

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2019**

BUILDING PLANNING AND DRAWING

[Time : 3 hours

(Maximum marks : 100)

- [Note :— 1. Question No. II is compulsory.
2. Missing data if any suitably assumed.
3. A2 size drawing sheet to be supplied.]

PART — A

(Maximum marks : 15)

Marks

I Answer *all* questions in one or two sentences. Each question carries 1½ marks.

1. What is strip footing ?
2. What is meant by mullion ?
3. Define nosing.
4. Define the plinth area.
5. What is meant by mezzanine floor ?
6. What is meant by service plan ?
7. What is the setback line ?
8. What is a soak pit ?
9. Define the culvert ?
10. What is meant by abutment ?

(10 × 1½ = 15)

PART — B

(Maximum marks : 85)

II (a) Develop the line plan for a residential building to suit for a plot of 19 m × 21.30 m size based on the rules and regulations of KMBR. The total built-up area of the building is 103.80 m² and should contain the following facilities :

- (i) Drawing and dining
- (ii) Bedrooms - 2 nos. with attached toilets.
- (iii) Kitchen
- (iv) Verandah

A road 6 m width passing along the 19 m side of the plot which is in the north-south direction.

25

(b) Draw to a suitable scale, the plan and section AA from the line plan of a residential building. (figure 1). (15 + 15 = 30)

- III Prepare the detailed drawing of an RCC footing.
 Size of column 300×300 mm, size of footing 1600×1600 mm, the depth of the base concrete 100 mm, PCC 1:4:8, the depth of footing at column face - 400 mm, at the edge - 200 mm, the reinforcement of footing - 10 mm diameter 14 nos. in two direction and column 16 mm diameter 4 nos.

15

OR

- IV Draw to a suitable scale the elevation and sectional plan of a panelled door with the given details :
 Size of door 1200×2100 mm, size of frame 90×70 mm, lock and bottom rail 150×35 mm, styles and top rail 100×35 mm .

15

- V Draw the half sectional elevation along the centre line of the road of a slab culvert across a stream with the following details.
 Roadway - 4m, clear span - 1500 mm, bed level of the stream - +10.00 m, foundation level - +9.40m, road level - + 11.30m, foundation PCC M 10 grade 300 mm thickness, the thickness of abutment 400 mm throughout the height, the thickness of slab 200 mm, the thickness of wearing coat 100mm. The returns are square projecting 1200 mm from the earth face of the abutment. The height of parapet above slab 800 mm, coping 100 mm thick with 80 mm projections. Flooring consists of stone revetment 300 mm thick. Provide adequate kerb.

15

OR

- VI Draw the electrical service plan of a given figure 1 and denote the symbols for the fittings.

