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C09–C–307

3223

BOARD DIPLOMA EXAMINATION, (C–09)

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.

(3) Any missing data may be assumed suitably.

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

(a) Concrete

(b) Ashlar

(c) Plaster

(d) Sheet metal

2. Draw the elevation of fully glazed window and label the parts.

3. Draw the working drawing for the purpose of marking plan of a single-room building of 4 m × 6 m with superstructure wall 200 mm and the width of footing 900 mm.

4. Draw the electrical layout drawing for a two-roomed building with all necessary electrical fittings.

5. Draw a sectional elevation of lift shaft showing topmost floor and machine room along with lift car.

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PART—B

20×2=40

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

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

(3) Any missing data may be assumed suitably.

6. Following figure (in Page 4) and following specifications of a building, draw to scale of 1 : 50 the following views : 20

(a) Fully dimensioned plan

(b) Section on AB

Specifications :

(i) Foundations : The depth of foundation shall be 1100 mm below ground level. The plain cement concrete bed in the foundation will be 1000 mm wide and 200 mm deep. The footings shall be of brick masonry in CM (1 : 4). Width of first and second footings will be 500 mm and 400 mm respectively, whereas the depth of both footings will be 450 mm.

(ii) Plinth or Basement : The height of basement is 450 mm and the thickness of basement wall is 300 mm.

(iii) Superstructure : All the walls in the superstructure will of 200 mm thick and of brick masonry in CM (1 : 6).

(iv) Lintels and sunshades : Lintels with RCC are provided on all openings and depth is 150 mm with a bearing of 150 mm on either side.

Sunshades 100 mm thick at the wall face and 75 mm thick at free-end are provided projecting from lintels over exterior openings. A continuous sunshade is provided over both sides of verandah. All the sunshades shall project 600 mm from the face of the wall.

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(v) Verandah : In front verandah, an RCC bressummer 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 sunshade projects on both sides to a length of 600 mm. The remaining height above the beam consists of brick masonry wall (entablature wall) in CM (1 : 6).

(vi) Height of superstructure : The walls in the superstructure are taken to a height of 3·3 m.

(vii) Roofing : Roofing consists of RCC slab 120 mm thick.

(viii) Flooring : Flooring shall be of polished marble stone slabs of 20 mm thick over cement concrete.

(ix) Parapet : Parapet 100 mm thick and 700 mm height with brick masonry shall be provided all round the building.

(x) Steps : Steps are founded over 150 mm CC bed.

Schedule of doors and windows :

Sl. No.	*Numbers*	*Modular size* (in mm)
1.	D_1 5 No.	1000×2100
2.	D_2 2 No.	900×2000
3.	W 8 No.	1200×1500
4.	V_1 2 No.	1000×600

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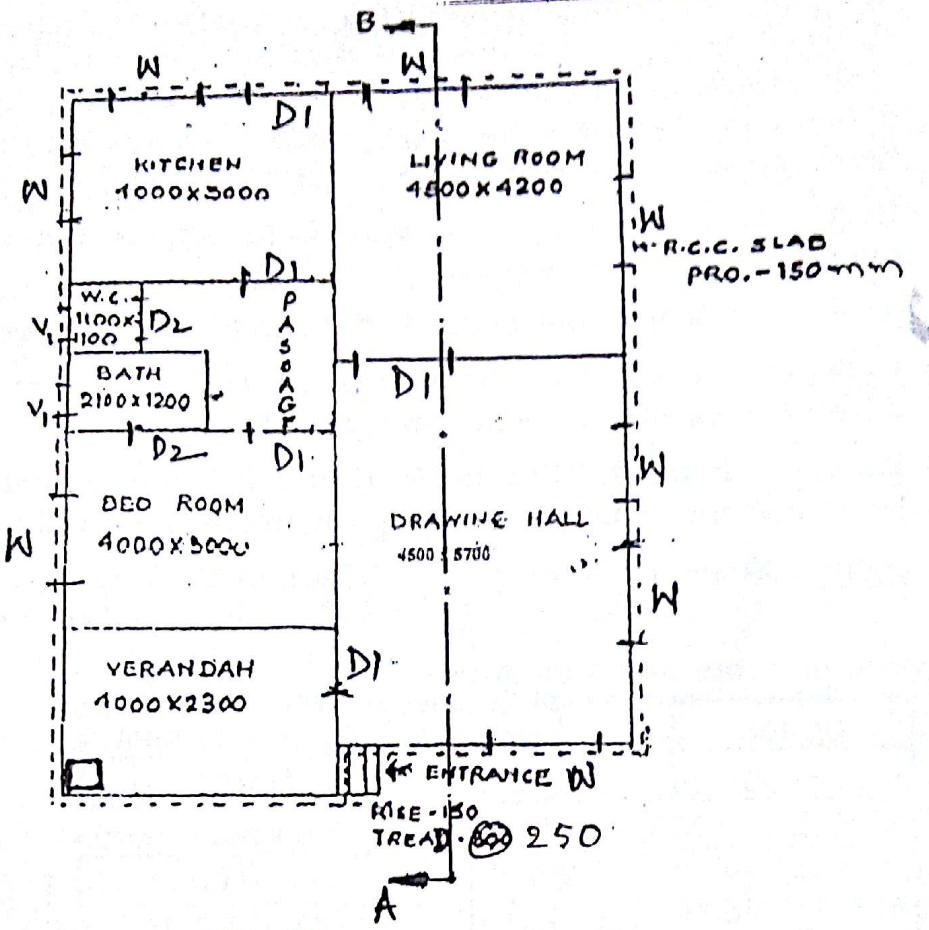

Line diagram of buildings

7. Draw a line diagram for a primary school building with all functional requirements to a scale of 1 : 100. 20

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