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C09–C–307

3223

BOARD DIPLOMA EXAMINATION, (C–09)

MARCH/APRIL—2017

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) Any missing data may be assumed suitably.

1. Draw the conventional signs for the following materials in sectional elevation :

(a) Stone

(b) Concrete

(c) Ceramic tiles

(d) Glass

2. Draw the elevation of a panelled door of size 1000 × 2000.

3. Draw the line diagram of a king post truss showing all component parts.

4. Draw the plan of a dog-legged staircase in a room of 2 m × 4·5 m, width of stair = 1 m.

5. Sketch the sectional elevation of a lift shaft for four floors.

PART—B

25+15=40

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

(2) The drawing must be to the scale.

(3) Any missing data may be assumed suitably.

6. With the given line sketch and following specifications of a building, draw to a scale of 1 : 50 the following views : 25

(a) Fully dimensioned plan

(b) Section on A-A

Specifications :

(i) Foundations : All the main walls are taken to depth of 1000 mm below ground level and rest on CC bed (1:4:8) 800 mm wide and 300 mm deep. The remaining portion consists of two footings with brick masonry in CM (1:4). The fist footing is 500 mm wide and 400 mm deep, the width of second footing is 400 mm wide and 300 mm deep.

(ii) Basement : All the walls are 300 mm wide and height is 600 mm above GL.

(iii) Steps : Steps of 1200 mm wide are provided with brick masonry in CM (1:6) on both front and rear side and rest on CC bed (1:4:8) 150 mm thick and having offset on three sides equal to 100 mm. Tread of each step = 300 mm and rise = 150 mm.

(iv) Superstructure : All the walls are 200 mm thick except partition wall between the toilets which is constructed on the floor with a thickness of 100 mm. The height of walls is 3300 mm to the bottom of RCC roof slab.

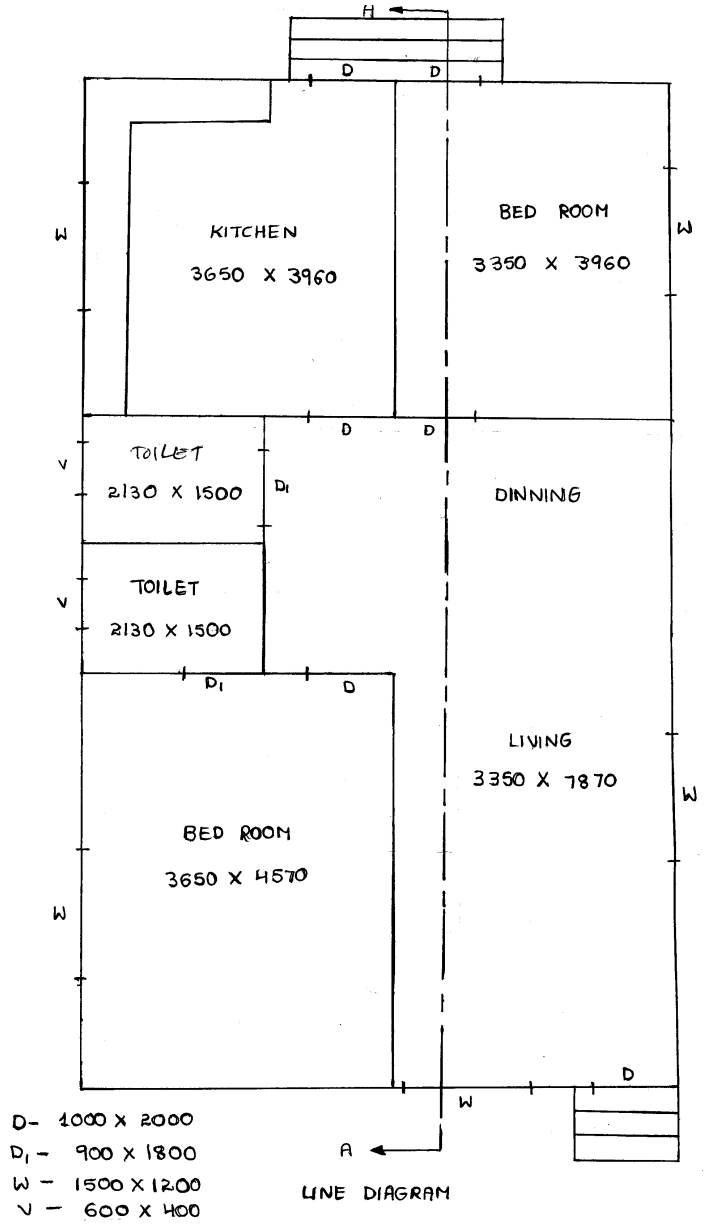
(v) Lintels and sun-shades : RCC (1:2:4) lintels are provided on all openings with 150 mm thickness and same 150 mm bearing on either side of opening.

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 sun-shades beyond the wall surface is 700 mm.

(vi) Roofing : 120 mm thick RCC (1:2:4) slab is provided over the entire building.

(vii) 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.

(viii) 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 showing the functional requirement of a high school building. 15

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