07 TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2075 Bhadra

Exam.	Regular		
Level	BE	Full Marks	30
Programme	BCE	Pass Marks	12
Year / Part	II / II	Time	3 hrs.

Subject: - Building Drawing *(AR556)*

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ *Attempt **All** questions.*
- ✓ *The figures in the margin indicate **Full Marks**.*
- ✓ ***Necessary figures are attached herewith.***
- ✓ *Assume suitable data if necessary.*

1. Mention the different elements in superstructure of a building. [2]
2. Draw hatching for the following material representation. Use 5 cm× 5 cm area for each hatching [2]
   i) Glasselevation
   ii) Concrete elevation
   iii) Stonesection
   iv) Gravel elevation
3. Draw the figure of light plane as per building by-laws. Mention the right of way (row) to constrain the height of the building. [2]
4. Redraw the provided floor plan of building as shown in figure below using appropriate drawing techniques with description given below. Use scale 1" =4'-0". [12]

Column size	: 12" x 12"
Wall thickness	: 9" (External), 4" (Internal)
Slab thickness	: 5"
Parapet wall height	: 3'
Plinth height	: 1'-6"
Size of beam	: 9" x 14"
Sill height	: 3'
Lintel height	: 7'-6"
Floor height	: 10'-5"
Thickness of sill band	: 3"
Thickness of lintel band	: 5"
Size of plinth beam	: 9" x 9"
Riser	: 7"
Tread	: 11"

Door D1	: 3'-6"x7'-6"
Door D2	: 3'-0"x7'-6"
Door D3	: 2'-6"x7'-6"
Window W	: 6'-0"x4'-6"
Window W1	: 4'-6"x4'-6"
Ventilation V	: 2'-0"x2'-0"

5. Draw the plan and the section of footing of a column given in question no.4 in scale 1" = 1'-0" with following information. [6]
   - The size of footing is 5'-0"×5'-0" and depth of footing is 5'-0" below the GL
   - 8 numbers of 16 mmϕ vertical bars in column and 8mmϕ stirrups @5"c/c
   - 12mmϕ bars on footing jali @6"c/c both ways
   - Assume other necessary data, if necessary
6. Draw elevation and vertical and horizontal detail section of typical wooden panel door. The size of door is 3'6"×7'6" double panel door. [6]
   - Elevation: (Scale 1"=2'-0")
   - Detail sections: (Scale 1"=1'-0")

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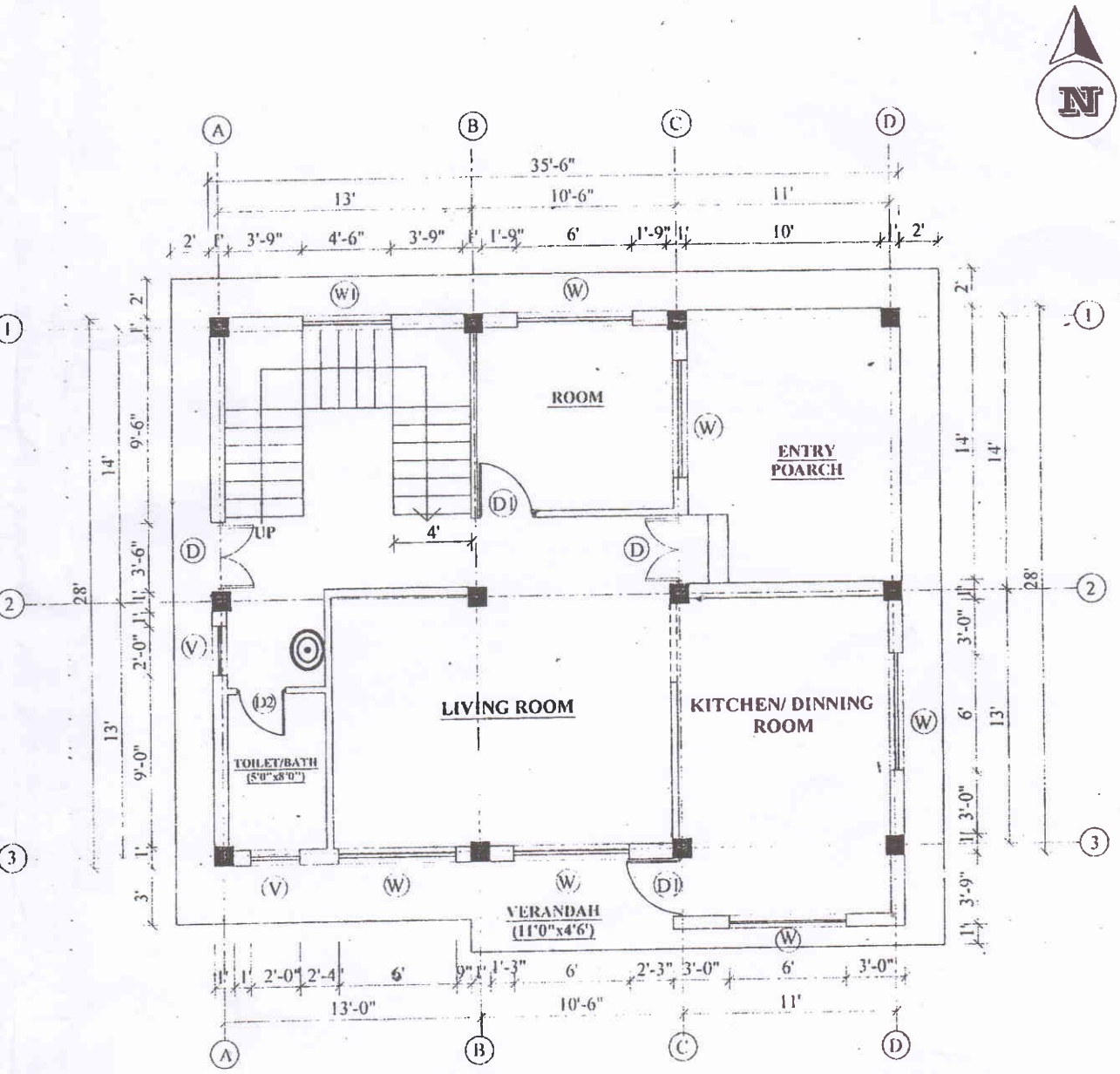

FLOOR PLAN

(AREA= 1040.0 SQ. FT., STEP TREAD = 12", RISER = 6")

07 TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2074 Bhadra

Exam.	Regular		
Level	BE	Full Marks	30
Programme	BCE	Pass Marks	12
Year / Part	II / II	Time	3 hrs.

Subject: - Building Drawing *(CE556)*

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ *Attempt **All** questions.*
- ✓ *The figures in the margin indicate **Full Marks**.*
- ✓ ***Necessary figures are attached herewith.***
- ✓ *Assume suitable data if necessary.*

1. Calculate the permissible built up area and maximum no. stories if the plot area is 0-5-3-1, permissible ground coverage is 60% and floor area ratio (FAR) is 1.5. [2]
2. Draw a light plane and right of way (ROW) as per building bye-laws. [2]
3. Fill in the blank spaces: [2]
   a) Beam above the opening is called.....
   b) Minimum width of the stair in residence is.....
   c) The size of the single shutter wooden frame is.....
   d) The standard size of Nepali brick is.....
4. Redraw the given Floor Plan with appropriate drafting techniques with all necessary information. Use scale 1"= 4'- 0". [12]
5. Draw a Wall Section through foundation to parapet level at A-A shown in given plan of two storied building. Mention the levels, floor details (ground and upper), Toe wall detail and walls with 12mm plaster on both sides. Use scale 1:24 [12]

Descriptions:

1. Column size : 12" x 12"
2. Wall thickness (ext./int.): 9"/4"
3. Plinth height : 1'-6"
4. Sill Height : 3"
5. Lintel Height : 7'
6. Floor Height : 9'-4"
7. Slab Thickness : 5"
8. Parapet Height : 3'
9. Plinth Beam : 9" X 9"
10. Floor Beam : 9" X 14"
11. Slab projection : 1'-6"
12. Lintel Band : 6"
13. Sill Band :3"
14. Riser : 7"
15. Tread: 11"
16. Window Height: 4'

