



The Institute Of Carpenters

ADVANCED CRAFT EXAMINATION

Wednesday June 14th 2006

THEORY PAPER B

TIME ALLOWED THREE HOURS

Total Time Allowed For Papers A and B

THREE HOURS

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

Section B: Consists of **8** questions only **FOUR** of which are to be answered.
All questions carry equal marks.

Each answer **MUST** be submitted on a separate sheet of paper, and your candidate number **MUST** be written in the top right hand corner of **EACH** answer sheet in the box provided.

Advanced Craft Examination

Associated Vocational Technology (Section B)

(Answer FOUR questions only)

1. A pair of hardwood double action vestibule doors are to be fitted to the entrance of a bank.
 - (a) Sketch **TWO** types of ironmongery which may be used to hang the doors and describe, with the aid of sketches, how each type of device may be adjusted for tension after fitting.
 - (b) Sketch a horizontal section through the door hanging stile and frame to show the preparations required to receive each type of hanging device chosen.
 - (c) Describe, with the aid of sketches, a method of overcoming the problems associated with fitting the frame to uneven wall and ceiling surfaces.

2.
 - (a) Describe with the aid of sketches how the following items would be stored after delivery to a building site :-
 - (i) Upper floor joists;
 - (ii) Roof trusses;
 - (iii) Door frames;
 - (iv) Pre-finished internal doors.

 - (b) Protected after fixing
 - (i) Treads and risers
 - (ii) Handrail and newel posts
 - (iii) Formwork in columns and staircase.

3. Details of a free-standing domestic fitment required for the catering department of a college are shown in figure 1.

The 32mm thick worktop of the fitment is to be covered with plastic laminate and to have drawers and sliding doors under as indicated.

For hygienic reasons, flush surfaces are required throughout.

- (a) Draw to a scale of 1:5 a vertical cross section A - A through the fitment to show full constructional details.
- (b) Sketch a broken vertical section through the track and runners suitable for the sliding doors.

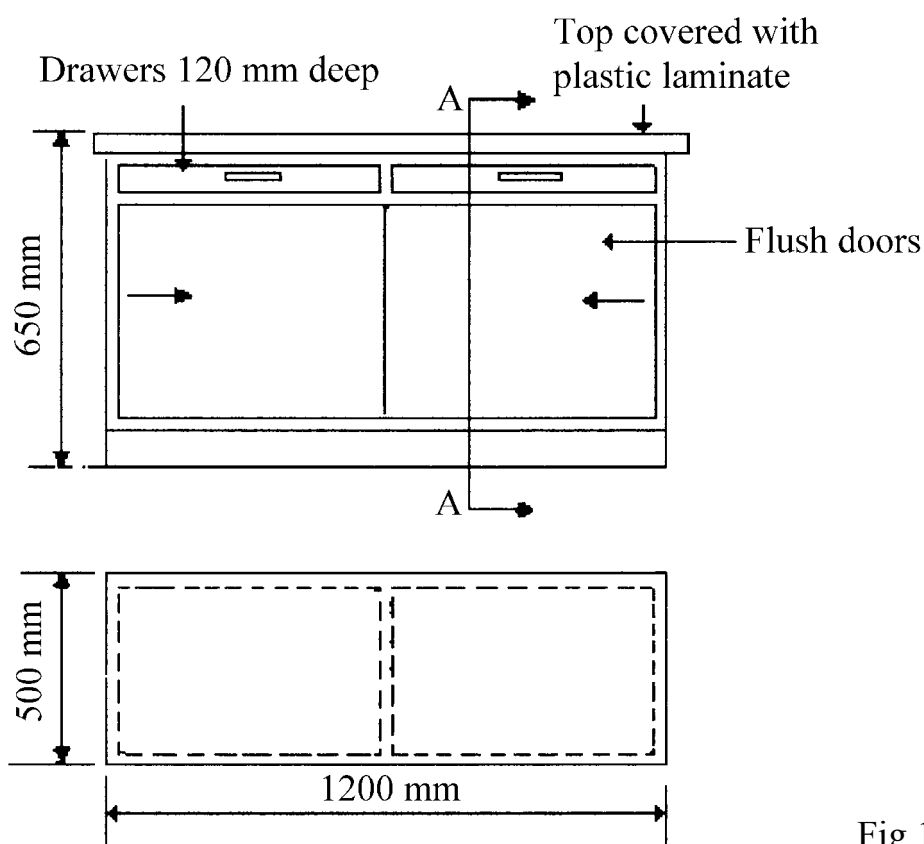


Fig.1

4. Sketch, and indicate the differences between, the following joints :-

- (a) A haunched tenon and a franked tenon.
- (b) A tenon shoulder which is scribed by :-
- (i) Hand;
 - (ii) Machine.

