drainage; (e) Walls;
 (f) Foundations; (g) Internal Services.

Order of construction	
1.	
2.	
3.	
4.	
5.	
6.	
7.	

35. List **FOUR** safety precautions applicable to a joinery workshop or a building site.

1.	
2.	
3.	
4.	

36. When using an oil-stone for sharpening, state reasons for applying thin oil to the stone.

37. Sketch a horizontal/plan section through a Door Lining/Casing fitted to an internal block and plastered wall. Include on the sketch a planted stop and architraves.

38. Complete the following statements in relation to House construction :-

- (a) Exterior walls are supported by the _____
- (b) Stud partitions rest on _____
- (c) The weight of the roof is distributed by the _____

39. Fig. 13 shows a plan of a hipped ended roof. Indicate the hip rafters, ridge, jack rafters, common rafters and wall-plate.

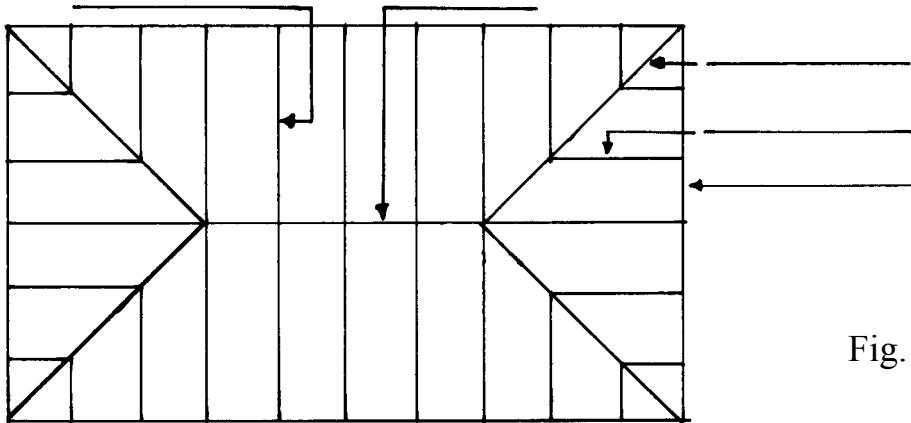


Fig. 13

40. (a) Describe, with the aid of a sketch, a type of shelving that is suitable for use in an airing cupboard.
(b) State why it is suited to this purpose.

(b)