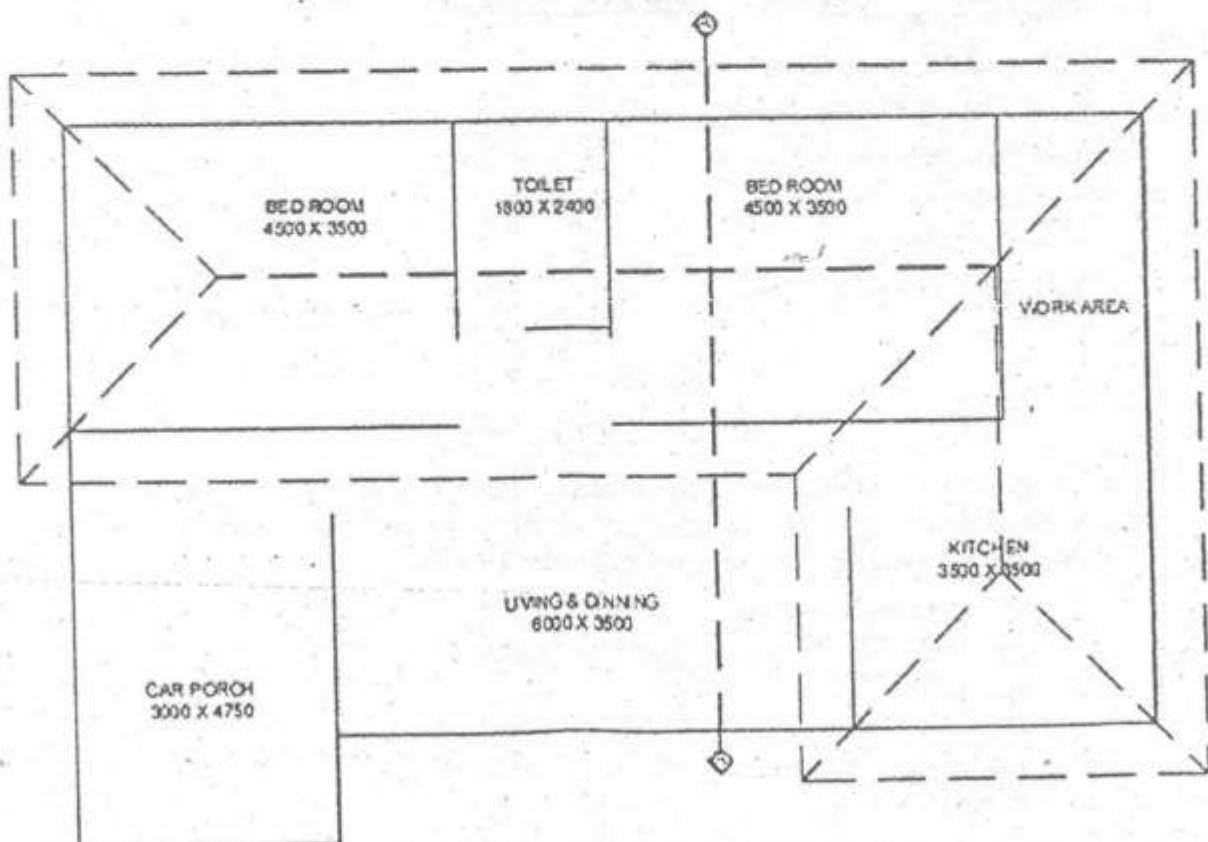


Figure - 1

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SCHEME OF VALUATION

(Scoring Indicators)

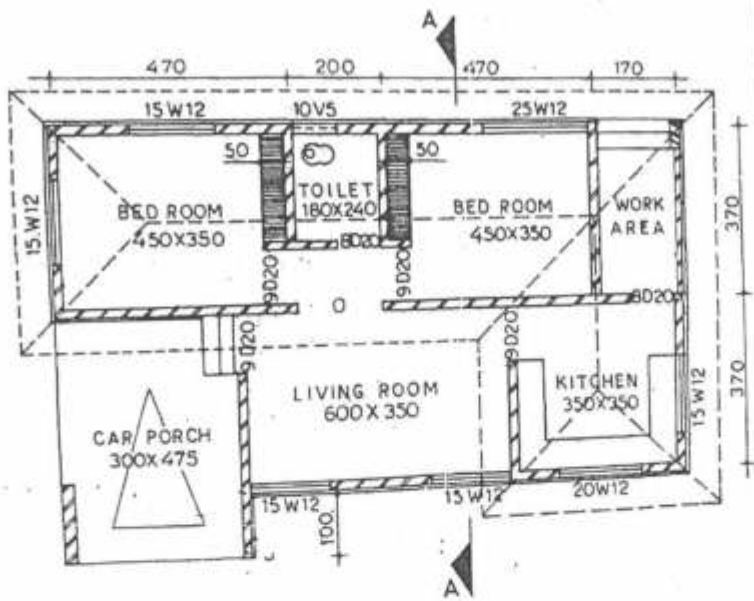
Revision:15		Course Code: 3014			
Course Title: Building Planning and Drawing					
Qn. No	Scoring Indicator	Split up Score	Sub Total	Total	
PART A (Maximum Marks: 15)					
1	1.	A strip footing is a continuous strip of concrete that serves to spread the weight of a load-bearing wall across an area of soil.	1½	1½	15
	2.	Mullion is a vertical member that forms a division between units of the window.	1½	1½	
	3.	Nosing is the part of the tread of a step extending beyond the riser.	1½	1½	
	4.	Plinth area is the total built-up area of the building in floor level.	1½	1½	
	5.	The mezzanine floor is the partial floor of the building between the ground floor level and first-floor level.	1½	1½	
	6.	The service plan is the plan showing all locations and details of water supply and sewage disposal systems.	1½	1½	
	7.	Setback line is the distance from the property line.	1½	1½	

