



C14-C-307

4231

**BOARD DIPLOMA EXAMINATION, (C-14)**  
**MARCH/APRIL—2018**  
**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.

(3) Part—A need not be drawn to the scale.

(4) Any missing data may be assumed suitably.

**1.** Draw the conventional signs for the following :

(a) Well

(b) WC pan (Indian type)

(c) Metalled road

(d) Ceiling fan

**2.** Draw the elevation of fully panelled door and label the parts. (Not to scale)

**3.** Draw the plan of a dog-legged staircase in a room of 2 m × 4 m.

**4.** Prepare an electrical layout for a living hall of a residential building.

**5.** Draw the working drawing for marking of foundation width of 1.0 m of a one-roomed building.

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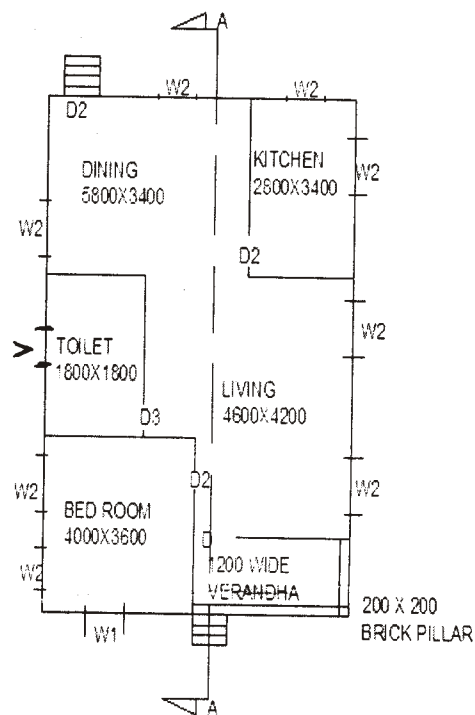
**PART—B**

20×2=40

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

(2) Any missing data may suitably be assumed.

6. The line diagram of a residential building showing the internal dimensions of the rooms is shown in the Figure. From the given specifications, draw the following views to the scale of 1 : 100 :



(a) Detailed plan

(b) Section along AA

*Specifications :*

**Foundation :** The depth of foundation shall be 1000 mm below the ground level. The PCC (1:4:8) bed in the foundation will be 1000 mm wide and 300 mm deep. The footing shall be of stone masonry in CM (1:4) with width of first and second footing will be 800 mm and 600 mm respectively, and the depth of first and second footing will be 300 mm and 400 mm respectively.

**Basement** : The height of basement is 450 and width is 450 mm in brick masonry in CM (1:4). DPC shall be provided under the superstructure walls with 50 mm thick.

**Superstructure** : The walls of superstructure will be of brick masonry in CM (1:6). Height of the walls is 3.3 m from the floor to bottom of the RCC slab. Width of the walls is 300 mm. For toilets, the partition wall is 100 mm thick from floor level.

**Lintels and sunshades** : Lintels with RCC (1:2:4) are provided on all openings with depth 150 mm and bearings of 150 mm on either side. Sunshades are provided on all the outer doors and windows. Sunshade is 100 mm thick at the wall face and 75 mm at free end and projection of 600 mm from the face of the wall.

**Verandah** : In front of verandah RCC (1:2:4) beam 200 mm × 250 mm is laid over the brick pillar, the bottom of the beam being at 2100 mm from floor level. From the bottom of the beam the sunshades project on both sides to a length of 600 mm.

**Roofing** : Roofing consists of RCC (1:2:4) slab 120 mm thick and weather proof course of 25 mm thick over slab.

**Flooring** : Flooring shall be of Cuddapah slab 20 mm thick over CC (1:5:10) of 100 mm thick over sand filling in the basement.

**Parapet** : Parapet wall is 100 mm thick and 700 mm height with brick masonry in CM (1:4) shall be constructed all around the building. A coping of 150 mm × 50 mm thick shall be provided over the parapet.

**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 (1:4:8) bed 150 mm, and having offset on the three sides equal to 100 mm. Tread of each step is 300 mm and rise is 150 mm.

**Doors and windows** : Reference

D1-Flushed door—1000 mm × 2000 mm

D2-Flushed door—900 mm × 2000 mm

D3-Flushed door—750 mm × 1800 mm

W1-Window—1800 mm × 1500 mm

W2-Window—1200 × 1050 mm

CB-Cupboard—1500 mm × 2000 mm

V-Ventilator—600 mm × 450 mm

7. Draw the line diagram showing the fundamental requirements of hostel building of 50 students.

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