



C14-C-307

4231

BOARD DIPLOMA EXAMINATION, (C-14)

OCT/NOV—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) Draw the sketches not to scale.

(4) Assume suitable data wherever necessary.

1. Draw the plan of one brick wall meeting at corner showing alternative courses of header and stretcher in English bond.

* 2. Draw the line diagram of a queen post truss and label the parts.

3. Draw the plan and sectional elevation of a dog-legged staircase and label the component parts.

4. Draw the line diagram of a single-bedroom building.

5. Draw the marking plan of a two-roomed building of size 3·60 m × 4·00 m and 4·00 m × 4·00 m having wall thickness 300 mm and width of foundation 1000 mm.

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PART—B

20×2=40

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

(2) Assume suitable data wherever necessary.

6. Draw the following views of a residential building, whose line diagram is given in the Fig. 1, to a suitable scale :

(a) Fully dimensioned scale

(b) Cross-section A-A

(i) **Foundation** : All the main walls are taken to a depth of 1000 mm below ground level and rest on CC (1 : 4 : 8) bed 1000 mm wide and 200 mm thick. The remaining portion consists of two footings 800 mm and 600 mm wide and equal heights. The footings are RR masonry in CM (1 : 6).

(ii) **Basement** : 450 mm × 450 mm—RR masonry in CM (1 : 6)

(iii) **Superstructure** : 300 mm thick—Brick masonry in CM (1 : 6). The height of floor is 3300 mm to the top of the slab.

(iv) **Lintels** : 300 mm × 200 mm

(v) **Sunshade** : Projected length—600 mm, 75 mm to 50 mm thick from fixed end to free end on all external openings.

(vi) **Roof Slab** : RCC (1 : 1½ : 3) 100 mm thick

(vii) **Parapet wall** : 120 mm thick brick masonry in CM (1 : 6) and height 1000 mm.

(viii) **Flooring** : CC (1 : 2 : 4) 40 mm thick over 100 mm thick CC (1 : 4 : 8)

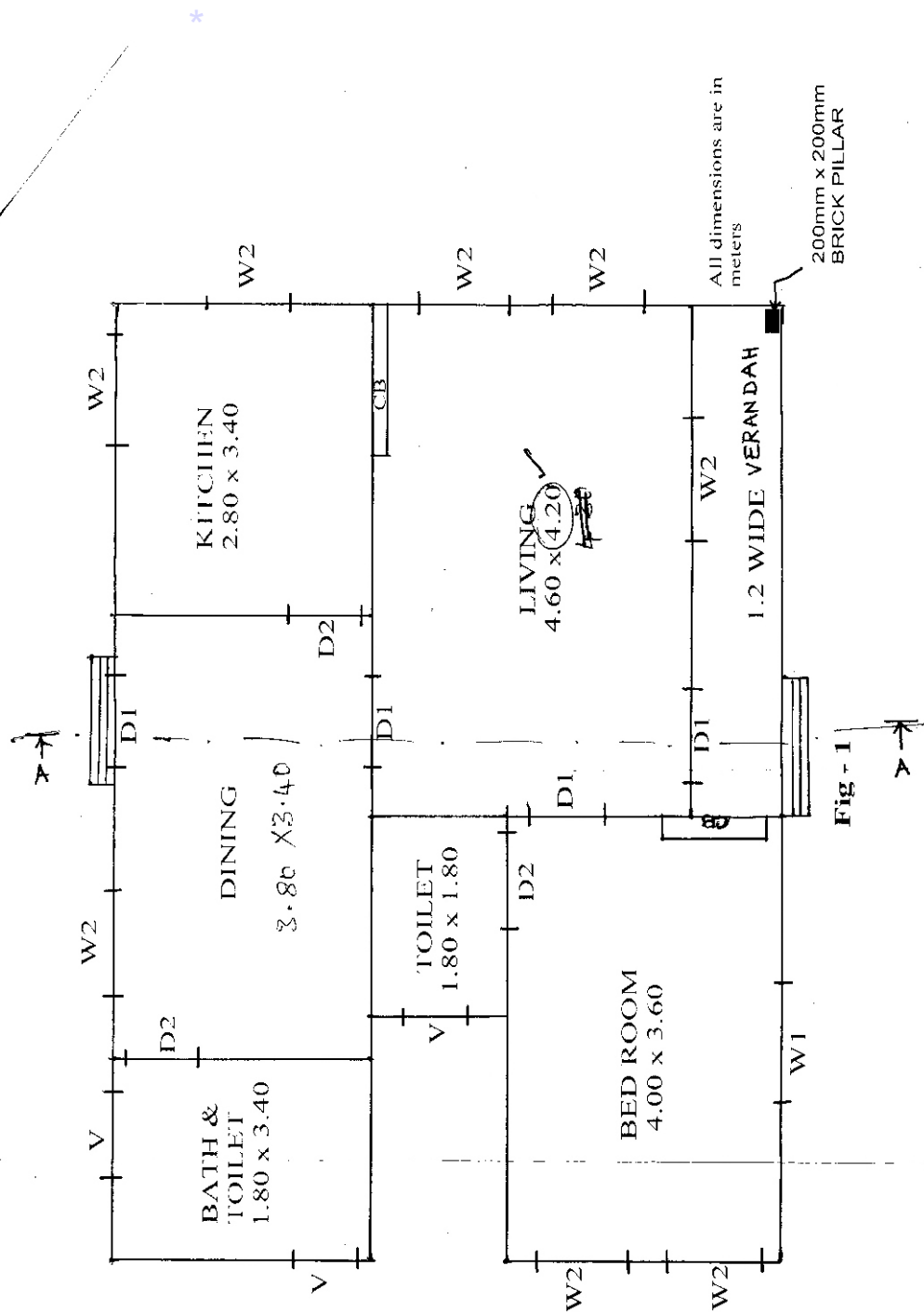
(ix) **Doors** : D₁—1000 mm × 2000 mm

D₂—800 mm × 2000 mm

(x) **Windows** : W₁—1200 mm × 1350 mm

W₂—1000 mm × 1350 mm

(xi) **Ventilators** : V—450 mm × 200 mm



7. Prepare the line diagram for an apartment building for one floor with 6 units at 100 sq.m to 120 sq.m per unit. Assume suitable sizes of rooms.
