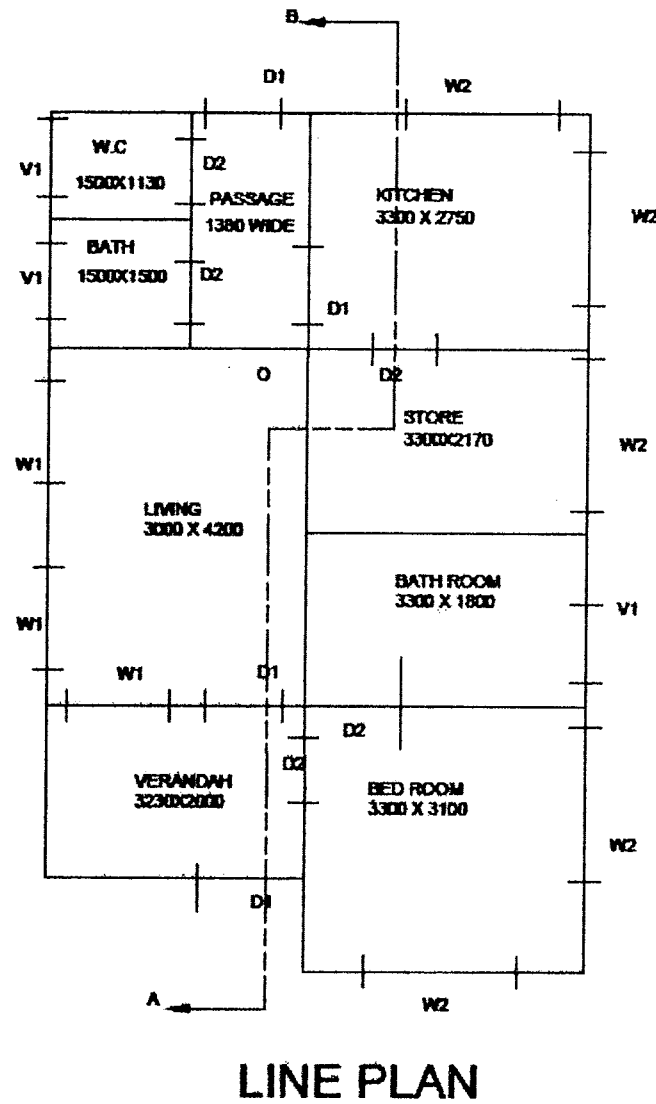


April 2024

Time - Three hours  
(Maximum Marks: 100)



SKETCH A - A HOUSE WITH SINGLE BED ROOM AND ATTACHED BATH ROOM WITH RCC FLAT ROOF

ALL DIMENSIONS ARE IN MILLIMETERS.

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- IN.B.*
1. Answer all questions under Part-A and Part-B in the drawing sheet supplied.
  2. Q.No. 1 & 2 each carries 4 marks, Q.No 3 carries 12 marks and Q.No. 4 carries 80 marks.
  3. Sketches under Part-A shall be drawn using pencil and drawing instruments not necessarily to scale.
  4. Any data not given may be assumed suitably and shall be indicated in the drawing.
  5. All dimensions indicated are in "mm".]

PART - A

1. List out the documents necessary to get a local body approval for the construction of a residential building.
2. Define line plan of a building and state its importance.
3. Draw the elevation of a "flush door" for the following details. Assume any other necessary data suitably. (All dimensions are in mm)

Size of door	-	1200 x 2100
Door frame size	-	75 x 100
Panel	-	25 mm thick

PART – B

4. Sketch “A” shows the line plan of “A house with single bedroom and attached bathroom with RCC flat roof”. The dimensions noted in the line plan are clear dimensions between the walls. The specifications are given below.

Specifications:

1. Foundation:

The foundation for all main walls shall be in cement concrete 1 : 5 : 10 mix, 1000 wide and 230 thick laid at 1130 below ground level. For verandah Cement Concrete 1 : 5 : 10 mix 700 wide 150 thick laid at 750 below ground level. The masonry footings for all main walls shall be in Random Rubble Masonry in Cement Mortar(CM) 1 : 6. The first footing being 750 x 450 and second footing being 600 x 450. The masonry footing for verandah footing 450 x 600.

2. Basement:

For all main walls the basement shall be in Random Rubble masonry in CM 1 : 6, 450 wide and 600 thick above ground level. For verandah the basement shall be 300 wide and 600 thick above ground level. A damp proof course in CM 1 : 3, 20 thick shall be provided at basement level for all walls. Inside the basement quarry dust /sand filling shall be 440 thick.

3. Super structure:

For all main walls super structure shall be in brick work in cement mortar 1 : 5 with 230 thick. The height of the main walls shall be 3050 above floor level, and for verandah 2100 above floor level. One brick pillar 230 x 230 thick shall be provided with brick work in CM 1 : 5. All the walls shall be plastered with CM 1 : 4 externally and CM 1 : 6 internally with 12.5 thick. Parapet walls shall be 230 thick and 600 high shall be provided all round.

4. Roofing:

The roofing shall be of R.C.C. 1: 1.5 : 3 mix, 120 thick flat slab over verandah and all other rooms. A weathering course 100 thick and finished with one layer of hydraulic pressed tiles of size 250 x 250 x 20 in CM 1:3 with water proofing compound.

5. Lintel:

All the internal openings shall be provided with R.C.C. lintel 1 : 1.5 : 3, 150 thick. All the external openings shall be provided with R.C.C. lintel cum sunshade of 1 : 1.5 : 3 mix, 600 wide. R.C.C lofts shall be provided with 600 wide in kitchen, store and bedroom.

6. Flooring:

The flooring shall be in cement concrete 1 : 4 : 8, 120 thick over that floor finish with vitrified floor tiles with cement mortar 1 : 3, 40 thick.

7. Steps:

Steps shall be in Brick work in CM 1 : 5 laid over 1100 x 150 thick cement concrete 1 : 5 : 10 footing. Rise 200 Tread 300. Hand rails are provided in the verandah.

8. Doors, Windows, Ventilators etc.,

D1	- Paneled door	-	1000 x 2100
D2	- Paneled door	-	750 x 2100
W1	- Glazed window	-	1500 x 1200
W2	- Glazed window	-	1200 x 1200
V1	- Ventilator Glazed	-	900 x 600
O	- Opening	-	1000 x 2100

Note:

1. All dimensions mentioned are in millimeters.
2. Assume any other dimensions if necessary and mention the same in the drawing.

Draw to a suitable scale the following views with required dimensions and details.

1. Plan at window sill level (30 Marks)
2. Section on AB (30 Marks)
3. Front elevation (20 Marks)