CANDIDATE No. | 0 | 7 | I | | | | |

The Institute Of Carpenters

INTERMEDIATE EXAMINATION

Tuesday June 12th 2007

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 20** questions
All questions 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

Name:																		
Date of Birth:							**Region**											
Occupation:															**Age**			

Marks

1. A ladder is to be used to gain access to a flat roof which is 3.8 metres above ground level. State the following:-

(a) The precautions necessary for the ladder at the top and bottom ends;

(b) How much the ladder must extend above the roof;

(c) The correct angle of the ladder.

2. Sketch below, how a mould box for a concrete sill would be constructed using the details shown in figure 1.

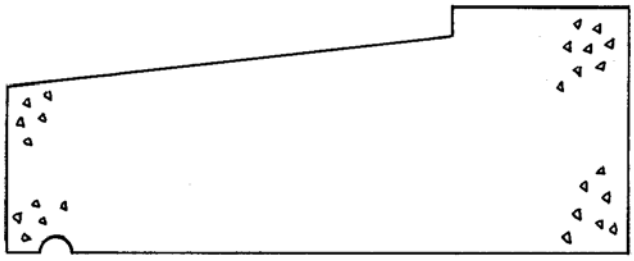

Fig. 1

Marks

3. Complete the table below:-

Name of Timber	Country of Origin	One use
Oak		
Western Red Cedar		
Ash		
Beech		
Douglas Fir		

4. (a) Using notes and sketches, indicate the positions of the riving knife and guard on a **portable** electric circular saw.

(b) Briefly describe the purpose of each.

Riving Knife	
Guard	

Marks

5. Wet rot and dry rot are two types of timber decay. Describe how they can be recognised on site.

6. (a) Using notes and sketches describe where a haunched mortise and tenon joint would be used.

(b) State the proportions used when forming the joint with regards to:-

Width of haunch	
Thickness of tenon	
Depth of haunch	

7. Calculate the floor area for a room which is 5.3m long x 4.4m wide adding 12% for waste.

Area of room =	
+ 12% =	
Total area =	

Marks

8. With the aid of sketches describe **THREE** defects which may occur when timber is seasoned.

9. Figure 2 shows the vertical section through an internal door opening to a kitchen. Complete the drawing to show the methods used to suspend and guide the sliding door.

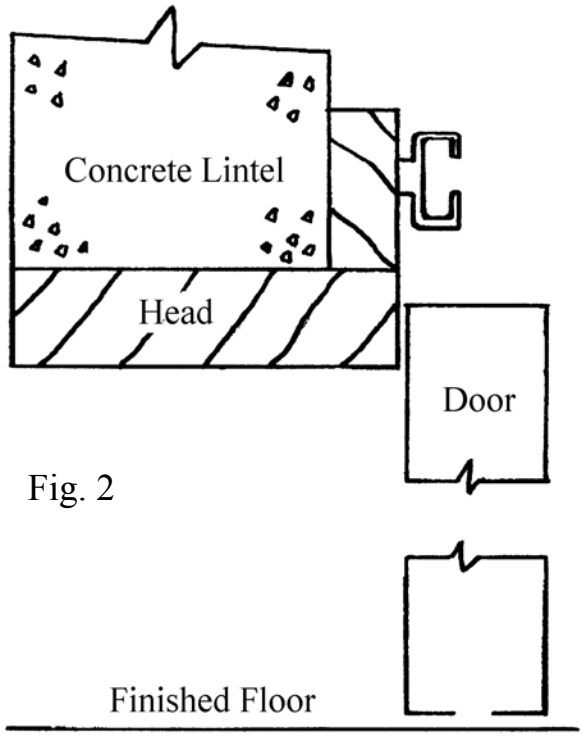

Fig. 2

Marks

10. (a) Describe **TWO** methods of setting out a right angle on a building site.

1.

2.

(b) State **ONE** method of checking a spirit level for accuracy.

11. Complete Figure 3 to show a vertical section through the **flush eaves** of a pitched roof to include a fascia board, **30°** rafter and ceiling joist.