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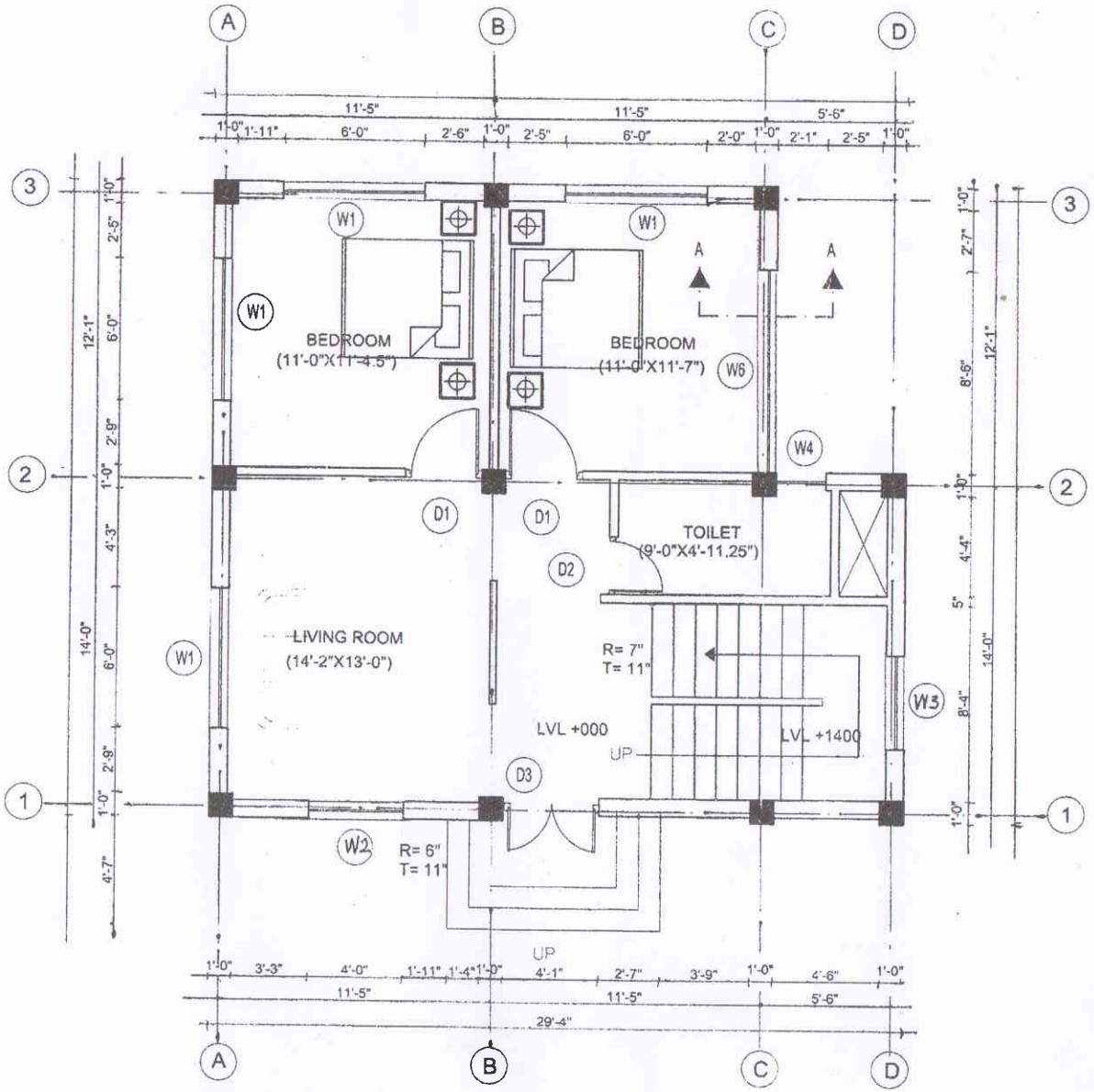

GROUND FLOOR PLAN

AREA : 889.23 SQ.FT

07 TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2073 Magh

Exam.	New Back (2066 & Later Batch)		
Level	BE	Full Marks	30
Programme	BCE	Pass Marks	12
Year / Part	II / II	Time	3 hrs.

Subject: - Building Drawing *(CE556)*

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ *Attempt **All** questions.*
- ✓ *The figures in the margin indicate **Full Marks**.*
- ✓ ***Necessary figures are attached herewith.***
- ✓ *Assume suitable data if necessary.*

1. Draw the hatching symbols of the following in the box of 40mm×40mm. [2]
   i) Brick in section
   ii) Concrete in section
   iii) Glass in elevation
   iv) Wood in section
2. Draw / Fill in the gap with appropriate words. [2]
   i) Structure bellow the group is called .....
   ii) Draw the symbol of four gang one way switch
   iii) Exit pipe (outlet) from WC (water close) is called .....
   iv) Minimum parapet height of residence building is .....
3. Calculate the permissible built-up area and number of stories. If FAR is 1.75, plot area is 1480 sq ft and ground coverage is 60% of plot area. [2]
4. Draw the figure of light plane and ROW (right of way) as per building bye-laws to constrain the height of building. [2]
5. Redraw the given ground floor plan with complete dimensions (3 layers) by showing grid, hatching and all necessary information as required. (use 1:50 scale) [12]

Description	Door/Windows Schedule	
	Symbol	Width
Column size : 300 x 300	D1	1000
Wall thickness : 230/110 (external/internal)	D2	900
Tread Width: 275	D3	750
Riser Height: 175	W1	2500
Landing Width: 1000	W2	2000
	W3	1800
	W4	900
Note: All dimensions are in mm.	W5	1000

6. Make a footing detail (plan and section) of footing B2 in scale 1:20. [4]

Column Type	Foundation Plan L x B (m)	Max. Thickness t_m (mm)	Reinforcement Each Way
Corner	1.25 x 1.25	300	6 – 12Φ
Face	1.4 x 1.4	300	7 – 12Φ
Interior	1.7 x 1.7	400	8 – 12Φ

7. Draw the vertical and horizontal detail section of typical wooden glazed window (Wz) in scale 1:10. [6]

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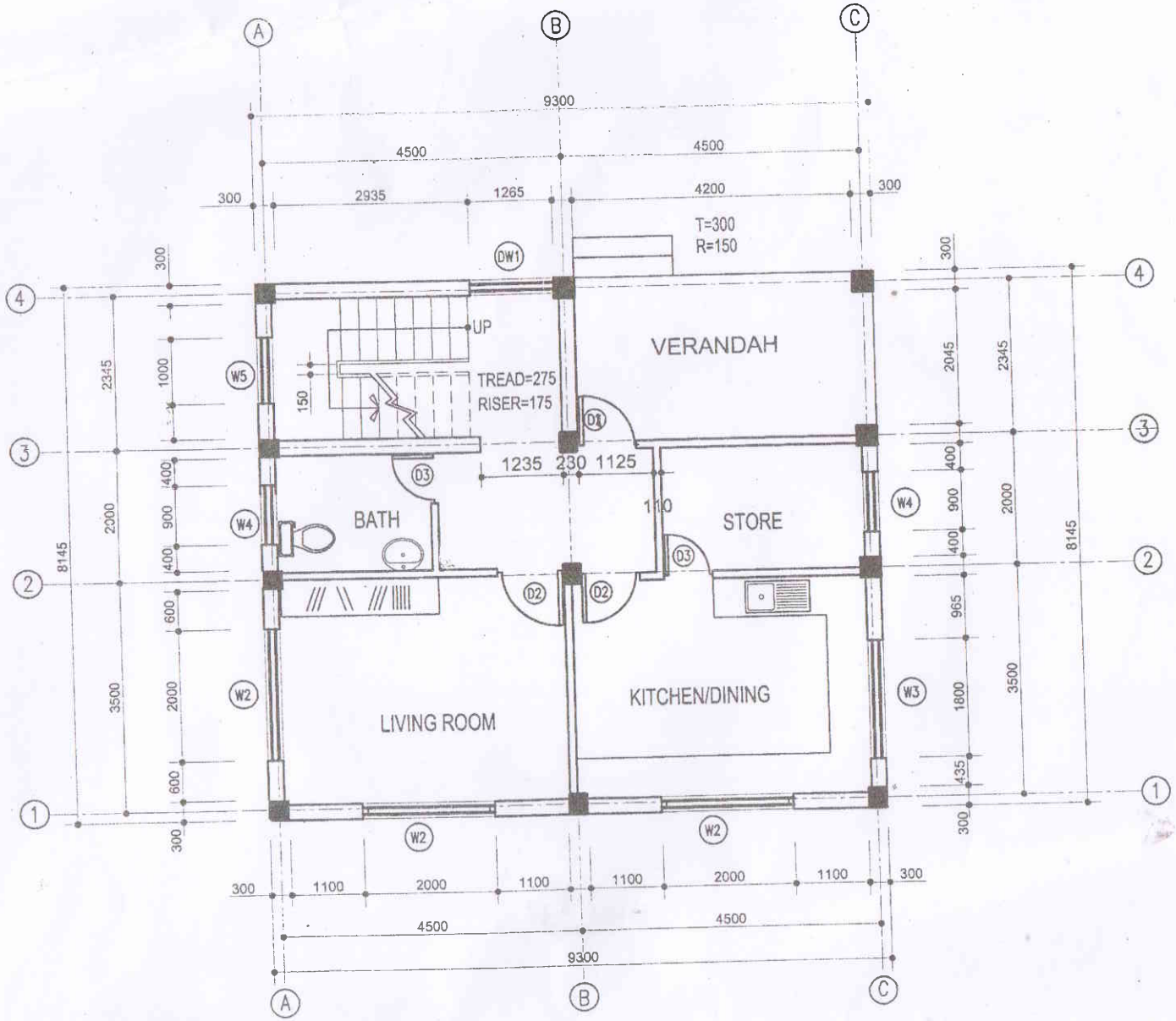

GROUND FLOOR PLAN

07 TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2071 Bhadra

Exam.	Regular / Back		
Level	BE	Full Marks	30
Programme	BCE	Pass Marks	12
Year / Part	II / II	Time	3 hrs.