5. An exterior timber framed canopy is to be constructed over the entrance to a block of flats. All fixings to the wall are to be contained within the thickness of the canopy.
- (a) Using the information contained in figure 2, describe with the aid of sketches
- A method of framing the canopy in softwood;
 - How the structure may be anchored to the wall.
- (b) To a scale of 1:20 draw the true shapes to which exterior grade plywood is required to be cut for panels 'A' and 'B'.

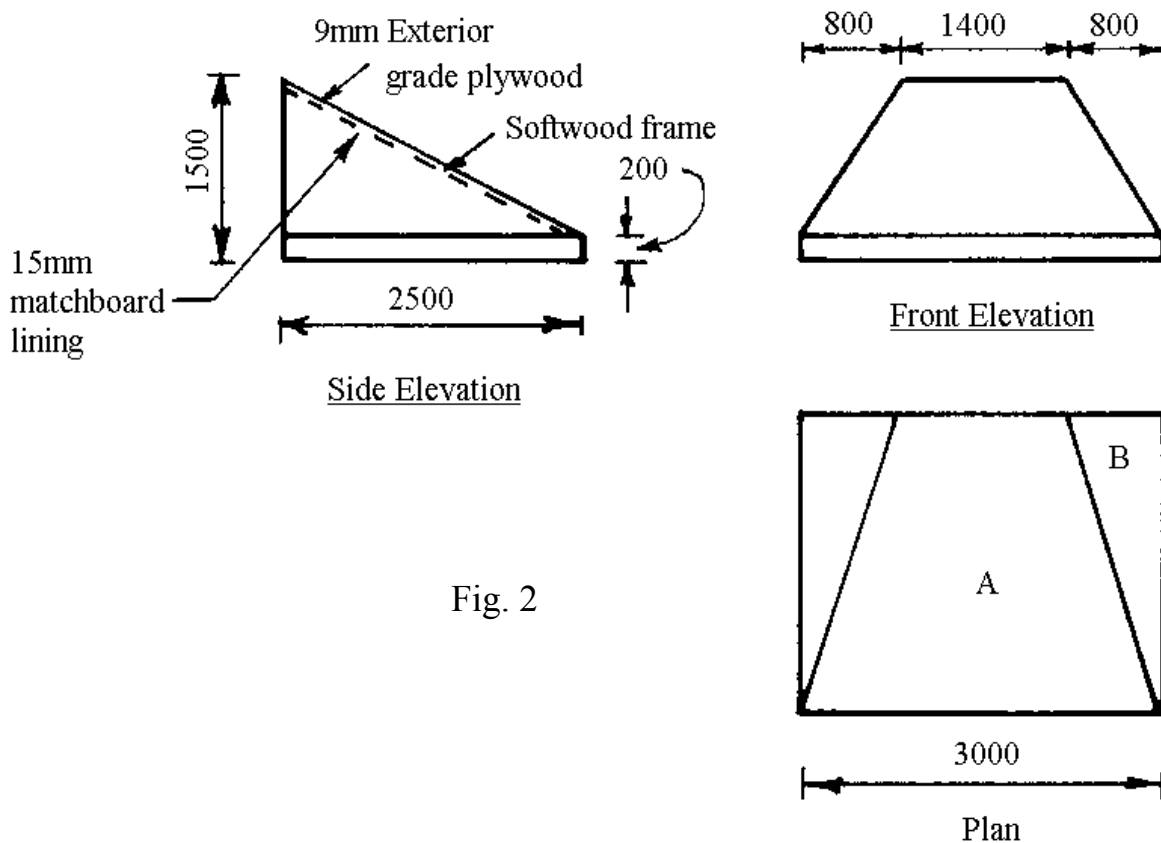


Fig. 2

6. Specify the type of material and describe with aid of sketches a method of fixing which may be used in each of the following situations :-
- Glass in a metal framed shop-front;
 - Glazing to an interior screen in a public building;
 - Laminated plastic faced panel encasing concrete columns;
 - Mirrors fixed to walls in a hotel cloakroom;
 - Hardwood lippings to reception counter tops.

7. The following is an extract from a timber merchant's price list on which a trade discount of 12.5% is allowed for all items.

PRICE LIST:

50 x 200 mm Sawn Softwood unsorted 3rds. £392.00 per m³;

50 x 200 mm Sawn Softwood 5ths. £230.00 per m³;

0.600 x 2.400 m x 18 mm thick flooring grade particle board. £6.22 per sheet.

From the prices quoted determine the total cost of the following order submitted to the merchant:

ORDER:

- (a) 170 metres x 50 x 200 mm Sawn Softwood (carcasing quality).
(b) The number of sheets of flooring grade particle board required to cover the floor area shown in figure 3.

