



C14-C-307

4231

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2016

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 **four** marks.

1. Draw the conventional signs for the following materials :

(a) Glass

(b) Ceramic tiles

(c) Wood

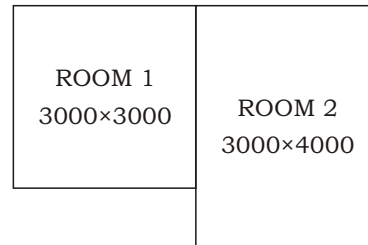
(d) Concrete

2. Draw the elevation of a panelled window (3 panels on each shutter). Size of the window 1200 mm×1500 mm with suitable frame and styles.

3. Draw the line diagram, showing functional requirements of a primary school for 5 classrooms.

4. Draw a plan of a dog-legged staircase in a room of 2 m×4.5 m. Width of a stair is 1 m.

- * 5. Prepare the working drawing for marking the width of foundation for the given plan, with 300 mm thick wall and 800 mm wide CC foundation 800 mm below GL :



(All dimensions are in mm)

PART—B

20×2=40

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

(2) The drawing must be to the scale.

(3) Any missing data must be assumed suitably.

(4) Marks are indicated in the margin.

6. With the given line sketch and following specifications of a building, draw the following views to a scale of 1:50 (Page No. 4) :

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(a) Fully dimensioned plan

(b) Section on AA

Specifications :

- (1) Foundation : All the main walls are taken to a depth of 1000 mm below ground level and rest on CC (1 : 4 : 8) bed 800 mm wide and 300 mm deep. The remaining portion consists of two footings 500 mm and 400 mm wide and are 400 mm and 300 mm deep. The footings are of brick masonry in CM (1 : 4).
- (2) Basement : All the walls are 300 mm wide and the height of basement is 600 mm above general GL.
- (3) Steps : Steps of 1200 mm wide are provided with brick masonry in CM (1 : 6) on both front and rear sides and rest on CC bed (1 : 4 : 8) 150 mm thick and having offset on the three sides equal to 100 mm. Tread of each step = 250 mm and rise 150 mm.

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- (4) Superstructure : All the walls are 200 mm thick except partition wall between toilets which are constructed on the floor with thickness of 100 mm. The height of walls is 3300 mm to the bottom of RCC roof slab.
- (5) Lintels and sunshades : RCC (1 : 2 : 4) lintels are provided on all openings with 150 mm thickness and same 150 mm bearing on either side of opening.

RCC sunshades are provided on all exterior doors, windows and ventilators with 90 mm thickness at wall face and 75 mm thickness at free end. The projection of sunshades beyond the wall surface is 700 mm.

- (6) Roofing : 120 mm thick RCC (1 : 2 : 4) slab is provided over the entire building.
- (7) Parapet wall : Brick masonry parapet wall in CM (1 : 6) is of 100 mm thick and 700 mm height. A coping with 50 mm projection is provided at the top of the parapet wall.
- (8) Flooring : Flooring consists of mosaic tiled flooring over 100 mm thick CC bed (1 : 4 : 8).

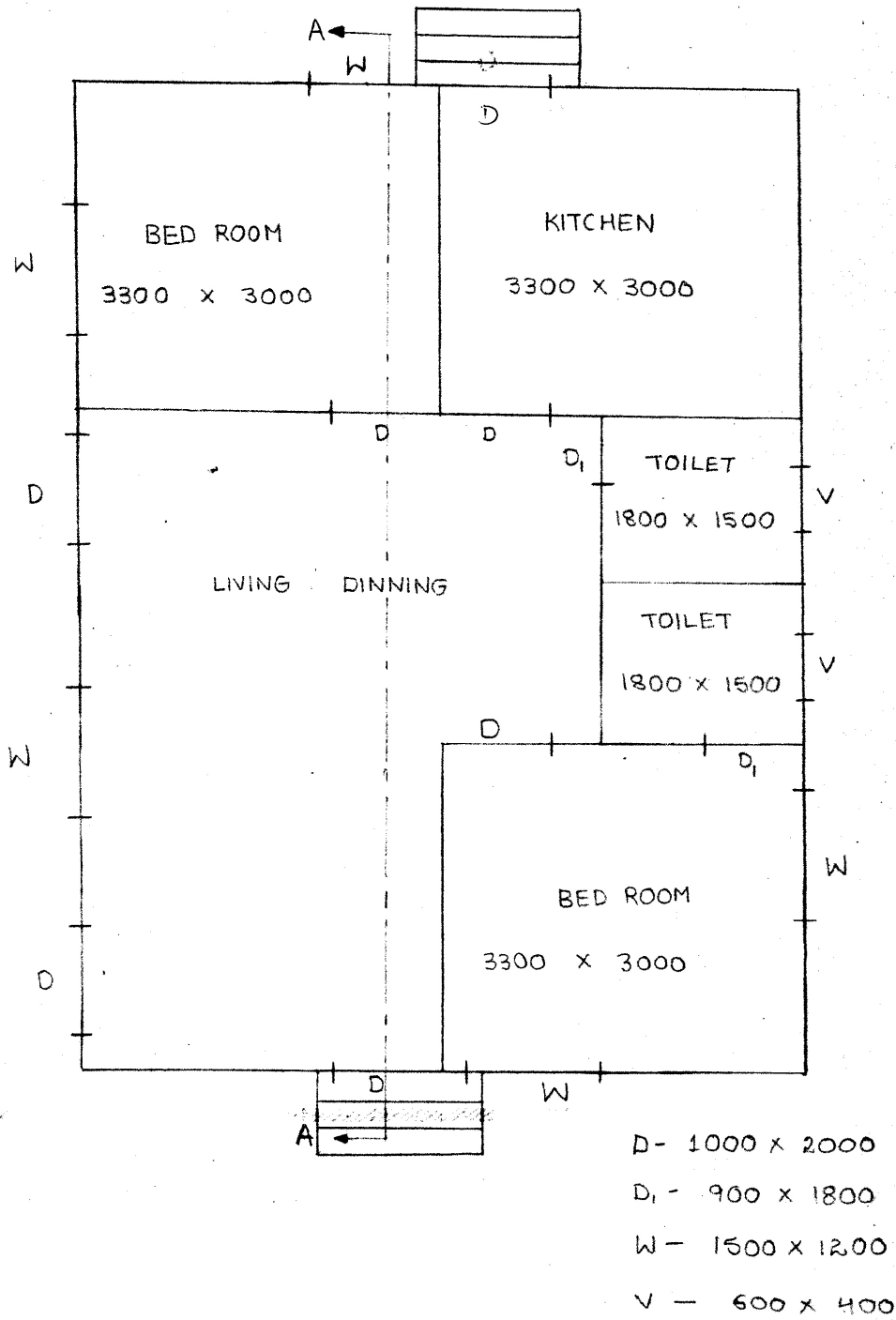
The remaining depth of basement is filled with sand and gravel and thoroughly compacted.

- 7.** Draw the line diagram of a hostel building for 50 students to a scale of 1:100.

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Line Diagram
(For Q. No. 6)

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