Subject: - Building Drawing *(CE556)*

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ *Attempt **All** questions.*
- ✓ *The figures in the margin indicate **Full Marks**.*
- ✓ ***Necessary figures are attached herewith.***
- ✓ *Assume suitable data if necessary.*

1. a) List down different building elements in sub-structure and super-structure. [2]

   b) Draw hatching pattern for the following material representation. Use 5 cm × 5 cm area for each symbol. [2]

      i) Glass in elevation
      ii) Wood in section

   c) Explain Floor Area Ratio (FAR). [2]

2. Redraw the given ground floor plan of load bearing structure by showing complete dimensions (3 layers) grid, lettering, hatching etc. (Use 1:50 scale) [12]

3. Make a detailed drawing of staircase as given in the attached drawing. Mention the necessary levels, floor details (ground and upper) and other information. (Use 1:20, 1:10, 1:15 scale) [12]

Description

Wall thickness: 230 (external/internal)
Plinth Height : 450
Floor Height : 2450
Slab Thickness : 100
Plinth Beam : 230 × 230
Floor Beam : 230 × 350
Tread Width : 230
Riser Height : 175
Stair Width : 1000
Landing Width : 1000

Door / Windows Schedule

Symbol	Width
DW1	2600
D1	1000
D2	900
D3	750
W1	2000
W2	1800
W3	900

Note: All dimensions are in mm.

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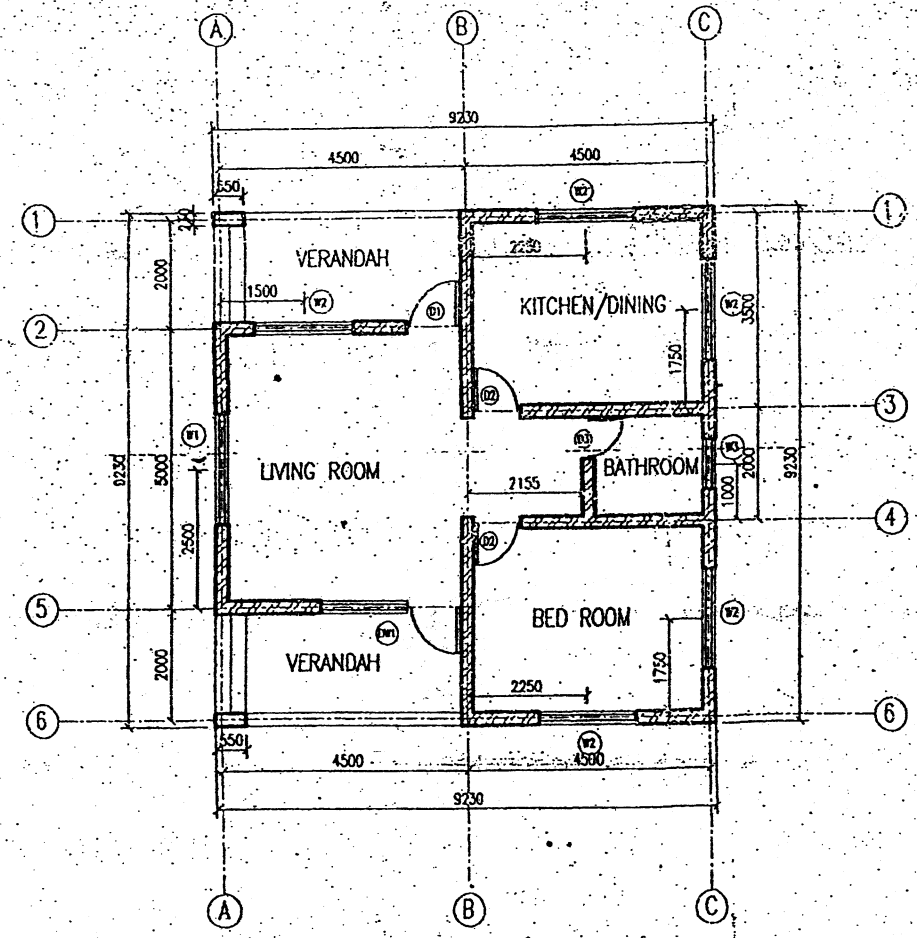
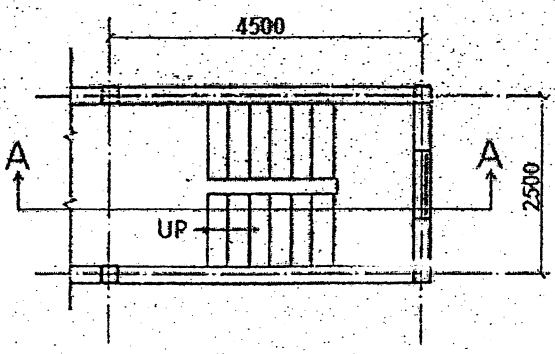
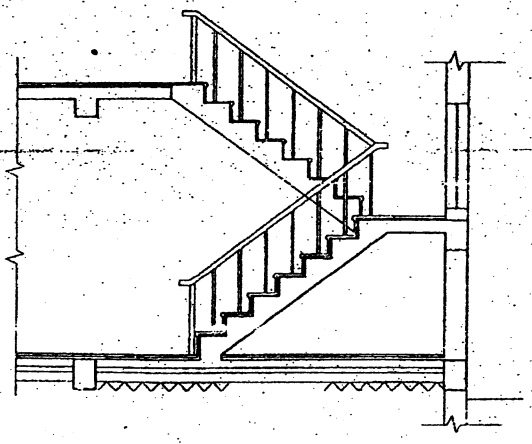


PLAN



Plan



Section at A-A

04 TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2071 Magh

Exam.	New Back (2066 & Later Batch)		
Level	BE	Full Marks	30
Programme	BCE	Pass Marks	12
Year / Part	II / II	Time	3 hrs.

Subject: - Building Drawing *(AR556)*

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ *Attempt **All** questions.*
- ✓ *The figures in the margin indicate **Full Marks**.*
- ✓ ***Necessary figures are attached herewith.***
- ✓ *Assume suitable data if necessary.*

1. Calculate the permissible built-up area and number of storey's that can be built with plinth area of 820 sq. ft. The area of plot is 1369 sq. ft. and ground coverage is 60% where FAR is given 1.5 as per building bye-laws. [2]
2. Make the figure of light plane and ROW (right of way) as per building bye-laws to constrain the height of building. [2]
3. Write short answers on: (any two) [2]
   a) Minimum Parapet height of residence building is .....
   b) One ropani is equal to ..... sq. ft.
   c) Draw the symbol of MDB and 4 gang of one way switch.
   d) What is soil line connected to before it is connected to the soak pit?
4. Draw Ground Floor Plans of the building as shown in the Figure 1, using appropriate drafting techniques. Refer to the description provided below. [12]

Drawing unit	: Metric system (All dimensions in mm)
Scale	: 1:50
Column size	: 230 × 230 c/c spacing - as shown in figure
Wall thickness	: Exterior: 230; Interior: 110
Door D1	: 1000 × 2100
Door D2	: 900 × 2100
Window W1	: 1800 × 1200
Window W2	: 1000 × 1200
Window W3	: 750 × 1200
Ventilation V1	: 400 × 400
Plinth Level	: 450 above ground level
Dimensioning	: - 3 layer dimension for floor plan - Floor Levels
Hatching	: as required

   Assume any other dimensions are required.
5. Draw staircase detail (Plan and section at A-A) with detail dimensions, labelling and using appropriate drafting techniques, in scale 1:20, as given in Figure 2. Use the description given below: [12]

   All dimensions are in millimeter. Assume any other dimensions as required.

Floor Height: 2800, Beam size: 230 × 350, Column size: 230 × 230 (c/c spacing - as shown in figure), Wall Thickness: 230, Plinth Level: 750 above Ground Level.

