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C09-C–307

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BOARD DIPLOMA EXAMINATION, (C-09)

MARCH/APRIL—2021

DCE - THIRD SEMESTER EXAMINATION

CIVIL ENGINEERING DRAWING - I

Time : 3 hours] [*Total Marks* : 60

PART—A

5×4=20

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

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

(3) Need not be drawn to be scale.

(4) Any missing data may be assumed suitably.

1. Draw the conventional signs for the following represented in sectional elevation :

(a) Wood

(b) Sand

(c) Sink

(d) Indian type water closet

2. Draw the plans of one brick wall in English bond.

3. Draw the electrical layout drawing for a two-roomed building with all necessary electrical fittings.

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

5. Draw the plan of lift shaft assuming suitable dimensions.

6. Draw the line diagram of a primary school building of five classrooms.

7. How much shall be the area of windows in a room?

PART—B

20+20=40

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

(2) The drawing must be to the scale.

(3) Any missing data may be assumed suitably.

8. Draw the cross-section of load bearing wall and name all components below and above ground level. 20

OR

9. A line diagram showing the arrangement of a building as shown in fig. 1 (given below). Draw a cross - section along AD to a scale of 1 : 100 : 20

Specifications :

(i) All the dimensions are internal measurements in the line sketch.

(ii) All walls are 200 mm thick

(iii) Provide sunshades with 600 mm projection with 100 mm thick at the wall face and 75 mm thick at free end.

(iv) Height of walls is 3300 mm from top of flooring to bottom of the roof.

(v) Roof consists of RCC (1:2:4) slab 110 mm thick with weather proof course of flat tiles in CM (l :4) 50 mm thick, laid over RCC slab.

(vi) Lintels with RCC (1 : 2 : 4) are provided on all openings and depth of 150 mm.

(vii) Flooring shall be polished stone 25 mm thick over 80 mm thick CC (1:3 : 6) over sand filling.

(viii) Parapet 100 mm thick and 700 mm height.

(ix) Steps are provided in front and backside of length 1200 mm . The tread is 300 mm and rise is 150 mm.

(x) Foundation and plinth : The depth of foundation shall be 1000 mm below ground level. The plain cement concrete (1 : 4 : 8) bed in the foundation will be 800 mm wide and 200 mm deep. The footings shall be of brick masonry in CM (1 : 4). Width of first and second footings will be 500 mm and 400 mm respectively, whereas the depth of each footing is 450 mm. The height of basement is 600 mm and thickness is 300 mm. DPC 50 mm thick is provided over basement walls.

(xi) Schedule of doors, windows, ventilators and cupboard is as given in the table : (All dimensions are in mm)

D	1	1200 × 2000	Flushed door
D_1	4	1000 × 2000	Flushed door
D_2	3	900 × 2000	Flushed door
W_1	6	1200 × 1500	Glazed window
W_2	8	1000 × 1500	Glazed window
V	2	1000 × 600	Glazed ventilator
Cupboard (*CB*)	1	1200 × 1500	Flushed shutters

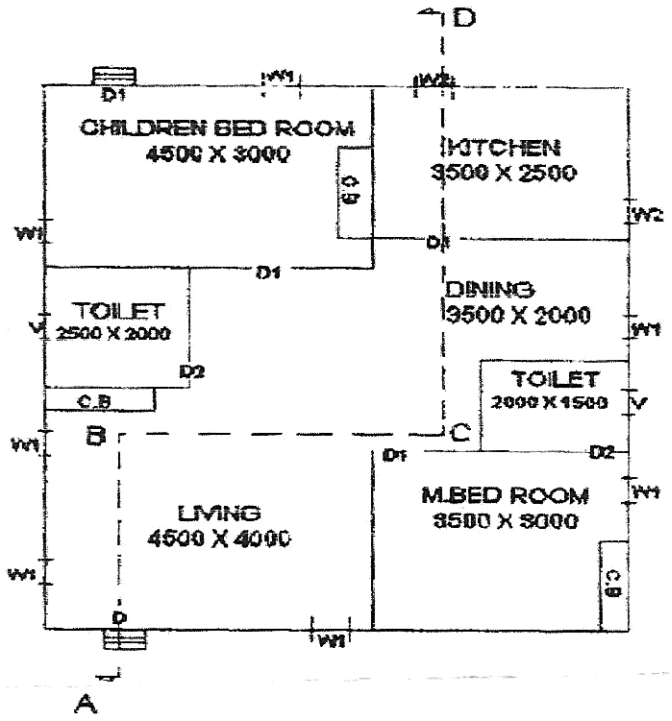

Fig-1 Line Diagram

10. Draw the line diagram for a proposed hostel for 200 students to a suitable 20 scale. 20

OR

11. Draw the line diagram showing the functional requirements of a rural hospital building for 10 bed capacity. 20

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