4231

BOARD DIPLOMA EXAMINATION, (C-14)

JUNE—2019

DCE - THIRD SEMESTER EXAMINATION

CIVIL ENGINEERING DRAWING - I

Time : 3 hours]   [Total Marks : 60

PART—A

5 x 4=20

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

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

(3) Draw the sketches not to scale

(4) Assume suitable data wherever necessary

1. Draw the cross section of load bearing wall and name all components be low and above ground level.

2. Draw the line diagram of a King Post truss and label the parts.

3. Draw the plan and sectional elevation of a Dog-legged stair-case and label the component parts..

4. Draw the line diagram of a Primary school building of five class rooms.

www.manaresults.co.in

5. Calculate the plinth area carpet area of a building, where the area of walls is 15%.

   (a) Size of Plot - 10m x 18m

   (b) Road - 30 feet on width side

   (c) Front offset - 6m

   (d) Rear offset - 2m

   (e) Side offset - 1.5m each

PART—B   2 x 20=40

Instructions : (1) Answer *any* **two** questions.

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

(3) 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 plan.

   (b) Cross-Section. A-A

   (i) <u>Foundation:</u> All the main walls are taken to a depth of 1200mm be low ground level and rest on C.C(1:4:8) bed 1200mm wide and 300mm thick. The remaining portion consists of two footings 800mm and 600mm wide and are 450mm deep equally.

   The footings are R.R masonry in CM (1:6).

   (ii) <u>Basement:</u> 450mm x 600mm - R.R masonry in CM (1:6)

(iii) Superstructure: Brick masonry in CM (1:6) - 300mm thick. The height of floor is 3000mm to the bottom of the slab.

(iv) <u>Lintels</u>: 300mm x 200mm

(v) <u>Sunshade</u>: Projection - 600mm, 60mm uniform thickness on all external openings.

(vi) <u>Roof Slab</u>: R.C.C. (1:1½:3) 120mm thick.

(vii) <u>Parapet wall</u>: Brick masonry in CM (1:6) is of 100mm thick and height 900mm.

viii) <u>Flooring</u>: Flooring consists of Tiled flooring over 100mm thick C.C.(1:4:8)

(ix) <u>Doors</u>: D_1 - 1000mm x 2000mm

                     D_2 - 800mm x 2000mm

(x) <u>Windows</u>: W_1 - 1200mm x 1200mm

                     W_2 - 900mm x 1200mm

(xi) <u>Ventilators</u>: V - 450mm x 200mm

7. Prepare the line diagram for a Rural Hospital construction of 10 beds capacity with basic requirements. Assume suitable sizes of rooms and data and other provisions. to a suitable scale.
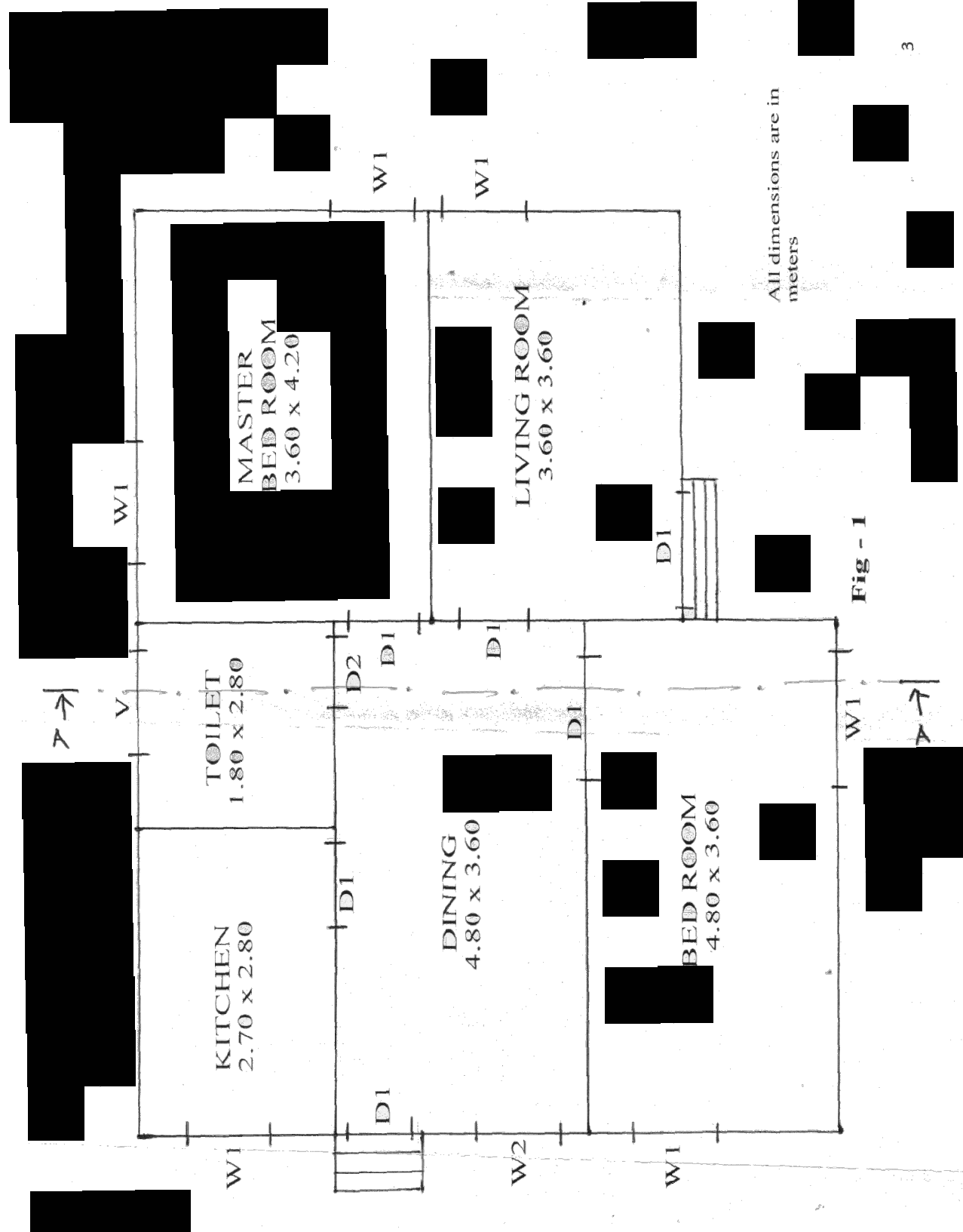
Fig - 1

All dimensions are in meters

MASTER
BED ROOM
3.60 x 4.20

LIVING ROOM
3.60 x 3.60

TOILET
1.80 x 2.80

KITCHEN
2.70 x 2.80

DINING
4.80 x 3.60

BED ROOM
4.80 x 3.60

W1 W1 W1 W1 W2 D1 D1 D1 D2 D1 V