Stair Steps:

16 risers @ 175
Tread : 300
Stair width : 1000
Waist slab : 125

Slab Thickness : 100
Window size : 1500 × 1100
Lintel Beam size : 230 × 100
Sill height : 900

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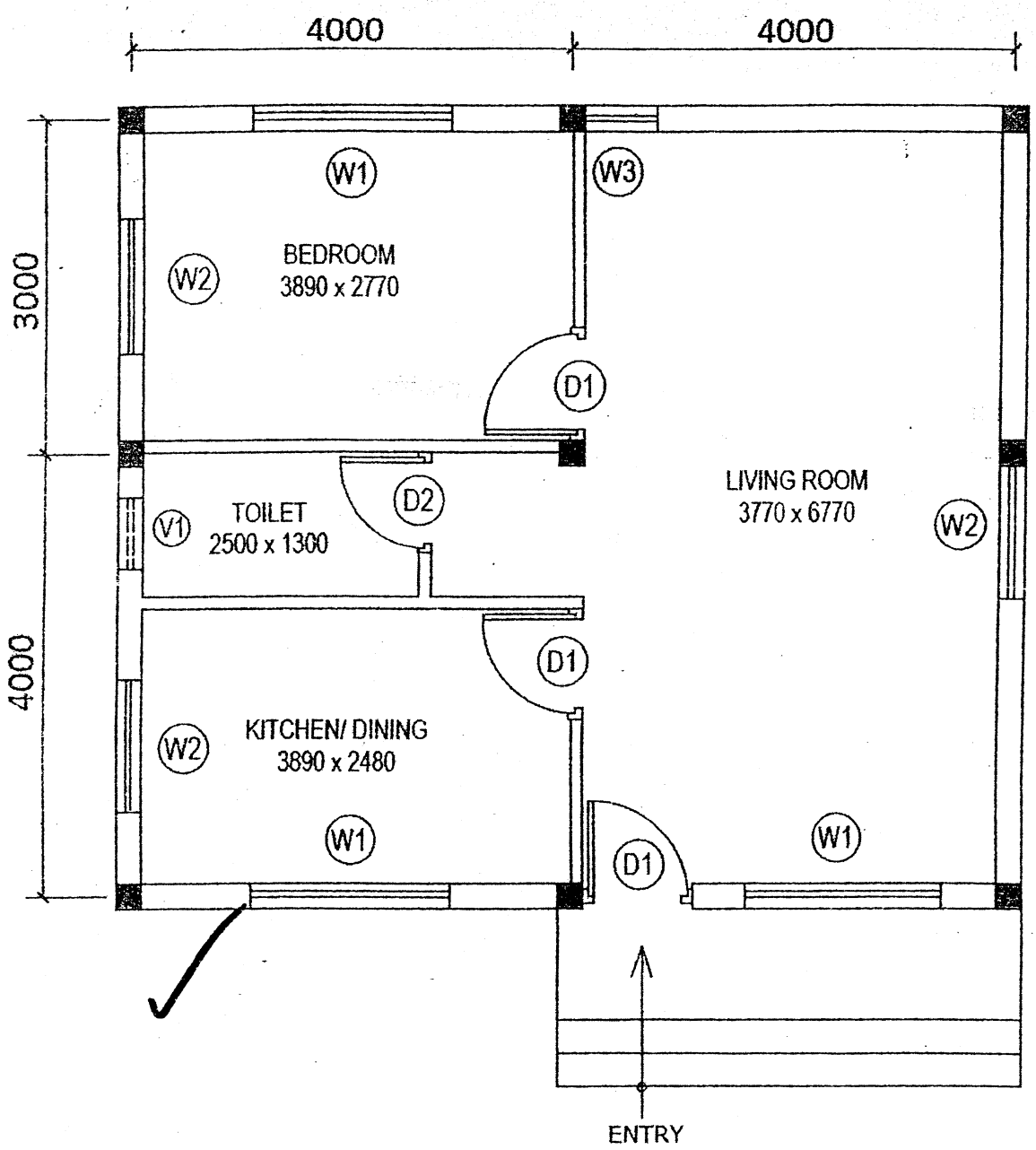
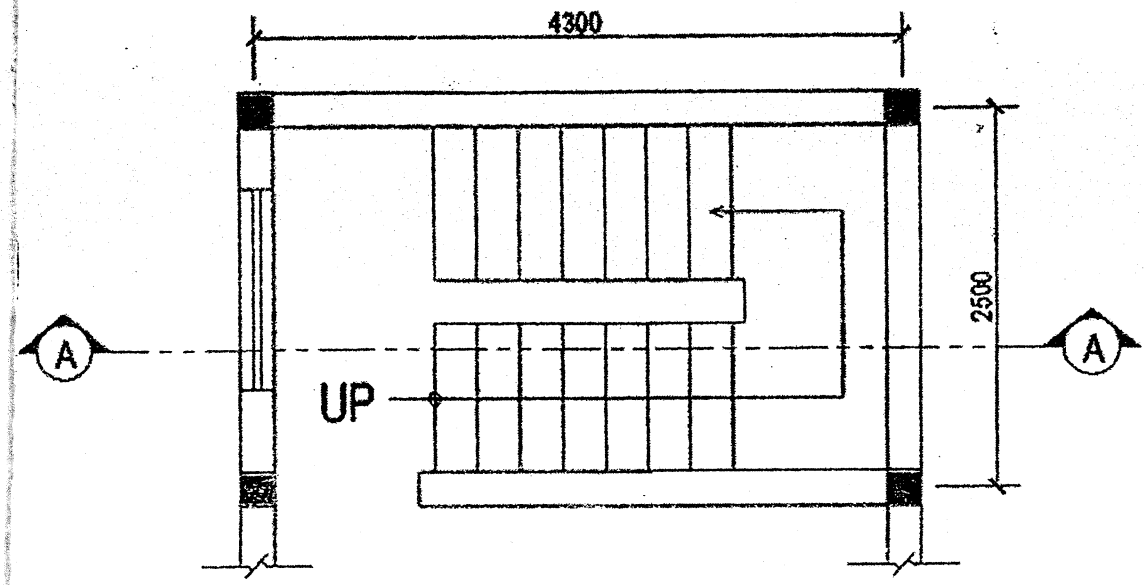
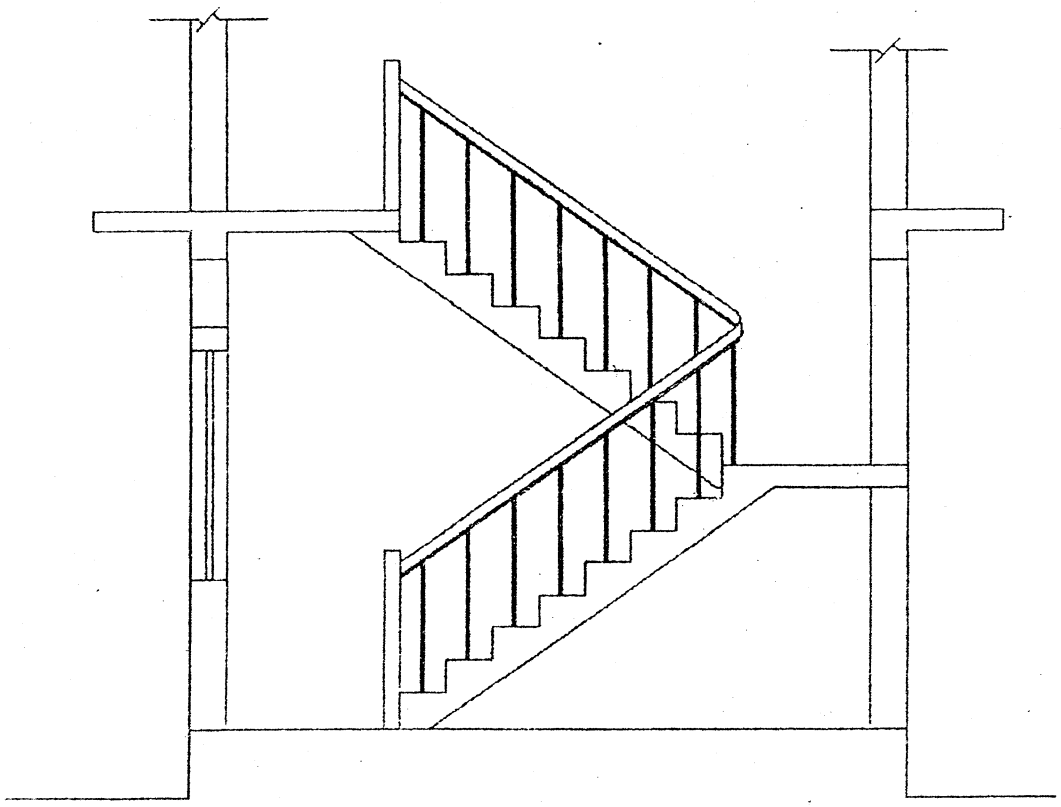


Figure 1: Ground Floor Plan



PLAN (GROUND FLOOR)



SECTION AT A-A

[redacted] Staircase detail (Plan & Section)

06 TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2070 Bhadra

Exam.	Regular		
Level	BE	Full Marks	30
Programme	BCE	Pass Marks	12
Year / Part	II / II	Time	3 hrs.