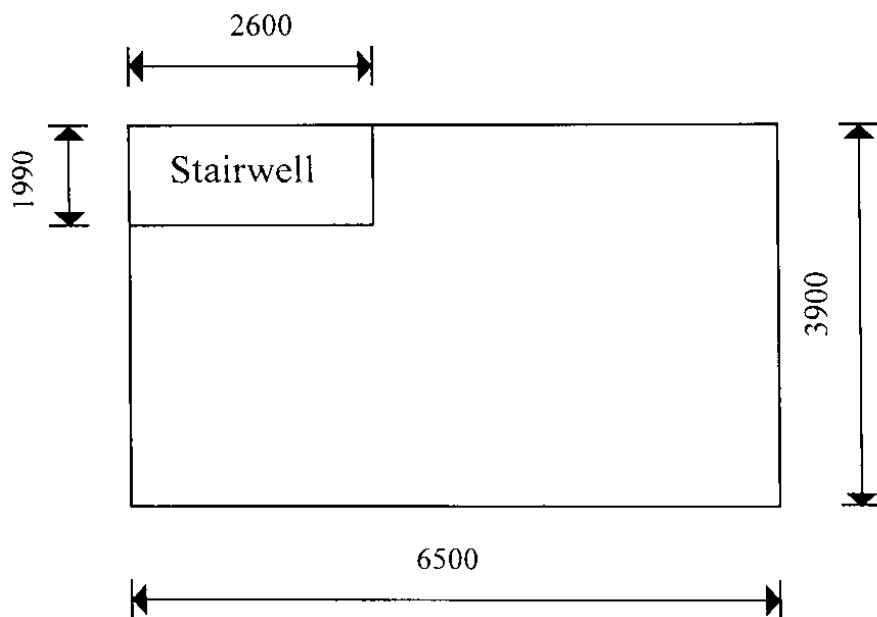


Fig. 3

8. The outline plan of a 13 riser, open newel stair which is required for a private dwelling is shown in figure 4.

The Storey Height is 2340, the newel posts are Ex 100 x 100, the strings Ex 38 thick, the Treads Ex 32, and the Risers are Ex 22 thick.

- (a) Calculate a suitable step rise and going to comply with current Building Regulations.
- (b) Draw, to a scale of 1:5, a vertical section at A-A to include the bottom three steps and a method of joining the string to the newel post.
- (c) Draw, to a scale of 1:2, the four faces at the lower portion of newel post "B" to show the housing positions for the tread and risers and mortise positions to receive the string.

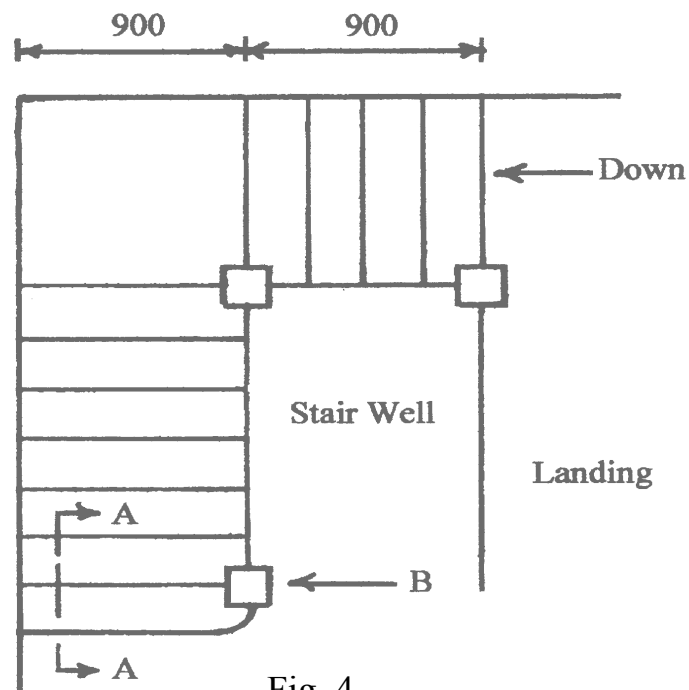


Fig. 4

Institute Membership

Member membership of the Institute of Carpenters is available to candidates achieving success in the Institute's Advanced Craft Examination, also to Teachers/Lectures/Instructors of Woodcrafts possessing a trade background.

Further information and application forms may be obtained from

Institute of Carpenters, Central Office, 35 Hayworth Road,

Sandiacre, Nottingham, NG10 5LL.

Tel. 0115 949 0641 Fax 0115 949 1664

© Institute of Carpenters June 2006
A Company Limited by Guarantee - Reg. No. 76125

www.iocexams.co.uk