8.	Soak pit is a covered, porous-walled chamber that allows water to slowly soak into the ground.	1½	1½
9.	A culvert is a structure that allows water to flow under a road or rail from one side to the other side.	1½	1½
10.	The abutment is a structure built to support the lateral pressure of an arch.	1½	1½

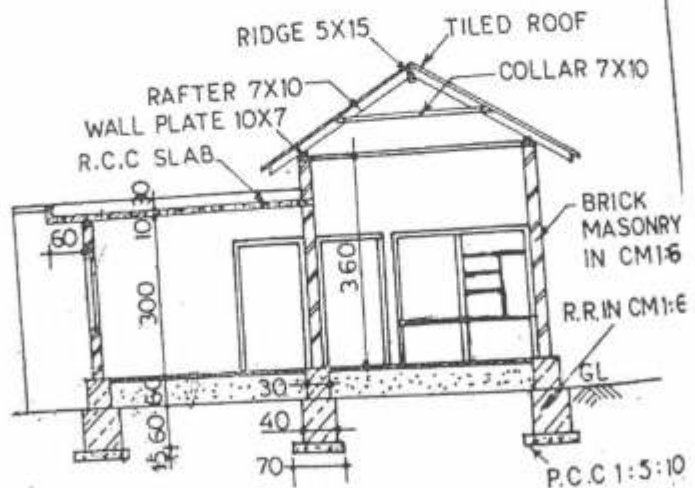
PART-B
(Maximum Marks: 85)

II	(a)		25	25
		With schedule of openings and set back distance		55

(b)



PLAN



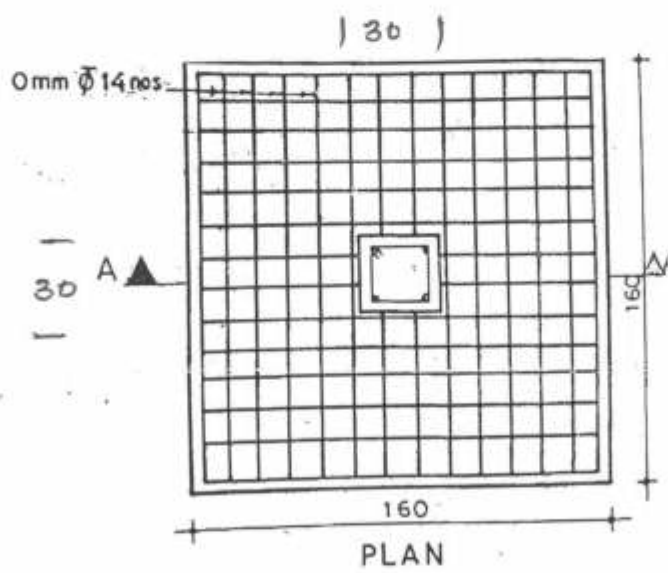
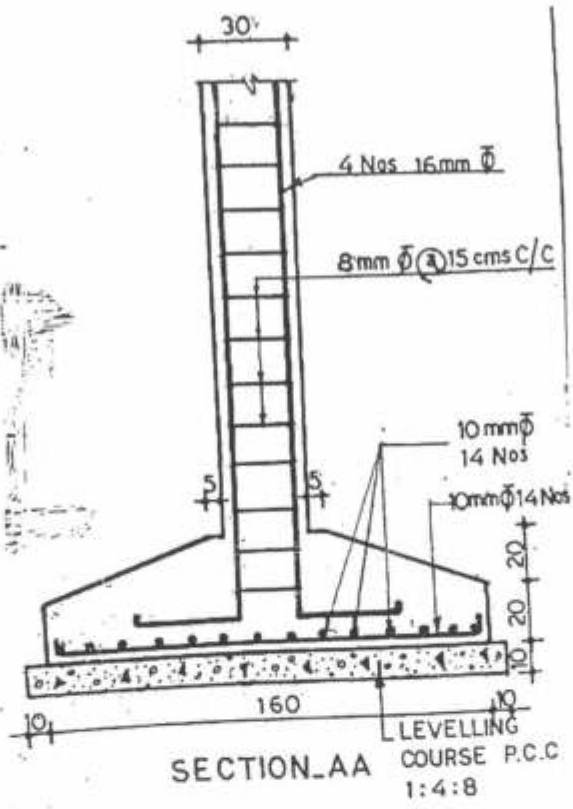
SECTION AA