Subject: - Building Drawing *(CE556)*

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- ✓ *Attempt **All** questions.*
- ✓ *The figures in the margin indicate **Full Marks**.*
- ✓ ***Necessary figures are attached herewith.***
- ✓ *Assume suitable data if necessary.*

1. Draw the hatching symbols in the box of 40×40 mm [2]
   a) Brick in section
   b) Concrete in section
   c) Wood in section
   d) Stone in section
2. Draw the figure of light plane as per building bye-laws. Mention the right of way (ROW) to constrain the height of building. [2]
3. Redraw the following ground floor plan as shown in figure. Make complete dimension (3 layers) by showing all information as required in scale-1:50 [12]
4. Redraw the given wall section through ground level to parapet level. Mention the necessary levels, floor details (ground and upper) and other missing information. Use scale 1:20. [14]

Descriptions:

Column (RCC)	: 230 x 300	Riser	: 175
Wall (Brick)	: 230 / 110 (External/Internal)	Tread	: 250
Slab thickness	: 100 (RCC)	Stair Width	: 1000
Slab projection	: 750	Landing Width: 1000	
Floor Beam	: 230 x 350	**Door/Window Schedule**	
Plinth Beam	: 230 x 230	DW1: 2300 x 2100	
Floor Height	: 2800	W2 : 2000 x 1350	
Sill Height	: 750	W3 : 1800 x 1350	
Sill Band	: 230 x 50	W4 : 900 x 1350	
Lintel Height	: 2100	W5 : 1000 x 1350	
Lintel Band	: 230 x 150	D2 : 900 x 2100	
Parapet Height	: 900	D3 : 750 x 2100	

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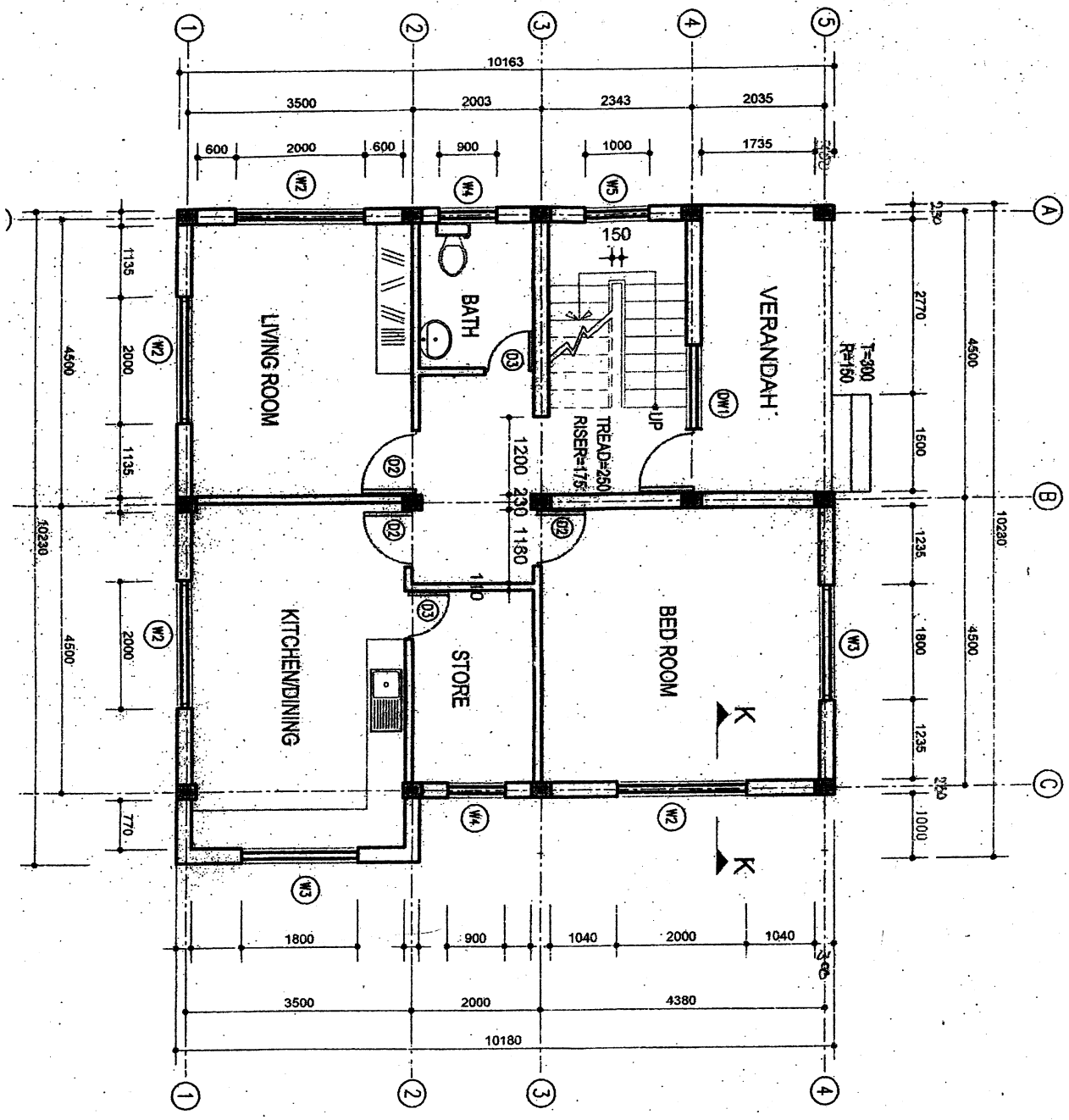
10163
3500
2003
2343
2035
600
2000
600
900
1000
1735
W2
W4
W5
150
LIVING ROOM
BATH
VERANDAH
UP
TREAD=250
RISER=175
T=300
R=150
DW1
02
03
1200
230
1180
110
KITCHEN/DINING
STORE
BED ROOM
K
W3
1135
2000
1135
4500
10230
2770
1500
1235
1800
1235
1000
770
1800
900
1040
2000
1040
3500
2000
4380
10180
A
B
C
1
2
3
4
5

GROUND FLOOR PLAN

06 TRIBHUVAN UNIVERSITY

INSTITUTE OF ENGINEERING

Examination Control Division

2070 Bhadra

Exam.	Regular		
Level	BE	Full Marks	30
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Year / Part	II / II	Time	3 hrs.

Subject: - Building Drawing *(CE556)*

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- ✓ *Attempt **All** questions.*
- ✓ *The figures in the margin indicate **Full Marks**.*
- ✓ ***Necessary figures are attached herewith.***
- ✓ *Assume suitable data if necessary.*

1. Draw the hatching symbols in the box of 40×40 mm [2]
   a) Brick in section
   b) Concrete in section
   c) Wood in section
   d) Stone in section
2. Draw the figure of light plane as per building bye-laws. Mention the right of way (ROW) to constrain the height of building. [2]
3. Redraw the following ground floor plan as shown in figure. Make complete dimension (3 layers) by showing all information as required in scale-1:50 [12]
4. Redraw the given wall section through ground level to parapet level. Mention the necessary levels, floor details (ground and upper) and other missing information. Use scale 1:20. [14]

Descriptions:

Column (RCC)	: 230 x 300	Riser	: 175
Wall (Brick)	: 230 / 110 (External/Internal)	Tread	: 250
Slab thickness	: 100 (RCC)	Stair Width	: 1000
Slab projection	: 750	Landing Width: 1000	
Floor Beam	: 230 x 350	**Door/Window Schedule**	
Plinth Beam	: 230 x 230	DW1: 2300 x 2100	
Floor Height	: 2800	W2 : 2000 x 1350	
Sill Height	: 750	W3 : 1800 x 1350	
Sill Band	: 230 x 50	W4 : 900 x 1350	
Lintel Height	: 2100	W5 : 1000 x 1350	
Lintel Band	: 230 x 150	D2 : 900 x 2100	
Parapet Height	: 900	D3 : 750 x 2100	

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06 TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2069 Poush

Exam.	New Back (2066 & Later Batch)		
Level	BE	Full Marks	30
Programme	BCE	Pass Marks	12
Year / Part	II / II	Time	3 hrs.

