

THE INSTITUTE OF CARPENTERS



Fellowship Examination

9th - 13th June 1997

Paper 1: CARPENTRY PRACTICE

TIME ALLOWED: THREE HOURS

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

To obtain full marks Candidates must answer SIX questions. The answer to each question should be submitted on a separate sheet of paper.

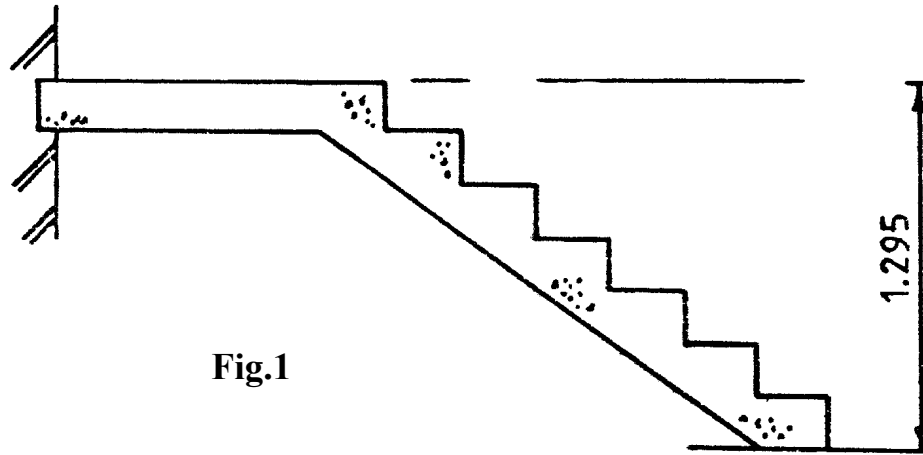
The question number and your candidate number must be clearly written in the top right-hand corner of each answer sheet.

1. a) Sketch and describe:
 - i) a Putlog Scaffold,
 - ii) an Independent Scaffold.b) Name the Statutory documents which cover the erection and safe use of scaffolding on a construction site.

2. a) Describe in detail the action to be taken to ensure an adequate supply of electricity which will enable a series of powered hand tools to be used in complete safety on a small housing estate situated some distance away from the main supply.
b) List the types of modern powered hand tools which may be used to speed up the carpentry work in semi-detached chalet bungalows and indicate specific operations for each tool listed.

3. A carpenter is required to service and co-operate with other trades in each of the following types of contract :-
 - i) A laboratory building,
 - ii) Traditional panelling in a new Town Hall.a) Select ONE of the above contracts and describe in detail the work involved and the information required to achieve maximum efficiency.
b) Explain how the following would facilitate the conduct of both contracts :-
 - i) Programme
 - ii) Site meetings,
 - iii) Carpentry and Joinery schedules.

4. Figure 1 shows a cast in-situ reinforced concrete landing and stair.
- Sketch the timber formwork required to support the concrete showing all construction details.
 - List the sequence of operations involved in the erection of the formwork including time allocation and scheduling of work.



5. A timber framed building is required to meet a certain fire resistance, also thermal and sound insulation standards. The building has suspended timber ground floors and brick external cladding. Sketch details of DPC., thermal and sound insulation, moisture and vapour barriers.
- State the materials recommended and include the fire precautions necessary at :-
- ground floor and outer wall,
 - outer wall and roof,
 - window head and outer wall.
6. A site is allocated for a detached villa which is centrally sited on a plot to meet Planning Authority requirements. You are requested to set-out the building and produce levelling points for the foundations from a given datum.
- List suitable optical or non-optical setting out equipment required to locate the foundations and state a sequence of operations using the items selected.
 - Explain with the aid of line diagrams TWO methods which may be used to establish the foundation levels.

7. A city centre site requires a hoarding and gantry to be erected for the protection of the public and temporary Site Office accommodation to be positioned above the public footpath.
- a) Sketch details through the gantry, hoarding, footpath and road, to include all the safety features necessary for protection of the public.
 - b) Describe any relevant regulations and state the authorities or parties to be notified prior to, and after commencement of the above contract.
8. A number of houses are to be roofed using trussed rafters and hips.
With sketches :-
- (a) Describe the construction of the rafters to comply with the relevant B.S.S. and C.P.
 - (b) Describe the erection of the roof with full safety provisions.