

CONSTRUCTION MANAGEMENT



Submitted by

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Section A

Submitted to

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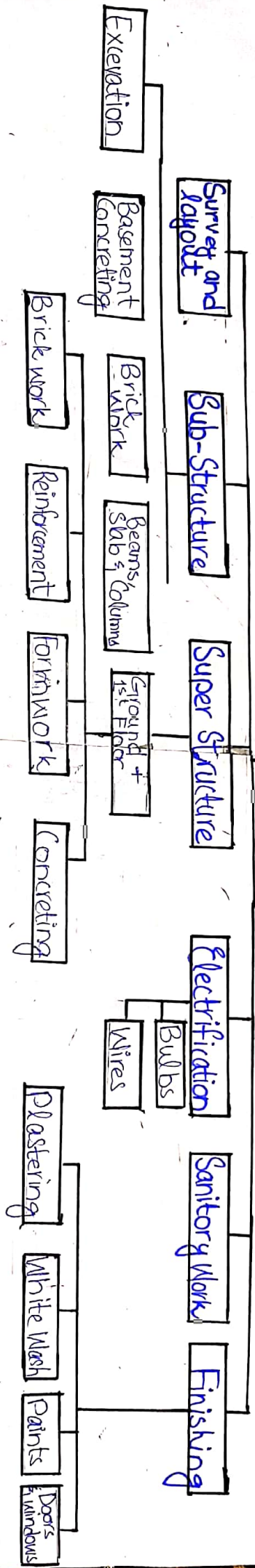
Answer to part 1

Activities List

1. Survey
2. Layout
3. Excavation
4. lean concrete (1:4:8)
5. Column footing
6. Column Reinforcement
7. Column Formwork
8. Concrete for column
9. Brickwork upto ground level
10. Plastering
11. Electrification work
12. Sainatory and Plumbing
13. Reinforcement for plinth beam
14. Formwork for plinth beam
15. Concrete for plinth beam
16. Basement slab formwork
17. Basement beam formwork
18. Basement slab and beam concreting
19. Extension of column reinforcement
20. Brickwork upto first floor level

- 21 Formwork for columns of ground storey
- 22 Concreting of columns of ground storey
- 23 Formwork for beam and slab of ground floor
- 24 Reinforcement for beam and slab of ground floor
- 25 Concreting for beam and slab of ground floor
- 26 Extension of column reinforcement for first floor
- 27 Brickwork of 1st floor
- 28 Formwork for columns of 1st floor
- 29 Concrete work for columns of first floor
- 30 Formwork for beam and slab of 1st floor
- 31 Reinforcement for beam and slab of 1st floor
- 32 Concreting for beam and slab of 1st floor
- 33 Tile work
- 34 Over head tank
- 35 White wash and colour wash
- 36 Window frame and door frames
- 37 Stair case basement
- 38 Ground floor staircase
- 39 First floor staircase.