Subject: - Building Drawing *(CE556)*

- ✓ Candidates are required to give their answers in their own words as far as practicable.
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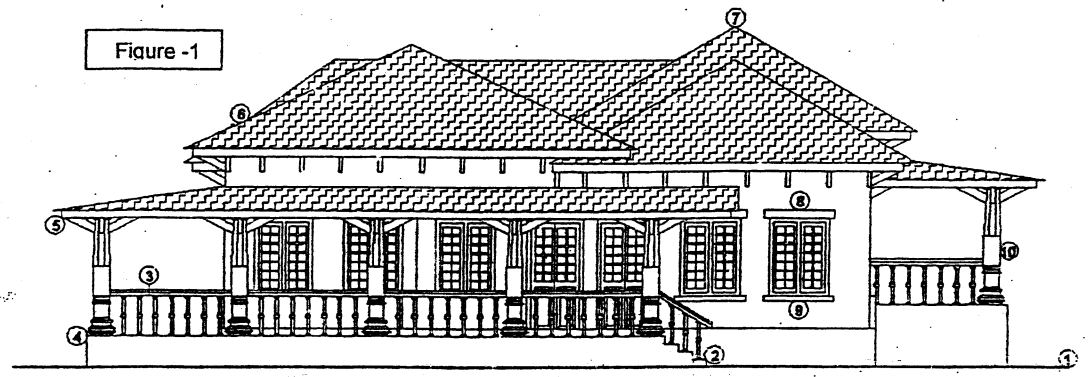
1. Write down the name of the different parts of a building as shown in the figure-1 below. [1]

Figure -1



2. Draw the architecture symbol of rubble stone masonry and brick masonry in the box size 5cmx5cm. [0.5x2]

3. What is the angle of light plane? If road width is 12' for any plot calculate the permissible maximum height of the building. [1]

4. Redraw the following ground floor plan with complete dimensions (3 layers) by showing all information as required in scale 1:50 [12]

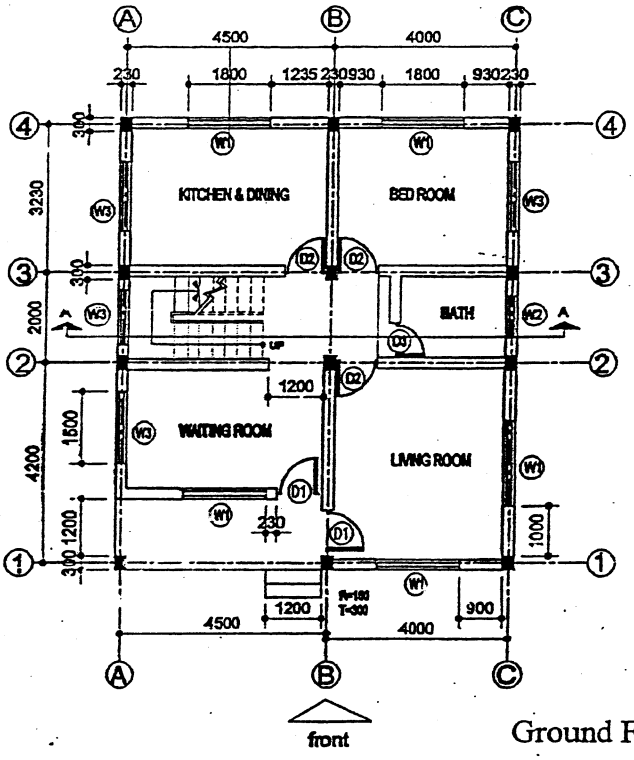
Description	
Column (RCC)	: 230 x 300
Wall(Brick)	: 230 (External/Internal)
Slab thickness	: 100(RCC)
Slab projection	: 600
Parapet Height.	: 750
Beam	: 230 x 350
Plinth	: 450
Floor Height	: 2800
Riser	: 175
Tread	: 250
Sill Height	: 900
Lintel Height	: 2100
Plinth Beam	: 230x230

Doors and Windows Schedule

TYPE	WIDTH	HEIGHT
D1	1000	2100
D2	900	2100
W1	1800	1200
W2	900	1200
W3	1500	1200
D3	750	2100

STAIRCASE

i) Stair width : 1000
ii) waist slab : 150
iii) Landing Width : 1000
iv) hand rail : 65 x 100
v) height : 900
vi) Baluster : 40 dia.



Ground Floor Plan

5. Draw elevation and vertical and horizontal detail section of a typical wood frame-glazed/glass window. The size of window is 7'×4'6". Three panel window having central panel fix and two side panels are openable. There is no ventilator on window.

   i) Elevation: (scale 1" = 2'0")

   ii) Vertical and horizontal detail sections (scale 1" = 1'0") [5]

6. Draw the staircase detail of given above ground floor plan [3+3]

   (i) Plan (scale: 1:25) (ii) section (scale 1:25)

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06 TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2069 Bhadra

Exam.	Regular (2066 & Later Batch)		
Level	BE	Full Marks	30
Programme	BCE	Pass Marks	12
Year / Part	II / II	Time	3 hrs.

Subject: - Building Drawing *(CE556)*

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ *Attempt **All** questions.*
- ✓ *The figures in the margin indicate **Full Marks**.*
- ✓ ***Necessary figures are attached herewith.***
- ✓ *Assume suitable data if necessary.*

1. Explain the types of drawings, what are the minimum drawings for a municipality pass drawing sheet? [2]
2. Draw hatching for the following material representation. Use 5cm×5cm area for each hatching a) Brick elevation (b) Concrete elevation (c) Liquid elevation (d) Gravel elevation. [2]
3. If ground coverage is 80%, calculate the permissible ground coverage area of given plan figure 1. [1]
4. Fill in the gap with appropriate words (use drawing sheet as answer paper) [0.5×4]
   a) Scale for Kathmandu valley's map is .....(1:20,000, 1:10 or 1:100)
   b) Draw the symbol of dome light (ceiling light) and single tube light.
   c) Exit (outlet) pipe from WC/Pan in a toilet is known as ..... pipe.
   d) The name of drawing send to construction purpose at site is ..... drawing.
5. Redraw the given ground floor plan(figure 1) including walls, columns, grid lines, dimensions, hatching and all complete information. (Scale 1:100) [12]
6. Draw the trench plan of the given plan (figure 1). Draw typical footing detail plan and section of footing B2. (Scale 1:50) [4+3+4]
   - The size of footing B2 and C2 are 3m×3m×2.5m
   - All other footing sizes are 2m×2m×2m
   - Wall thickness is 230mm and 110 refer plan
   - d) 6 number 16mm main vertical bars on pillars and 8mm diameter stirrups @5" c/c
   - e) Lowermost jali 10mm diameter bars @6"c/c both ways, grade of concrete is M20
   - f) Assume necessary data if necessary

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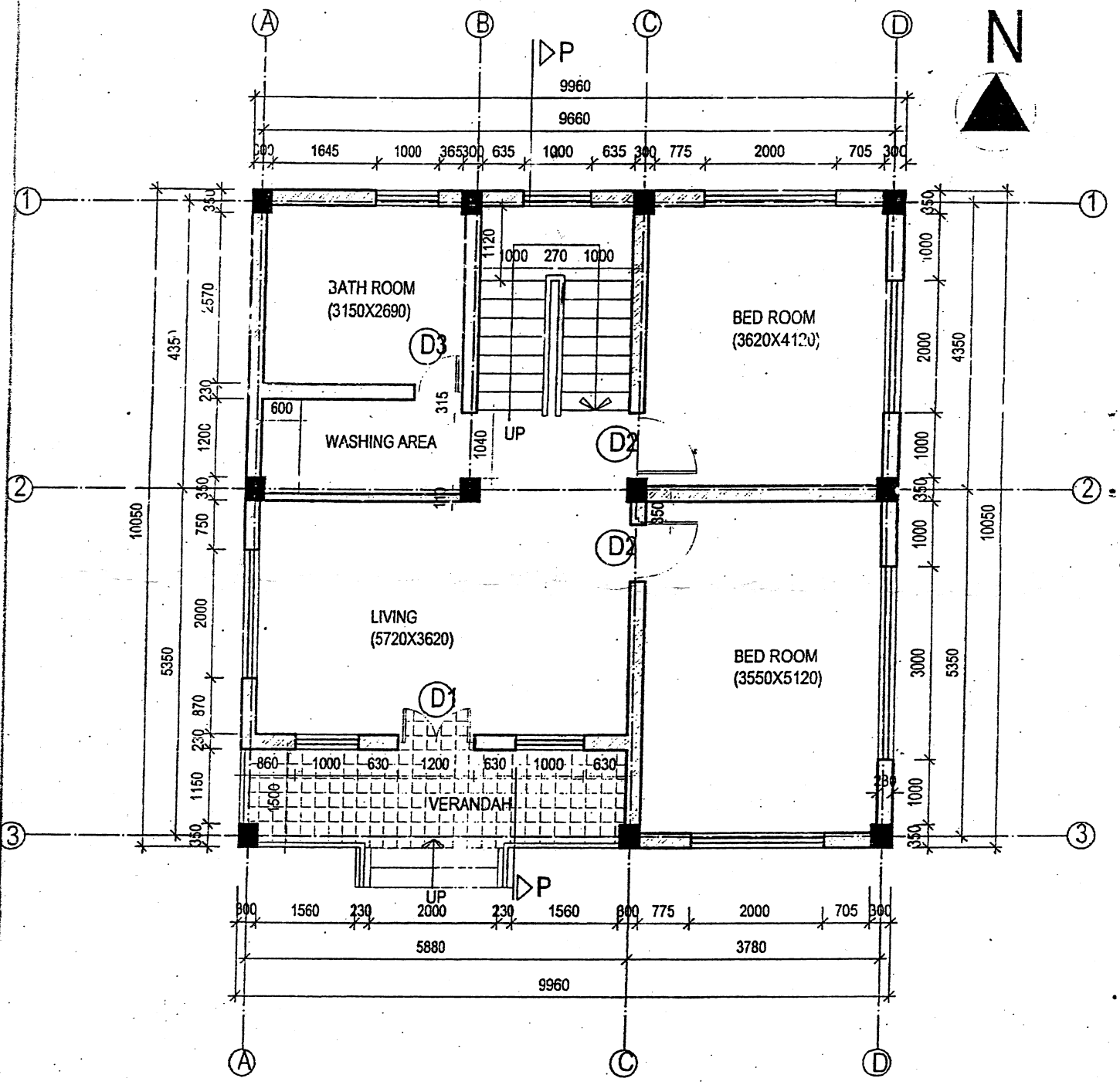


