



C14-C-307

4231

BOARD DIPLOMA EXAMINATION, (C-14)

OCT/NOV—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) 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) Plant cement concrete

(b) Wood

(c) Glass

(d) Road bridge

2. Draw the line diagram of king post truss and label the parts.

3. Draw the plan of a dog legged stair case in a room of 3 m × 4.5 m.

4. Prepare an electrical layout for a one-room building with at least for components.

5. Draw the working drawing for marking of foundation width of 900 mm for a two roomed building for the Fig. 1 The measurements shown are inner dimensions.

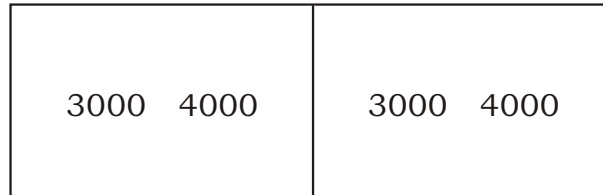


Fig. 1

PART—B

20×2=40

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

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

(3) 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 Fig. 2. From the given specifications, draw the following views to the scale of 1 : 100 :

(a) Detailed plan

(b) Section along ABCD

Specifications :

Foundation : The depth of foundation shall be 900 mm below the ground level. The PCC (1 : 4 : 8) bed in the foundation will be 900 mm wide and 200 mm deep. The footing shall be of stone masonry in CM (1 : 4) with width of first and second footing will be 600 mm and 500 mm respectively and the depth of first and second footing will be 300 mm and 300 mm respectively.

Basement : The height of basement is 450 and width is 400 mm in brick masonry in CM (1 : 4) DPC shall be provided under the super structure walls with 50 mm thick.

Super structure : The walls of super structure will be brick masonry CM (1 : 6) is 3·3 m from the floor to bottom of the RCC slab. Width of the wall is 300 mm. For toilets the partition wall is 100 mm thick from floor level.

Lintels and Sun shades : Lintels with RCC (1 : 2 : 4) are provided on all openings with depth 150 mm and bearings of 150 mm on either side. Sun shades 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.

Roofing : Roofing consist of RCC (1 : 2 : 4) slab 140 mm thick and weather proof course of 25 mm thick over slab.

Flooring : Flooring shall be of Cuddapah slab 25 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 750 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 ad 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 250 mm and rise is 150 mm.

Doors and Windows : Reference.

D1 – Flushed door – 1000 mm × 2100 mm

D2 – Flushed door – 900 mm × 2100 mm

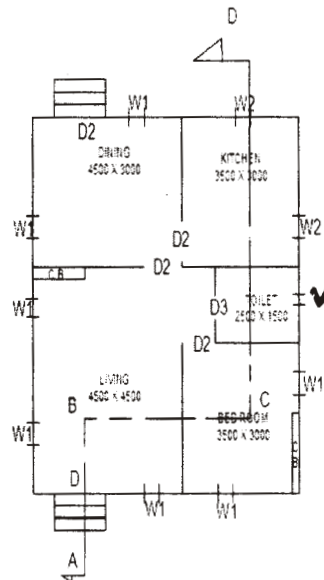
D3 – Flushed door – 750 mm × 2100 mm

W1 – Window – 1800 mm × 1500 mm

W2 – Window – 1200 mm × 1050 mm

CB – Cupboard – 1800 mm × 2000 mm

V – Ventilator – 600 mm × 450 mm



7. Draw the line diagram showing the fundamental requirements of a primary school building of 300 students.

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