C14-C-**307**

4226

BOARD DIPLOMA EXAMINATION, (C-14)
OCTOBER/NOVEMBER-2018
DCE– THIRD SEMESTER EXAMINATION

CIVIL ENGINEERING DRAWING - I

Time : 3 Hours]   [Total Marks: 60

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PART-A

4X5=20

Instructions   :   1. Answer **All** questions.
                           2. Each question carries **four** marks.

1. Sketch the conventional signs of the following

    (i) Bell push   (ii) Embankment

    (iii) Concrete   (iv) Single leaf double swing door.

2. Draw the front view of panelled door (assume suitable dimensions)

3. Draw to a scale of 1:25, the plan of a dog legged staircase with 10 steps in each flight,

    take the width of flight and landing width is 1200mm, tread is 25mm

4. State any four functional requirements of a rural hospital.

5. Draw the marking plan of a single room building of size 4600 mm x 3600 mm having

    wall thickness 300mm and width of foundation 900mm

2X20=40

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

                                2. Each question carries **20** marks.

6. Line diagram of a residential building is shown in the figure. Draw the following views to a scale 1:50 as per the specifications given below:

    (a) Dimensioned plan (b) Section ABCD.

<u>Specifications</u>:

- **Foundation**: The depth of foundation shall be 1000mm below ground level. The concrete (1:4:8) bed in the foundation will be 800mm wide and 200mm deep. The footings shall be of brick masonry in C.M (1:4). Width of first and second footings will be 500mm and 400mm respectively, whereas the depth of both footings will be 400mm

- **Plinth or basement:** The height of basement is 600mm. Damp proof course of 50mm thick shall be provided under the superstructure walls. Thickness of walls in basement is 300mm

- **Steps:** Steps are provided in front side and rear side of length 1200mm. Tread of each step is 300mm and rise is 150mm

- **Superstructure:** All the walls are 200mm thick except two partition walls between bed and toilet and dining and toilet which are constructed on the floor with a thickness of 100mm. The height of walls is 3300mm to the bottom of R.C.C. roof slab.

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

         R.C.C. sunshades are provided on all exterior doors, windows and ventilators with 100mm thickness at wall face and 75mm thickness at free end. The projection of sun-shades beyond wall surface is 600mm

- **Verandah :** Front verandah is 1500mm wide a square brick pillar 200 x 200mm is provided on left side corner. A R.C.C. beam 200 x 250mm is provided on both sides of verandah resting on brick pillar, the height being 2100mm from floor level to the bottom of R.C.C beam. The remaining portion between top of beam and bottom of R.C.C slab of brick masonry in C.M. (1:6)

- **Roofing:** 110mm thick R.C.C.(1:2:4) slab is provided over the entire building.

- **Parapet wall:** Brick masonry parapet wall in C.M. (1:6) is of 100mm thick and 700mm height. A coping with 50mm projection is provided at the top of the parapet wall.

- **Flooring:** Flooring shall be of polished shahabed stone slab 25mm thick over 80mm thick cement concrete (1:3:6) over and filling in the basement.

- **Doors:** D=1000 x 2100 mm (fully paneled),

    D1 = 1000 x 2100mm (Flushed door), D2 = 900 x 1800mm (flushed door)

- **Windows:** W1 = 1500 x 1200mm (Glazed window)

    W2 = 1000 x 1200mm (Glazed window)

- **Cup board, C.B.** = 1500 X 1800mm: Ventilator, V = 1000 x 600mm

FIG. LINE DIAGRAM
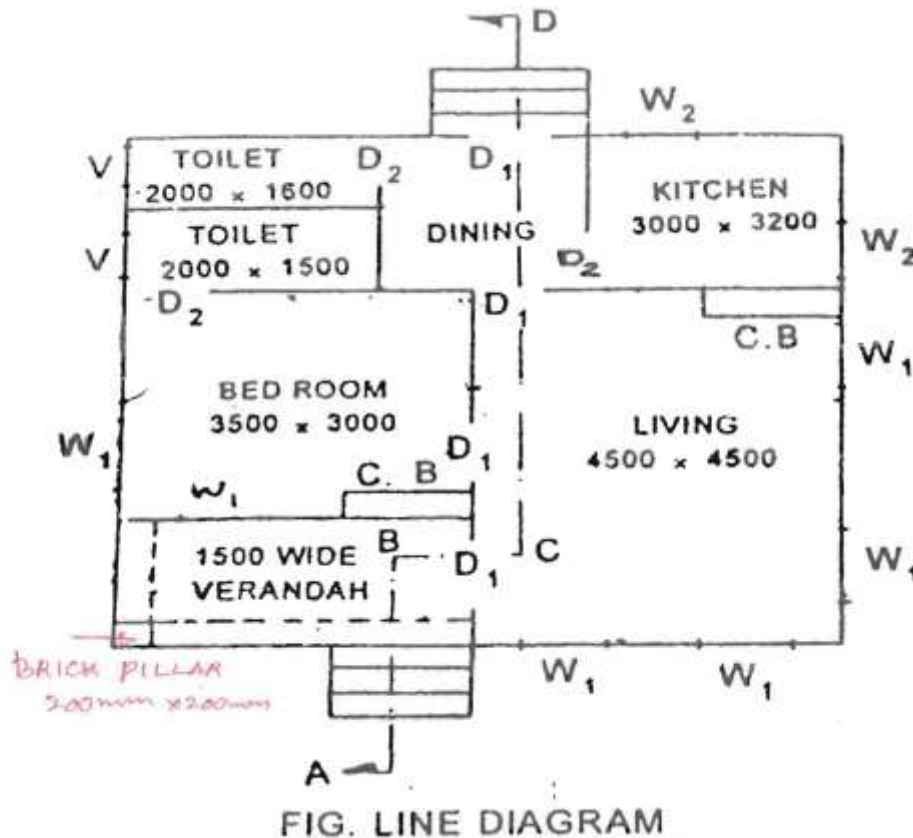
7. Design and prepare the plan for primary school of 200 students with 7 class rooms with HM room, staff room, toilets etc., Assume suitable sizes of rooms with verandah, show provision for playground. Assume suitable data and other provisions for school building.

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