GROUND FLOOR PLAN

FIG 1 (wall thickness is 230mm except specified)

All dimensions are in mm

06 TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2068 Magh

Exam.	New Back (2066 & Later Batch)		
Level	BE	Full Marks	30
Programme	BCE	Pass Marks	12
Year / Part	II / II	Time	3 hrs.

Subject: - Building Drawing

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ *Attempt <u>All</u> questions.*
- ✓ *The figures in the margin indicate <u>**Full Marks**</u>.*
- ✓ ***<u>Necessary figures are attached herewith.</u>***
- ✓ *Assume suitable data if necessary.*

1. a) Mention building types, based on structural system. [2]

   b) Draw hatching pattern for the following material representation. Use 5cm×5cm area for each pattern. [2]

   i) Wood in section ii) Glass in elevation
   iii) Stone in section iv) Tile

   c) Draw the figure of light plane as explained in bye-laws. [2]

2. Redraw Ground floor plan as given in figure2, based on description given below. (Scale 1"= 8'-0") [12]

1. Column size – 9" x 12"
2. All wall thickness – 9" (External/ Internal)
3. Plinth height – 2'
4. Floor height – 9'4"
5. Slab thickness – 4"
6. Parapet height – 3'
7. Plinth beam – 9" x 9"
8. Floor beam – 9" x 14"
9. Slab projection – 1'6"
10. Sill height – 3'
11. Lintel height – 7'
12. Lintel band thickness – 6" RCC
13. Riser height – 7"
14. Tread width – 11"

Doors and Window Schedule

SN	Symbol	Width	Height
1	D1	4'	7'
2	D2	3'	7'
3	D3	2'6"	7'
4	W1	6'	4'
5	W2	4'	4'
6	W3	3'	4'

3. Draw the staircase with detail dimension, complete labeling and using appropriate drafting techniques, in scale 1:20, as given in figure 3, based on the description given below. [12]

   Steps:

   - 14 risers @ 180
   - Tread:300
   - Stair width: 1000
   - Waist slab: 125

7

Floor height: 2520, Beam size: 230×300, wall thickness: 230, Plinth level: 600 from ground level.

Ground floor details:

- Marble floor finish
- 20mm screed
- 75 thk PCC
- Flat brick soling
- 100mm sand filling
- Earth compaction

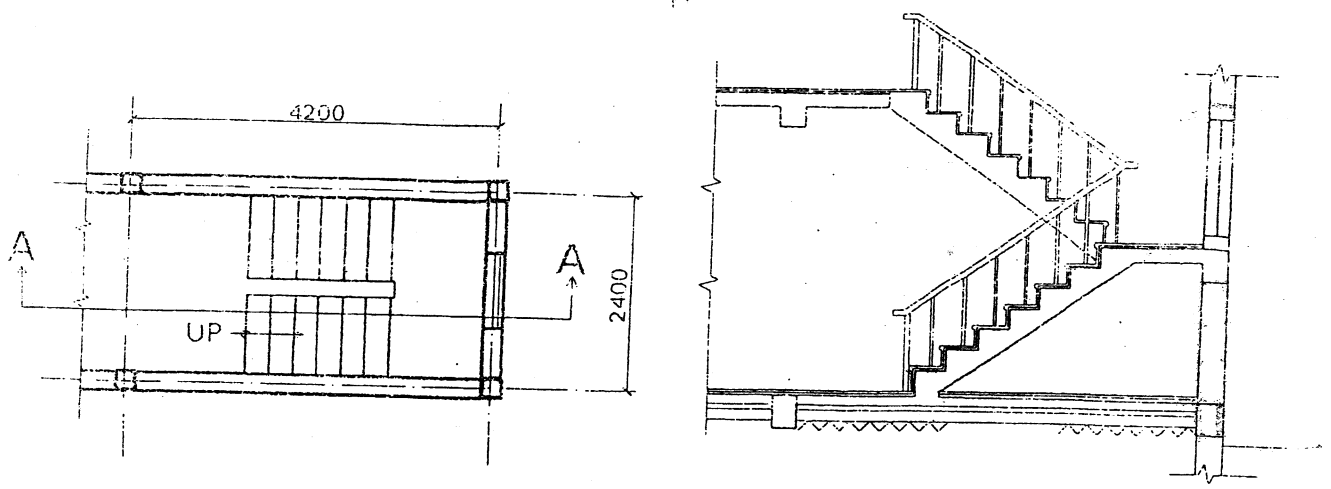
First floor Details:

- Marble floor finish
- 20mm screed
- Floor slab: 125
- Cement plaster: 12mm

All dimensions are in millimeter. Assume any other dimensions as required.

OR

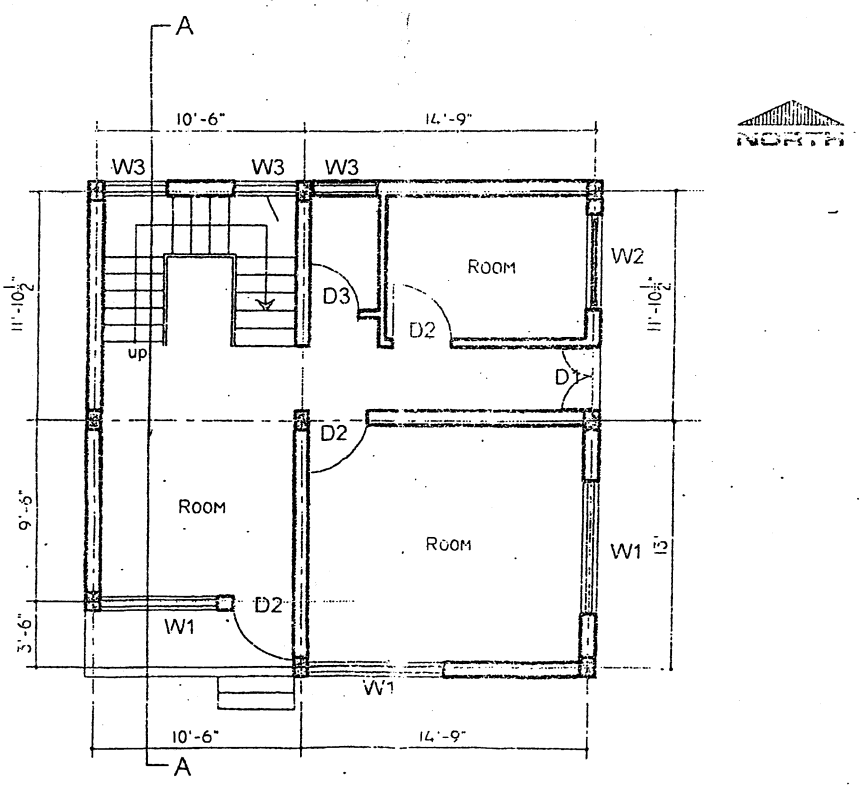
Draw the complete section through the window from footing to parapet. Write the name of all parts and give the dimension also. Take the necessary data from question no. 2 and assume the other necessary data if required. (Scale 1"= 2'-0") [12]



Plan

Section at A-A

Figure 3: Staircase detail



GROUND FLOOR PLAN

Floor Area =635.96 sq. ft.

