



C14-C-307

4231

BOARD DIPLOMA EXAMINATION, (C-14)

OCT/NOV—2015

DCE—THIRD SEMESTER EXAMINATION

CIVIL ENGINEERING DRAWING—I

Time : 3 hours]

[Total Marks : 60

PART—A

4×5=20

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Any missing data may be assumed suitably.

1. Draw the conventional signs for the following items :

(a) Stone

(b) Steel

(c) European water closet

(d) Ceiling fan

2. Draw the elevation of the fully panelled door with size 11 DT 20 and assume any other data necessary.

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3. State the min area and min width for the following rooms as per the building bye laws :

- (a) Kitchen-cum-dining
- (b) Bedroom
- (c) Bathrooms and water closets
- (d) Staircase

4. Refer the following line diagram and calculate :

- (a) Total internal and external dimensions of plan
- (b) Built-up area

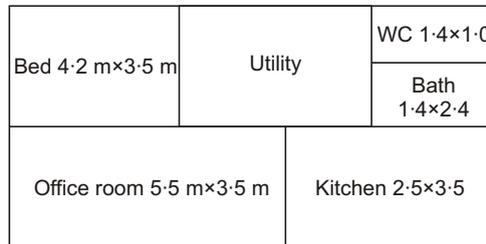


Fig. 1

Note : All walls : 200 mm thick, Wall between WC bath : 100 mm thick

5. The following line diagram shows the plan of a one bedroom residential building (load bearing structure). Prepare a working drawing (marking) for excavation of foundation :

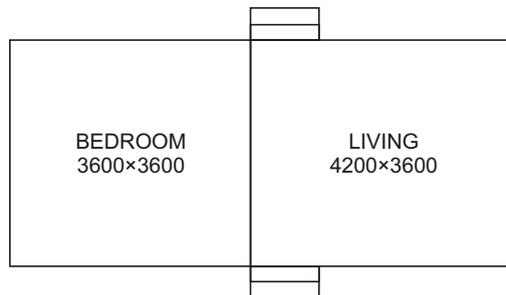


Fig. 2

Note : All the walls 200 mm thick, are taken to a depth of 900 mm below ground level and founded on CC bed 700 mm wide.

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PART—B

20×2=40

Instructions : (1) Answer **all** questions.

(2) The drawing must be to the scale.

(3) Any missing data may be assumed suitably.

6. The sketch shows the line plan of 'a two-bedroom house with RCC roof'. The dimensions noted therein indicate the clear dimensions between the inside walls. The specifications are given below :

Foundation :

Foundation shall be of CC 1:4:8 mix, 1000 mm wide and 300 mm thick laid at 1100 mm below GL for all main walls and verandah retaining wall. It consists of two footings of size 700 mm × 400 mm and 500 mm × 400 mm in CM 1:6.

Basement :

The basement will be in brickwork in CM 1:5. 300 mm wide and 600 mm thick above GL. A damp proof course in CM 1:3, 20 mm thick will be provided for all walls.

Superstructure :

All main walls will be in brickwork in CM 1:5, 200 mm thick. The inner partition walls in toilet will be 100 mm thick. The height of all the walls will be 3000 mm above floor level.

Roofing :

The roofing will be RCC 1:2:4 mix, 120 mm thick flat slab. Verandah slab will be of RCC 1:2:4 mix, 100 mm thick at a height of 2600 mm from verandah floor level. A weathering course in brick jelly line concrete plastered with mortar 1:5:9 mix, 75 mm thick will be provided.

Lintels :

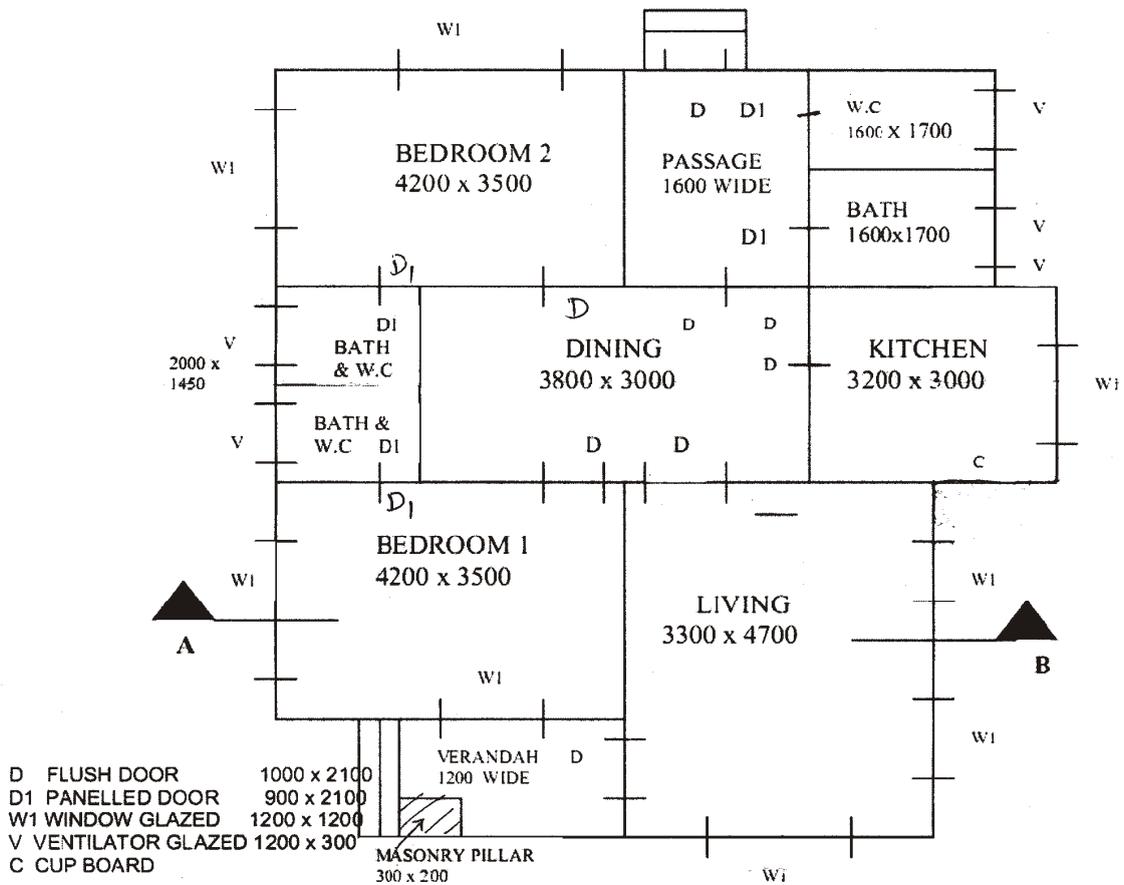
RCC lintel 120 mm thick over all the openings shall be provided. Suitable sunshades for all external openings shall be provided.

Flooring : *

The flooring will be in CC 1:4:8, 120 mm thick plastered smooth with CM 1:3, 20 mm thick for all the portions.

Steps :

Provide steps of rise 150 mm and tread 250 mm



Draw the following views to suitable scale :

(a) Plan of the building 10

(b) Section on 'AB' 10

7. Draw the line diagram of Rural Hospital for 10-bed capacity with all functional requirements to a suitable scale. 20
