The Institute Of Carpenters

ADVANCED CRAFT EXAMINATION

Wednesday June 13th 2007

THEORY PAPER A

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

Candidates are advised **NOT** to spend not more than **1 HOUR** on this section.
Total time allowed for both papers A and B is **THREE HOURS**

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

Name:
Date of Birth: Region
Occupation: Age

1.   Figure 1 shows the graphical representation of concrete. Complete the boxes for the remaining materials.

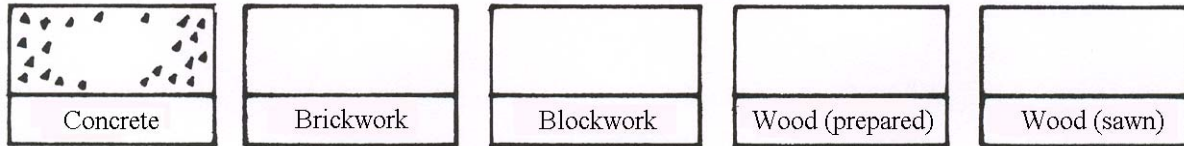| Concrete | Brickwork | Blockwork | Wood (prepared) | Wood (sawn) |

Fig. 1

2.   Figure 2 shows a side elevation of a newel post and string. Illustrate on the drawing to indicate how the string is jointed to the newel post.
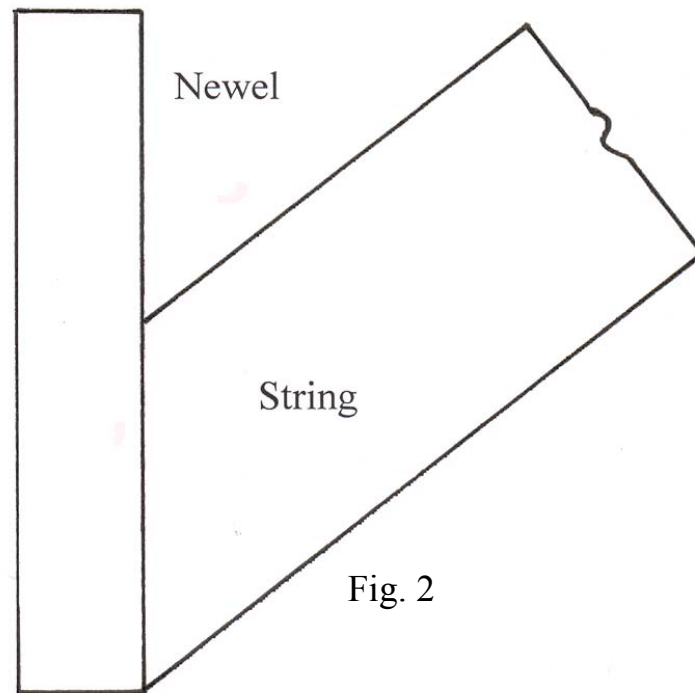
Newel

String

Fig. 2

3.   Calculate the cost of the following batch of carcassing timbers:-

10 Pieces 3000 x 225 x 50 @ £3.68/m;

10 pieces 2700 x 150 x 75 @ £3.05/m;

20 Pieces 4200 x 100 x 75 @ £2.04/m.

Add 17.5% VAT.

Sub total =	
+ 17.5% VAT =	
Final cost =	

4. Sketch details of the following, showing all finishes and indicate the current regulations:-

   (a) Open sprocket eaves;

   (b) Closed eaves.

5. Complete the table below to describe the use of **FOUR** of the scaffolding components listed.

Component	Use
Base plates	
Standards	
Ledgers	
Braces	
Transoms	
Working platforms	

6. Sketch **THREE** of the following to **illustrate a use** for each:-

(a) Shrinkage plate; (b) Metal flooring clip;

(c) Joist hanger; (d) Framing anchor.

7. List **FIVE** priorities for a healthy working environment in either a joinery workshop or on a construction site.

1.	
2.	
3.	
4.	
5.	

8. (a) State **TWO** reasons for producing window or door schedules.

1.

2.

(b) State the scales used for drawings associated with these schedules.

9.   Complete Figure 3 which shows a horizontal section through the jamb of a
     traditional window frame, to include the stile of an opening casement.
     Indicate methods of preventing the movement of moisture into the building
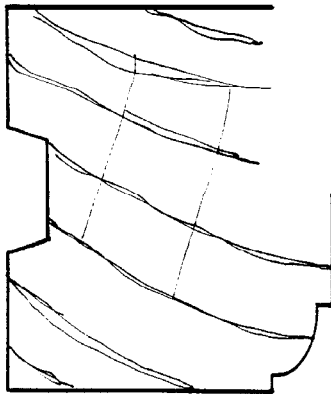   and state the sizes of the members.

Fig. 3

10. List, in order of use, the woodworking machines involved in the
     manufacture of a six panelled door stating the function of each machine.

Machine	Function

11. Describe the purpose and function of the following Contract Documents :-
     (a) Bill of Quantities;   (b) Specifications;   (c) Schedules.

(a.)
(b.)
(c.)

12. State **TWO** different methods of applying a timber preservative and compare by stating **TWO** advantages and **TWO** disadvantages of each method.

Method	Advantages	Disadvantages

13. Indicate, by means of single line diagrams, the differences between DEAD, RAKING and FLYING shoring.

14. Sketch **TWO** methods of stiffening/strutting an upper timber floor to reduce deflection.

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15. State **FIVE** safety precautions to be observed in the use of portable powered hand tools in the workshop or on the site.

1.
2.
3.
4.
5.

16. (a) List in the table below **THREE** different types of adhesive used in Carpentry and Joinery and state a suitable use for each.

Adhesive	Use

b) State **THREE** factors which will influence the quality of the bond when using adhesives.

1.
2.
3.

(c) Define, when related to adhesives, the terms:-

(i) Shelf life;   (ii) Pot life.

i)
ii)

6

17. (a) List the sequence of operations when drawboring a mortise and tenon
     joint.

   (b) State a practical application of this technique.

18. Sketch **TWO** different methods of securing a solid timber counter top to its
     framework, to include allowance for timber movement.