



C14-C-307

4226

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH / APRIL - 2019

DCE - III SEMESTER EXAMINATION

CIVIL ENGINEERING DRAWING - I

Time : 3 Hours]

[Total Marks : 60

PART - A

4 × 5 = 20

- Instructions :**
- (1) Answer *all* questions and each question carries four marks.
 - (2) Any missing data may be assumed suitably.
 - (3) Part A need not be drawn to the scale.

- 1 Draw the conventional signs for the following materials in sectional elevation.
 - (a) Plain cement concrete
 - (b) Stone
 - (c) Brick
 - (d) Glass
- 2 Draw the sanitary symbols for the following.
 - (a) Shower head
 - (b) Bath tub
 - (c) Indian type w.c
 - (d) Wash basin
- 3 Sketch the elevation of a paneled door and label the parts.
- 4 Draw the elevation of king post truss and label the parts.
- 5 Draw the working drawing for the purpose of marking for excavation of foundation width for a room of size 4200 mm x 3600 mm (internal dimensions). The thickness of brick masonry is 300 mm and width of foundation is 800 mm.

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[Contd...

PART - B

2×20=40

- Instructions :** (1) Answer *all* questions.
(2) Any missing data may be assumed suitably.

- 6 The accompanying line sketch fig (1) shows the plan of a residential building. The dimensions given in the sketch are internal dimensions of the rooms. Draw (a) The Plan (b) sectional elevation at AB, to a scale of 1:50 **20**

SPECIFICATIONS :

Foundations : The depth of foundation shall be 1200 mm below the ground level. The PCC 1:4:8 bed in the foundation will be 1000 mm wide and 300 mm depth. The footings shall be of stone masonry in CM 1:4. The width of first and second footing will be 800 mm and 600 mm respectively, where as the depth of both footings will be 450 mm each.

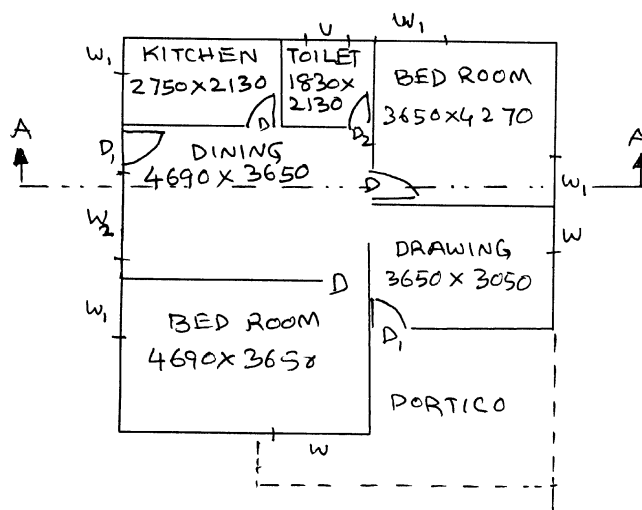
Basement : The basement of stone masonry in CM 1:4 of height 600 mm and the width of basement is 450 mm.

Superstructure : The walls in superstructure will be of brick masonry in CM 1:6, of thickness 230 mm, and the height 3300 mm from FL to bottom of the slab. Parapet wall is constructed with brick masonry CM (1:4) of 100 mm thick and 750 mm height. The partition wall thickness between kitchen and toilet is 110 mm.

Lintels and sun shades : Lintels with RCC in 1:2:4, are provided on all openings of depth 150 mm with a bearing of 150 mm on either sides. Sun shades 100 mm thick at the wall face and 75 mm thick at free end and projection 600 mm from the face of the wall.

Roof : Reinforcement cement concrete (1:2:4) slab of thickness 120 mm and weather proof course over the slab.

Flooring : Flooring shall be of Shahabad stone slab 20 mm thick over 80 mm thick cement concrete (1:3:6) over sand filling in the basement.



REFERENCES

DOORS

$$D = 900 \times 1980$$

$$D_1 = 1070 \times 1980$$

$$D_2 = 0760 \times 1980$$

WINDOWS

$$W = 1820 \times 1220$$

$$W_1 = 1520 \times 1220$$

$$W_2 = 2440 \times 1220$$

$$\text{VENTILATOR} = 600 \times 450$$

- 7 Draw the line diagram showing the functional requirements of 20 a rural hospital.