Fig. 2

A

Building Drawing -2068 Magh

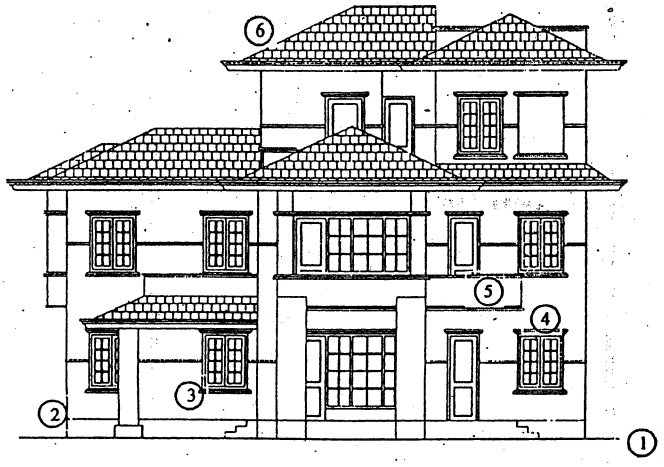
06 TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2068 Bhadra

Exam.	Regular		
Level	BE	Full Marks	30
Programme	BCE	Pass Marks	12
Year / Part	II / II	Time	3 hrs.

Subject: - Building Drawing

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ *Attempt <u>All</u> questions.*
- ✓ *The figures in the margin indicate <u>Full Marks</u>.*
- ✓ ***<u>Necessary drawing sheet are attached herewith.</u>***
- ✓ *Assume suitable data if necessary.*

1. Write down the name of the different parts of a building as shown in the figure below. [0.5×6]



2. Draw the hatching symbol of Brick section and Earth. Box size for hatching is 4cm ×4cm.[0.5×2]
3. Redraw the given ground floor plan of figure 2 in detail including wall line, dimension, grid line, hatching and internal information. (Scale 1:100) [7+2+1+1+1]
4. Redraw the footing detail of a column in detail including pillar reinforcement detail, footing reinforcement in plan and section as shown in the figure 3. (scale 1:10, 1:20, 1:20) [2+5+5]

OR

Draw the plan (with appropriate drafting techniques and labeling) as shown in the figure 4, in 1:20 metric scale. Assume any dimensions as required.

a) Complete the sanitary drawing showing the following pipeline network with flow direction: [9,5]

   i) Hot water supply line
   ii) Cold water supply line
   iii) Waste water line
   iv) Soil pipeline

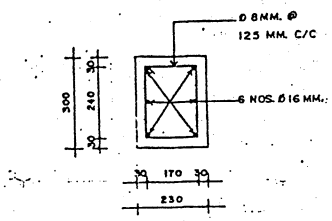
b) Identify the symbols in the electrical layout of figure 4 that are numbered. [2.5]

5. Write short answer, use drawing sheet as answer copy. [5×4]

a) Angle of light plane is .....
b) Set back from road side is.....
c) Draw the symbol of one gang-two way switch.....
d) If and area is 1500 sqm and ground coverage is 60%, calculate maximum ground floor area.....

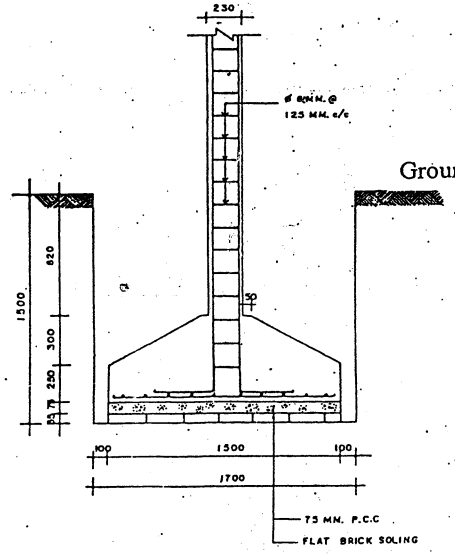
***

Figure :3 (1:10, 1:20, 1:20)



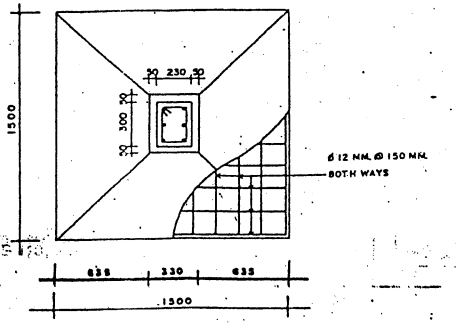
COLUMN DETAIL (C1)

(SCALE 1:10)



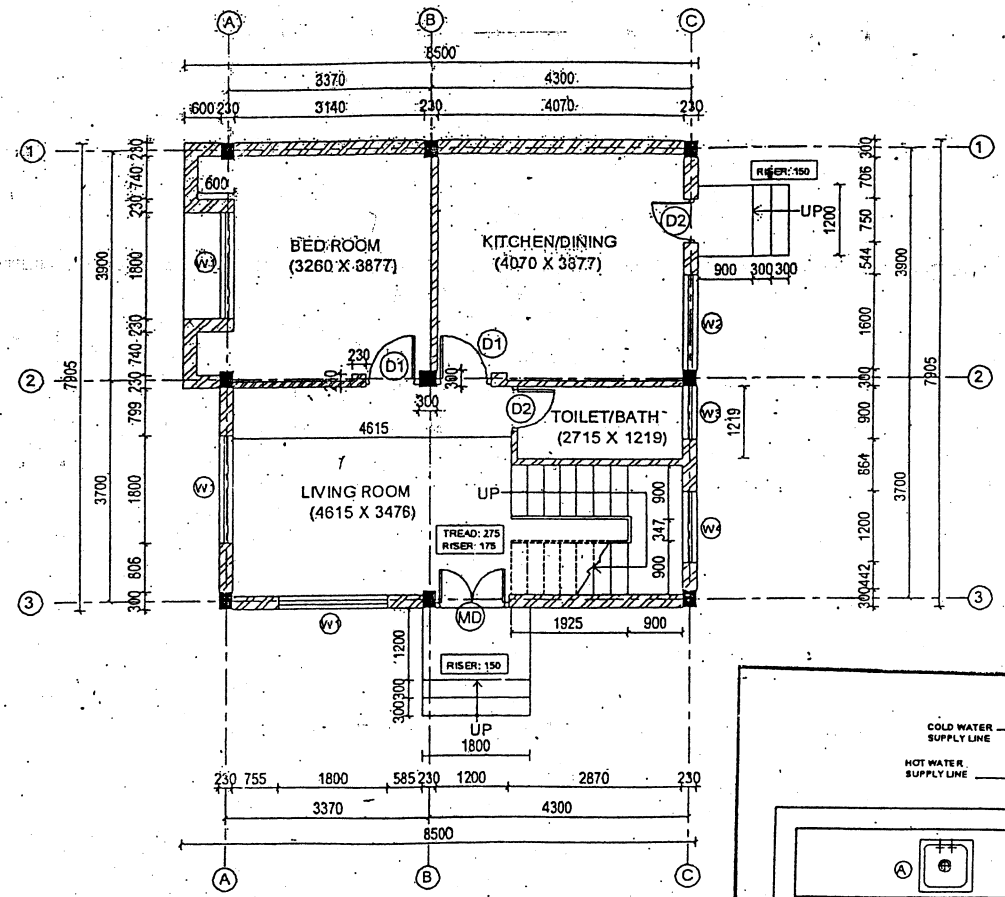
FOOTING SECTION (F1)

(Scale 1:20)



FOOTING PLAN (F1)

Figure: 2. (1:100)



GROUND FLOOR PLAN

MD1: 1200X2100
D1: 900X2100
D2: 750X2100
W1: 1800X1350 (Sill ht. 750)
W2:1600X1350 (Sill ht. 750)
W3:900X1000 (Sill ht. 1100)
W4:1200X1800 (Sill height 150 from landing level)
Wall thickness: 230 AND 110
PILLAR SIZE: 230X300

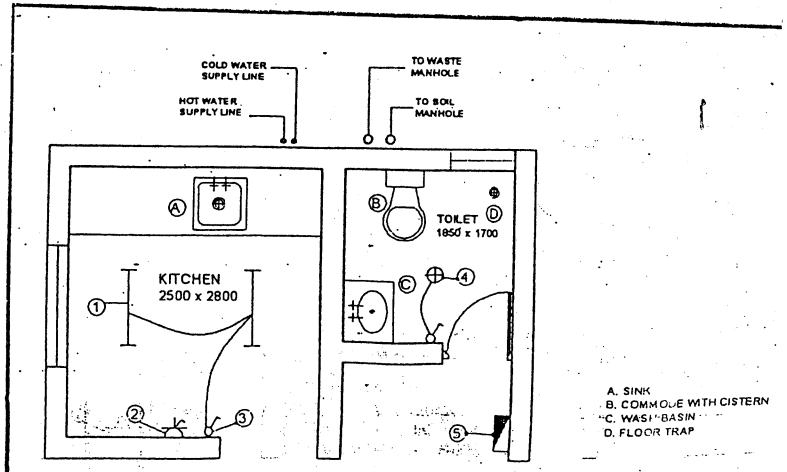


Figure 4: Sanitary and Electrical layout plan