6227

BOARD DIPLOMA EXAMINATION, (C-16)

MARCH /APRIL-2019

DCE - THIRD SEMESTER EXAMINATION

CIVIL ENGINEERING DRAWING - 1

Time: 3Hrs Max. Marks: 60

PART-A

5x4=20M

Instructions: 1) Answer **all** the questions. Each question carries **four** marks
2) Any missing data may be assumed suitably.

1) Draw the conventional signs for the following materials.
   a) Wood
   b) Glass
   c) Wash basin
   d) Ceiling fan
2) Draw the paln of a dog legged staircase to a suitable scale.
3) Draw the elevation of a Glass panelled window of size 1000x1500.
4) State the minimum area and minimum width for the following rooms as per the building bye laws
   a) Kitchen cum dining
   b) Bed room
   c) Bath rooms and water closets
   d) Staircase.
5) Draw the plan of active solar water heating system.

PART-B

40M

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

2) The drawings must be to the scale.

3) Any missing data may be assumed suitably.

6) With the given line sketch and following specification of a building, draw th following views to a suitable scale. 25M

a) Fully dimensioned plan, 15M

b) Section on R-R. 10M

Specifications:

i) Foundations: Depth of foundation is 1200 mm below ground level and rest on CC bed (1:4:8) 900 wide and 300 mm deep . The remaining portion consists of two footings with brick masonry in CM(1:4) . The first footing is 600 mm wide and 400 mm deep, the width of second footing is 400 mm wide and 300 mm deep.

ii) Basement: All walls are 300 mm wide and height is 500 mm above GL.

iii) Steps: Steps of 1200 mm wide are provided with brick masonry in CM (1:6) on front and rest on CC bed (1:4:8) 150 mm thick and having offset on three sides equal to 100 mm. Tread of each step=300 mm and rise=150mm.

iv) Super structure: All the walls are 200 mm thick except partition wall between the toilets which is constructed on the floor with a thickness of 100mm. The height of wall is 3300 mm to the bottom of RCC roof slab.

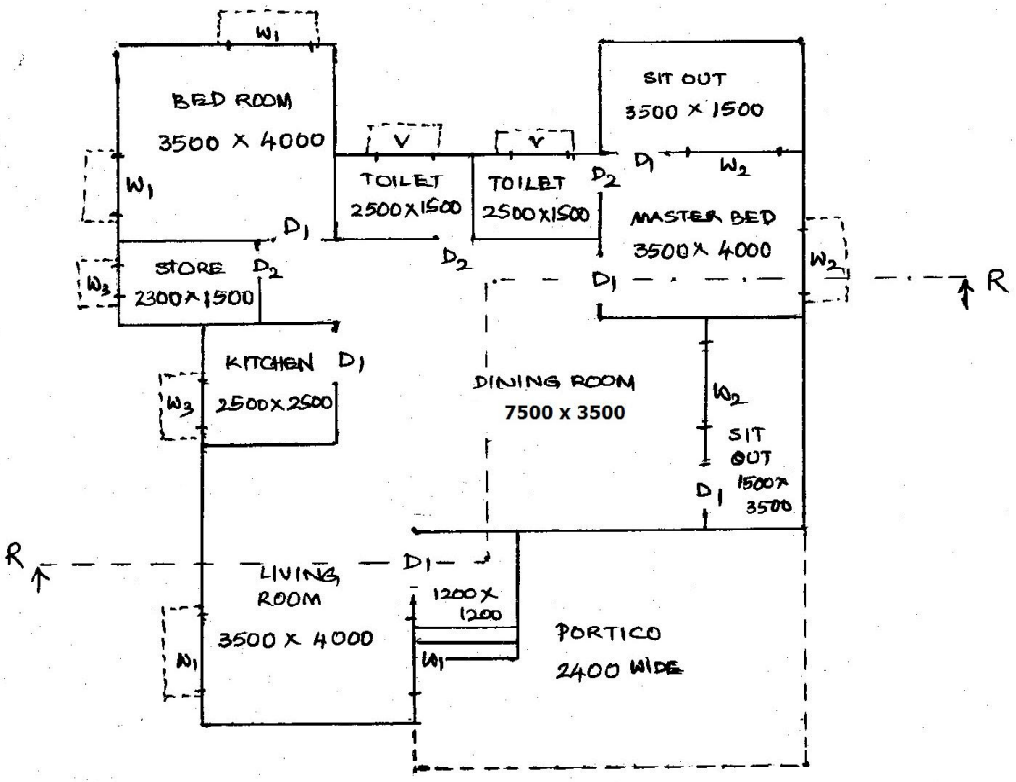
v) Lintels and sunshades: RCC(1:2:4) lintels are provided on all the openings with 150 mm thickness and same 150 mm bearing on either side of opening.

RCC sunshades are provided on all exterior doors, windows and ventilators with 90 mm thickness at wall face and 75 mm thickness at free end. The projections of sunshade beyond the wall surface are 700mm.

vi) Roofing : 140 mm thick RCC (1:1.5:3) slab is provided over the entire building.

vii) Papapet wall : Brick masonry parapet wall in CM(1:6) is of 100 mm thick and 800 mm height. A coping with 50 mm projection is provided at the top of the parapet wall.

viii) Flooring: Flooring consists of mosaic tiled flooring over 100 mm thick CC bed (1:4:8). The remaining depth of basement is filled with sand and gravel and thoroughly compacted.



Reference :

D_1 DOOR : 1000X 1980

D_2 DOOR : 760 X 1980

W_1 WINDOW : 1500X1220

W_2 WINDOW : 2000X1220

W_3 WINDOW : 1000 X 1220

V VENTILATOR : 1000X300

Note :- Corner windows are placed at 300 mm from the inner corner of the room.

7) Draw the line diagram showing the fuctional rquirements of Elementary school building consisting five class rooms, store room, staff room, room for Head master, common toilets for boys, girls, and staff separately.

* * *