

CANDIDATE NAME

CANDIDATE No						
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The Institute Of Carpenters

FOUNDATION CERTIFICATE

Wednesday May 24th 2006

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. Describe a situation where each of the following items of ironmongery would be used.

Item	Use
Mortise dead lock	
Casement stay	
Rim lock	
Barrel bolt	

2. Figure 1 illustrates an external six panel door. Name the parts indicated.

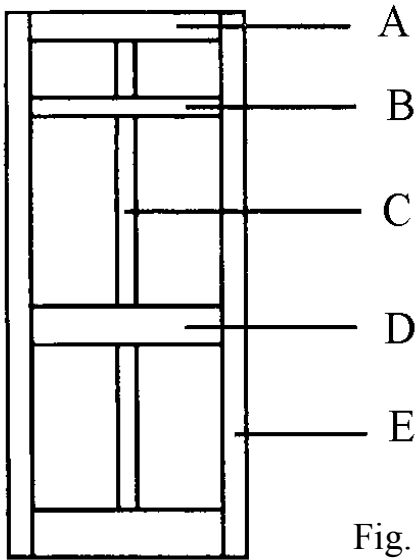


Fig. 1

A	
B	
C	
D	
E	

3. State **FIVE** components associated with a roof.

1	
2	
3	
4	
5	

4. a) Using drawing instruments, construct a 60° angle with both lines measuring 65 mm.

b) Bisect the angle to give 30° .

5. Describe in relation to timber conversion, what is meant by the term “Waney Edge”.

6. Describe **TWO** methods of drying/seasoning timber prior to use.

1.

2.

7. 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% for cutting and waste in your calculation.

Total run of skirting =	
- Door opening	
+ 12.5% =	
Final total run =	

8. Outline the sequence of operations involved in grinding and sharpening the blade for a jack plane.

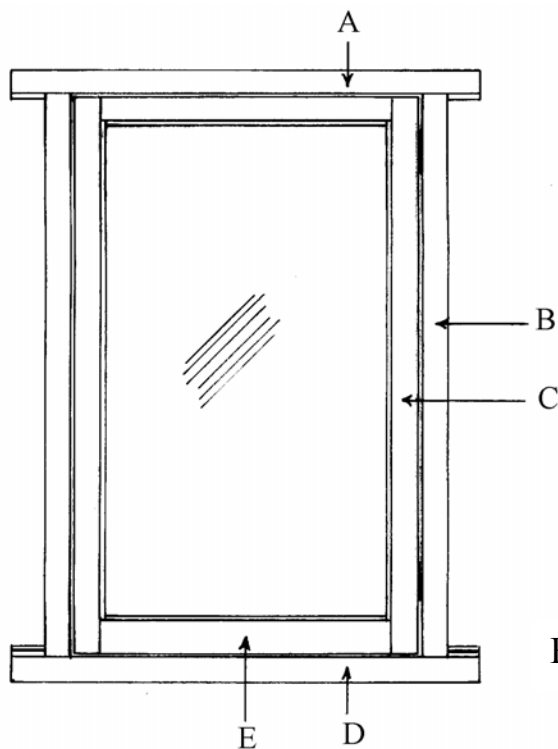
9. Describe using sketches, the correct proportions/sizes for a haunched tenon.

10. Describe with the aid of a sketch a method which may be used to support a shelf fitted between plastered brick walls.

11. Illustrate with sketches **TWO** natural timber growth defects.

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

13. Figure 2 shows a front elevation of a traditional casement window. Name the parts indicated.



A	
B	
C	
D	
E	

Fig. 2

14. a) Describe the meaning of “Pre-Cast” concrete.

- b) Define the term "Striking" with reference to formwork.

15. Using a compass and a ruler, construct a **HEXAGON** within the circle shown in figure 3.

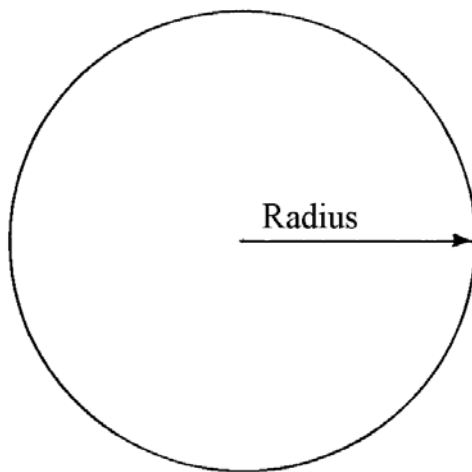


Fig. 3

16. State **THREE** safety checks to be made before using a pair of stepladders.

1.

2.

3.

17. Using notes and sketches describe the use of a "Plumb-bob".

18. Briefly explain the following terms used in building construction:-

i) stud partition; ii) hardcore; iii) damp proof course.

i)

ii)

iii)

19. State **TWO** main causes of Dry Rot.

1.

