

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER – 2020**

BUILDING PLANNING AND DRAWING

[Maximum Marks: 75]

[Time: 2.15 Hours]

[Note: 1. Question No.II is Compulsory.
2. Missing Data can be suitably assumed.
3. A₂ Size drawing sheet to be supplied.]

PART-A

I. Answer any five questions in one or two sentences. Each question carries 1 mark.

1. Write any three classification of building based on their occupancy.
2. Define floor area.
3. Write the minimum area of a bathroom as per building rules.
4. Define plinth area.
5. What are the documents to be submitted for a building permit?
6. Write different types of roofs.
7. Define basement floor.
8. Differentiate between clear span and effective span.
9. Define bridge and culvert.
10. Define Orientation of building.

(5x1=5)

PART-B

II. (a) Prepare the line plan for a residential building to suit for a plot of 18 x 20 Mtr. Size based on the rules and regulations of KMBR, should contain the following details:

(i) VERANDHA	6.4 m ²
(ii) LIVING HALL	26.5 m ²
(iii) DINING HALL	10.5 m ²
(iv) BED ROOM	20 m ²
BED ROOM	19 m ²
(v) KITCHEN	14 m ²
(vi) ATTACHED TOILET –2 Nos	4.5 m ²
(vii) STORE	6 m ²

A Road 4 mtr. Wide passing along the 20 mtr. Side of the plot, which is in the East-West direction.

(25)

(b) The line plan shows the layout of residential building. Draw the fully dimensioned (Fig.I)

(i) Plan (ii) Section along A-A

Missing data can be assumed.

Details:

(i) Bed concrete for foundation, PCC 1:5:10 – 80cm x 20cm

(ii) RR masonry in C.M. 1:6 for foundation – 60cm x 50cm

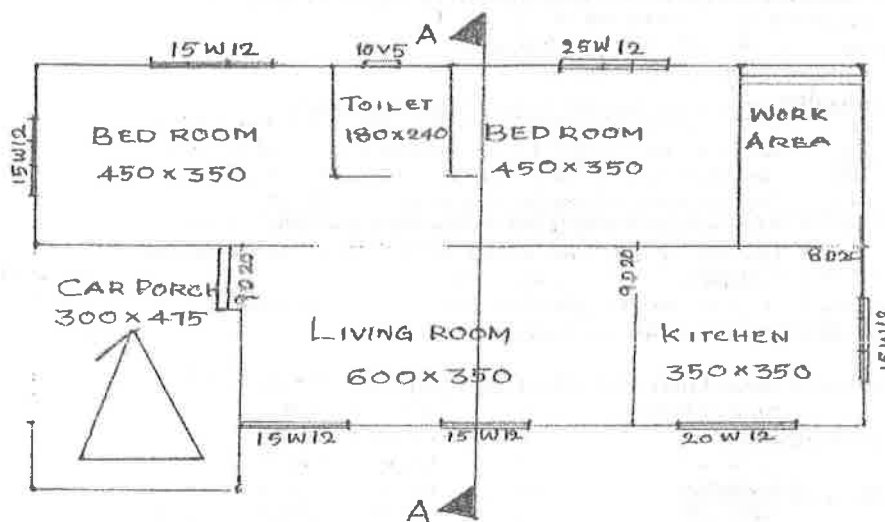
(iii) Basement RR masonry in C.M. 1:6, - 45cm x 50 cm

(iv) Superstructure 20cm brick masonry in CM 1:6

(v) RCC roof slab 10cm thick with a room height 3.1 Mtr.

Provide suitable Lintels, Sunshade, Doors, Windows and Ventilators wherever necessary.

(15 + 15)



LINE PLAN.

FIG- I

ALL DIMENSIONS ARE IN CM

Answer any one question from III to VI

III. Draw the suitable scale the elevation and sectional plan of a fully panelled door with the following specification.

Size of door	-	100cm x 200cm
Size of frame	-	9cm x 7cm
Style	-	9.5cm x 3.5cm
Kick rail	-	15cm x 3.5cm
Lock rail	-	15cm x 3.5cm
Mid rail	-	9.5cm x 3.5cm
Top rail	-	8.5cm x 3.5cm
Panels	-	1.6cm Thick

(15)

OR

IV. The details of couple roof with Lean to roofs on both side (one side lean to roof rests on wall and other side lean to roof rest on post of 20 x 20cm size) given below:

Details:

Couple roof:- Main wall thickness 30cm, 300cm effective span

- Ridge piece - 8cm x 20cm
- Rafter - 5cm x 12cm
- Wall plate - 15cm x 10cm

Lean to roof:- Wall thickness - 30cm, 300cm effective span

- Corbel stone @ 200cm c/c
- Wall plate - 15cm x 10cm
- Bressumer - 10cm x 20cm

(a) Draw to suitable scale the cross sectional elevation of couple roof with lean to roof. (10)

(b) Connection between the bressumer, common rafter and cornel stone. (5)

OR

V. Draw the half sectional elevation of and RCC slab culvert to a suitable scale with the following details. (half along C/L of waterway and half showing details of returns)

- Width of roadway - 4 mtr.
- Span - 1.5 mtr.
- Bed Level - +97.00 mtr.
- Foundation Level - +96.40 mtr.
- Road Level - +98.30 mtr.

Thickness of abutment and wingwall 400mm Though out height

- Thickness of slab - 200mm
- Thickness of wearing coat - 100mm
- Height of Parapet - 800mm

Returns are square, projecting 1200mm from the earth face of the abutment. (15)

OR

VI. Draw the service plan of the building shown in figure II to a suitable scale. (15)

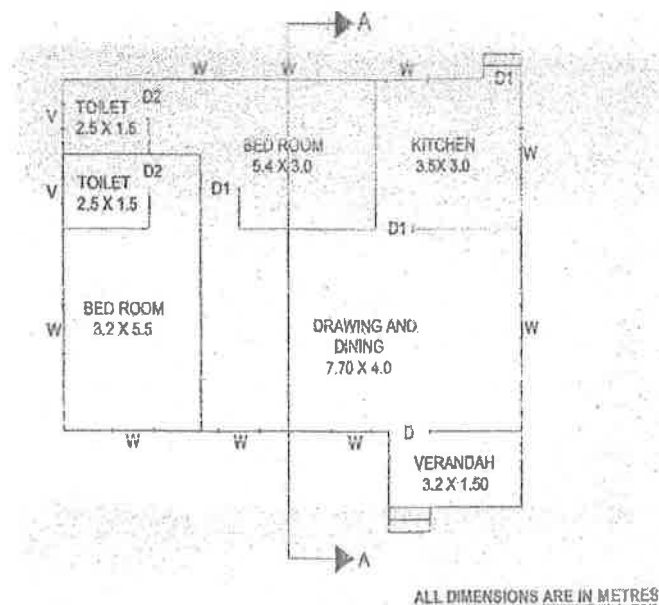


Figure II