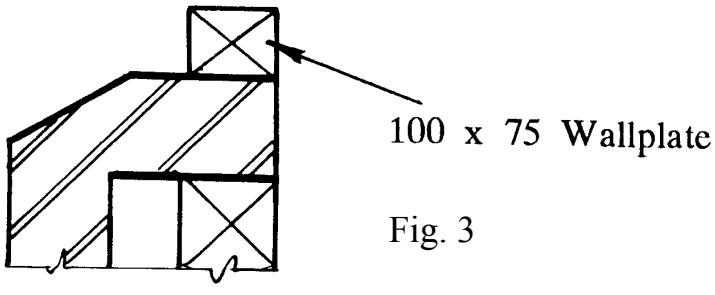

Fig. 3

Marks

12. (a) Using a simple line diagram, sketch a rear view elevation of a ledged, braced and battened door.

(b) Indicate the positions and types of ironmongery required to hang this door, i.e. locks, bolts hinges etc.

13. Prepare a cutting list for **TWENTY** hardwood door frames, as shown in Figure 4.

NOTE: Add on 10 mm to the length for each tenon, also 50 mm for each of the horns.

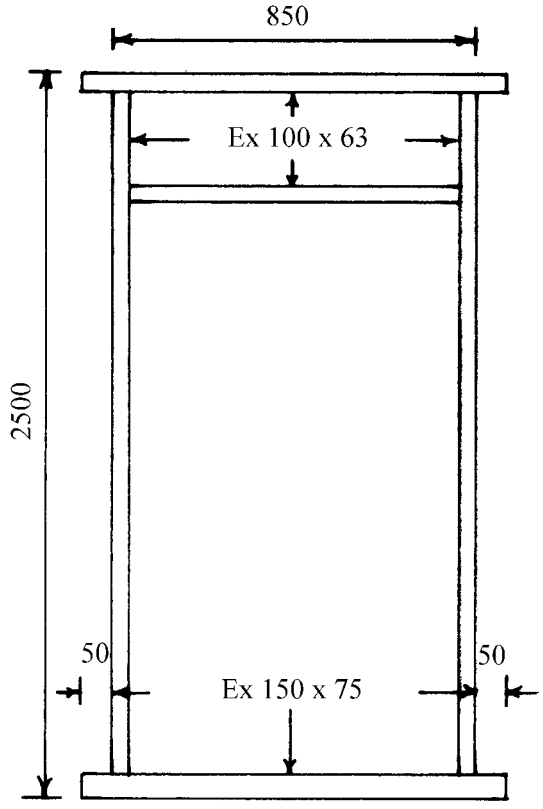

Fig. 4

			Sawn Size		Fin Size		
No of Pieces	Item	Length	W	T	W	T	Remarks

Marks

14. In relation to using adhesives, describe the following terms:-

Shelf life	
Pot life	

15. (a) Describe the use of a scale rule;

(b) State the true length of a 15 mm long line that has been drawn to a scale of 1:20;

(c) Complete the drawing at Figure 5 to form the outline for a **segmental** arch.

Fig. 5

Marks

16. Figure 6 shows the part plan of a traditional sliding casement window. Name the parts indicated.

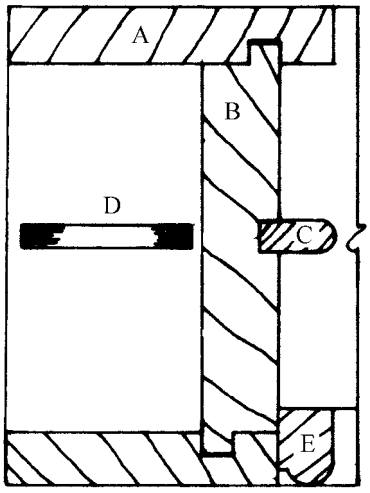

Fig. 6

A
B
C
D
E

17. Sketch part of a vertical section through a stairwell to show the following:-

(a) Floor trimmer; (b) Nosing; (c) Apron lining;

(d) Ceiling finish; (e) Floor covering; (f) Baluster.

Marks

18. Using sketches and notes, describe **THREE** methods of edge jointing traditional softwood flooring.

19. State a type of personal protective equipment which should be used in each of the following situations:-

Situation	Protective Equipment
Cutting M.D.F. (medium density fibreboard)	
Loading timber into stores	
Unloading glass panes	
Using a portable belt-sander	

20. Sketch **TWO** of the following details:-

(a) A horizontal section through a door lining and part flush door;

(b) A horizontal section through a door frame and part flush door;

(c) The front elevation of a storey frame.