2.

20. When removing a nail with a pair of pincers, state the necessary precaution to prevent damage to the wood.

21. (a) State **ONE** situation where a "Water Bar" may be used.

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- (b) Describe the purpose of using a "Water Bar".

22. Name **TWO** treatments which may be given to ironmongery to prevent corrosion.

1.

--

2.

--

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

W.B.P.	
M.R.	

24. Name the type of portable power hand tool that would be best suited to prepare a joinery item for a paint finish.

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25. List **THREE** timber components that make up a door lining.

1.	
2.	
3.	

26. Sketch and name a method used to strengthen and prevent twisting of the joists in upper floor timber construction.

27. Figure 4 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.

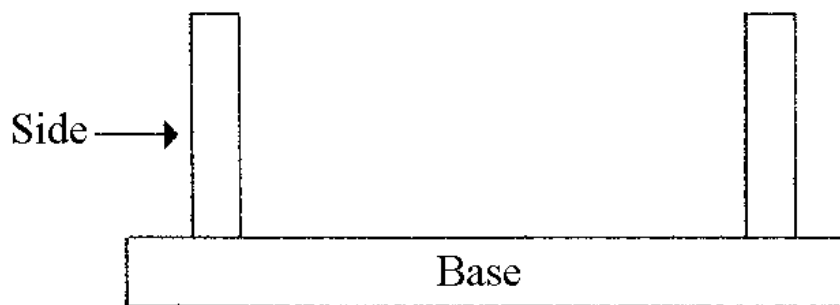


Fig. 4

28. Using notes and sketches, describe **TWO** methods of fixing a skirting board in position at the floor and wall junction.

29. With reference to geometrical shapes, name a figure that has **EIGHT** sides.

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

1.

2.

31. List **TWO** professions involved in the design and construction of a building and state **ONE** duty of each.

Profession	Duties
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

32. Name an adhesive suitable for each of the following:-

Situation	Type of adhesive
Fixing plastic laminate to worktop	<input type="text"/>
General internal joinery work	<input type="text"/>

33. Name the type of joint that is similar to a mortise and tenon, but instead of the sides being removed to form the tenon, the centre is removed to form a slot.

34. A damp-proof course (DPC) is important in building construction. Illustrate with notes and sketches, **ONE** situation where it would be included.
35. a) Sketch a cross section through **TWO** of the following types of chisels.
i) mortise; ii) bevelled edge; iii) firmer.

b) State **ONE** use for each of your choices.

Type of chisel	One use

36. When working in a Joinery workshop, personal protective clothing (PPE) must be worn. List **FOUR** types of accident which could occur through ignoring this rule.

1.	
2.	
3.	
4.	

37. Sketch **TWO** of the following types of nails:-
i) wire nail; ii) oval nail; iii) floor brad.

38. Illustrate using figure 5 below, **TWO** methods of converting timber.

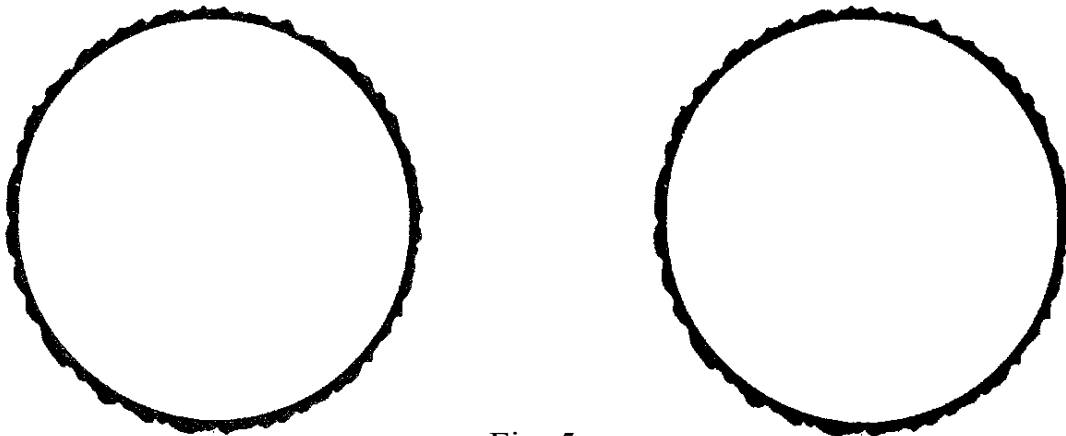


Fig. 5

39. State the recommended mains voltage to be used on building sites for hand power tools and how this is achieved.

Recommended voltage	Method used to lower voltage

40. Using sketches, describe the following that may be applied to the edges of timber doors..

i) ovolo; ii) chamfer; iii) groove; iv) rebate.