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30

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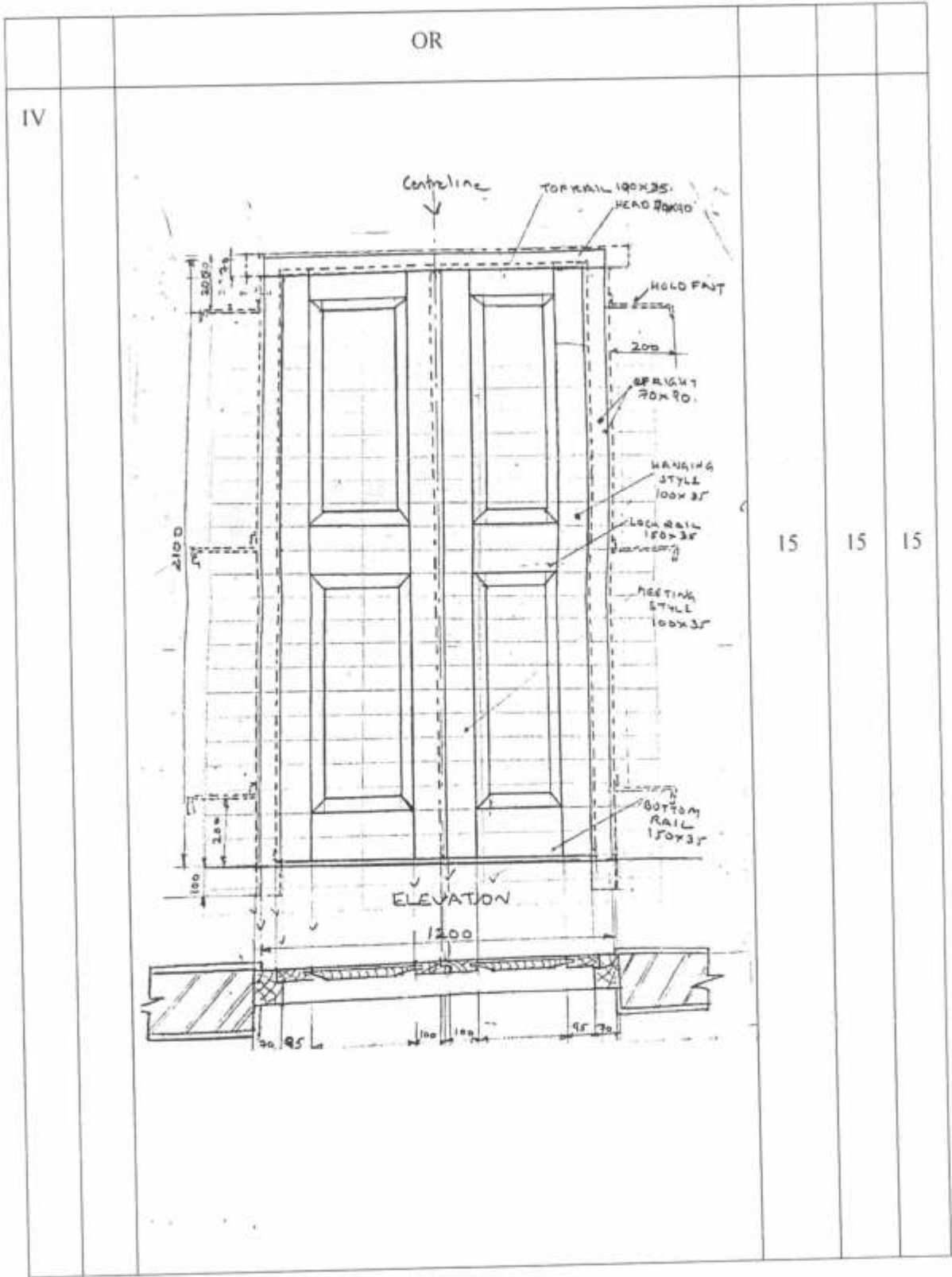
III

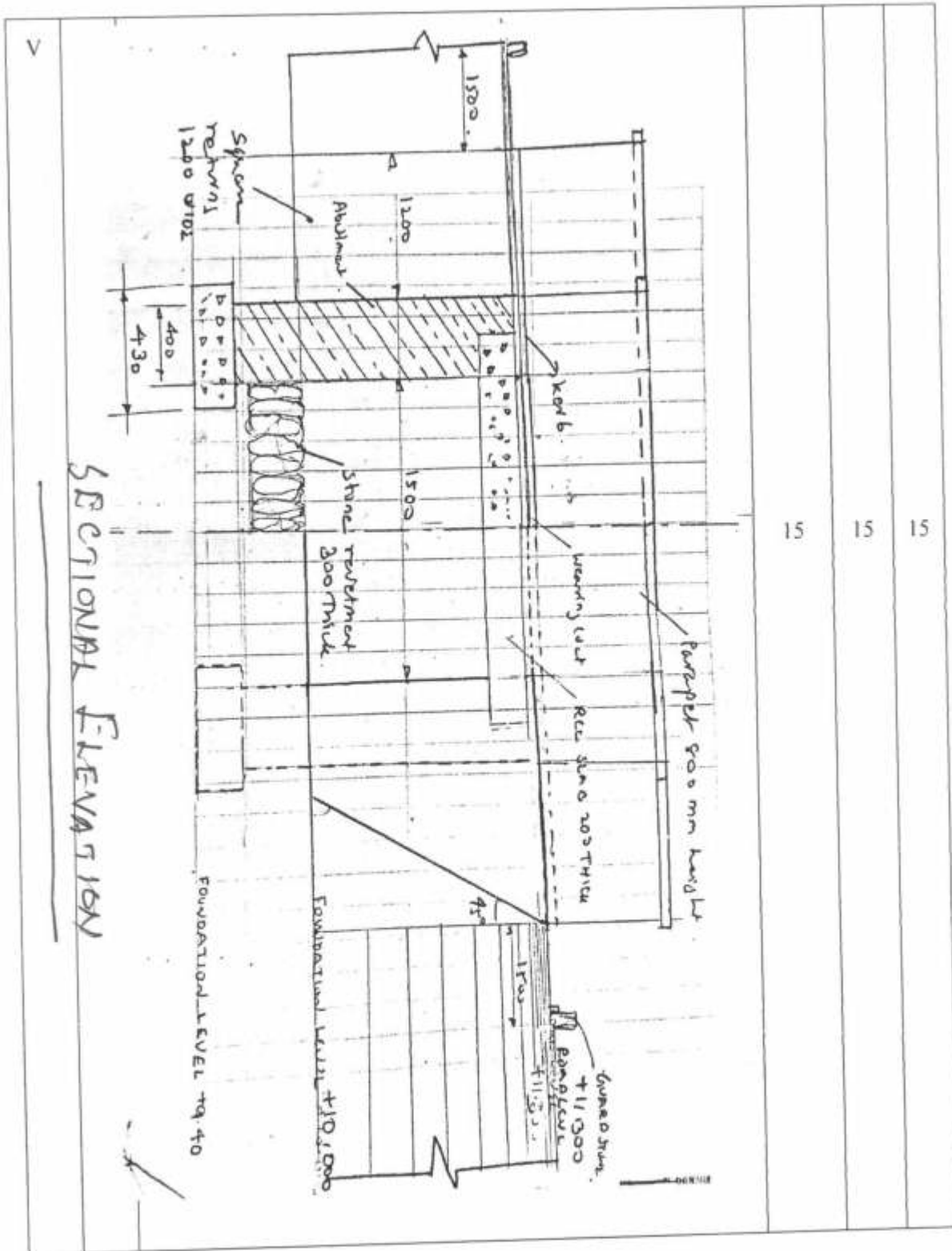


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15 15

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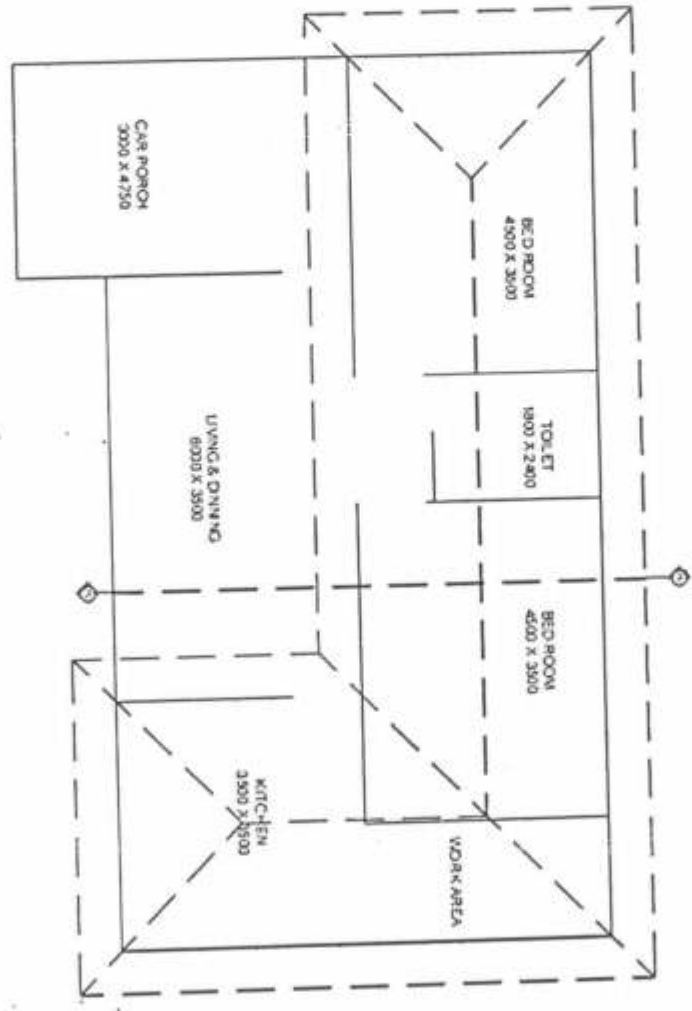




15 15 15

VI

SYMBOL	NAME
	16 AMP 1P1C SWITCH WITH 2WAY DISTRIBUTION BASE
	CEILING FAN
	40 WATT TUBE FITTING
	SINGLE LIGHT BRACKET
	SINGLE LIGHT PENDANT
	SINGLE LIGHT BATTEN HOLDER
	WATER TIGHT FITTING
	5 AMPS 3 PIN PLUG
	WIRING CIRCUIT
	EARTHING
	ONE WAY SWITCH



15

15

15