Work Breakdown Structure Construction Of House



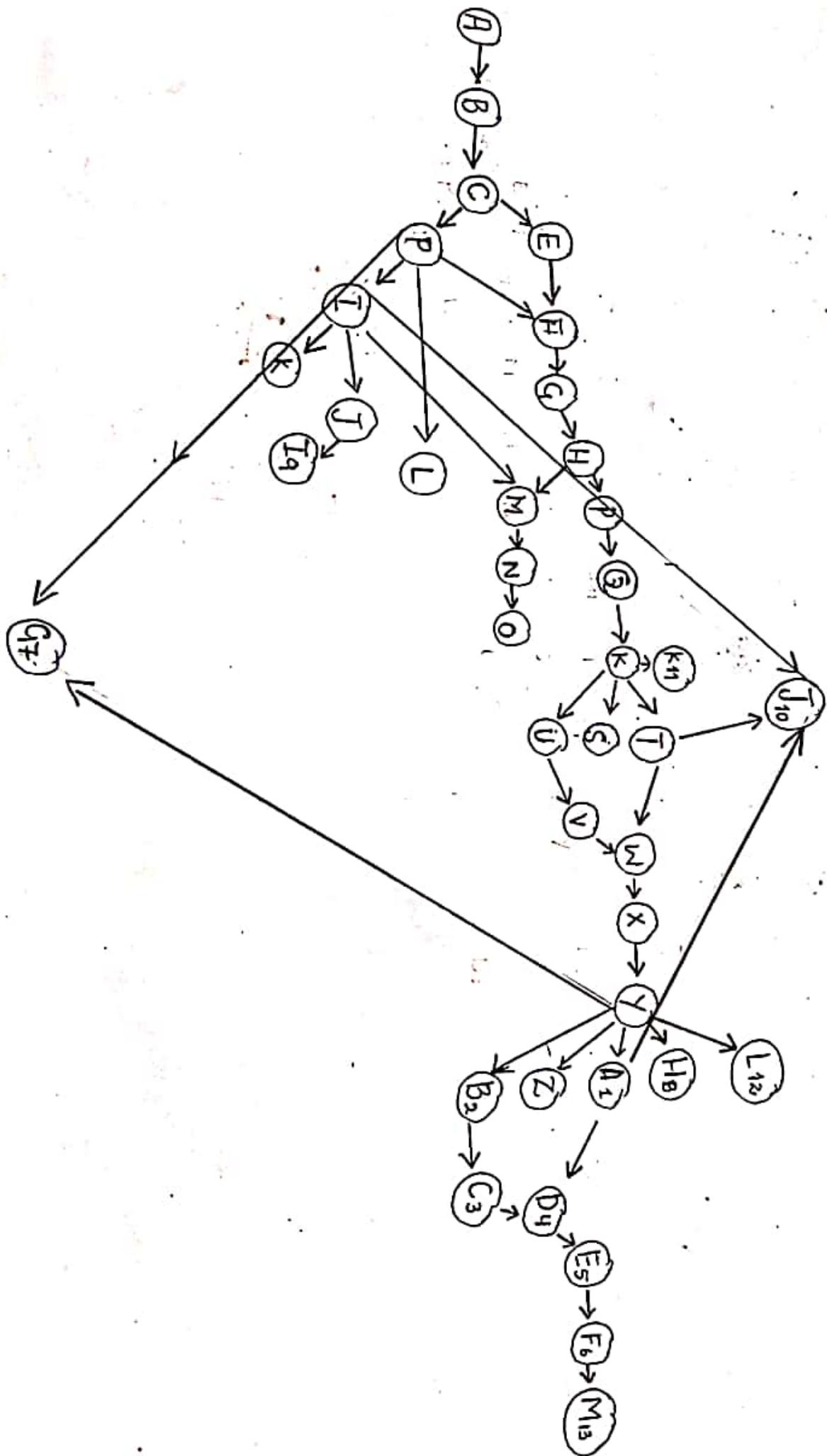
Part 2: Timeline

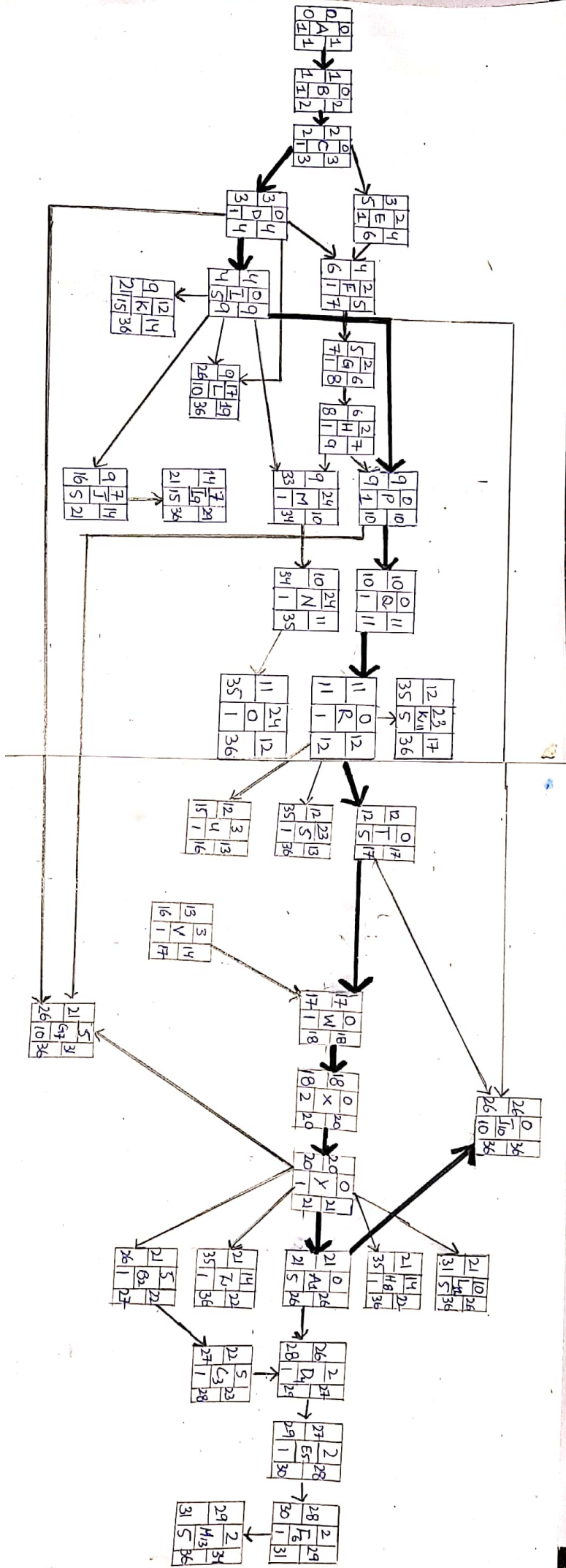
Symbol	Activity Name	Predecessor	Duration (Days)	Slack Time
A	Survey	-	1	0
B	Layout	A	1	0
C	Excavation	B	1	0
D	Lean Concrete (1:4:8)	C	1	0
E	Column Footing	C	1	2
F	Column Reinforcement	E	1	2
G	Column Formwork	F	1	2
H	Concreting for Column	G	1	2
I	Brickwork upto ground level	D	5	0
J	Plastering	I	5	17
K	Electrification work	I	5	12

L	Sanitary & plumbing	I, D	10	17
M	Reinforcement for plinth beam	I, H	1	24
N	Formwork for plinth beam	M	1	24
O	Concreting for plinth beam	N	1	24
P	Basement slab formwork	I, H	1	0
Q	Basement beam formwork	P	1	0
R	Concreting of basement beam & slab	Q	1	0
S	Extension of column Reinforcement upto 1 st floor	R	1	23
T	Plasterwork upto first floor	R	5	0
U	Formwork for columns of ground story	R	1	3
V	Concreting for columns of ground story	U	1	3
W	Formwork for slab of ground floor	V, T	1	0
X	Reinforcement for basement slab of ground floor	W	2	0
Y	Concreting for beam & slab of ground floor	X	1	0

Z	Extension of columns	✓	1	14
A ₁	Brickwork of 1 st floor	✓	5	0
B ₂	Formwork for column of 1 st floor	✓	1	5
C ₃	Concreting for column of first floor	B ₂	1	5
D ₄	Formwork for beam and slab of 1 st floor	C ₃ , A ₁	1	2
E ₅	Reinforcement for beam and slab of 1 st floor	D ₄	1	2
F ₆	Concreting for beam and slab of 1 st floor	E ₅	1	2
G ₇	Floor Plastering and Tile work	D ₄ , P ₇ ✓	10	5

H8	Over head tank	✓	6	14
I9	White wash & colour wash	J	15	7
J10	Window frames & Door frames	I, T, A1	10	0
K11	Stair Case basement	R	5	23
L12	Staircase Ground floor	✓	5	10
M13	Staircase first floor	F6	5	2





Paths

1) A, B, C, D, I, P, Q, R, T, W, X, Y, A₁₀, J₁₀

$$\text{Duration} = 1 + 1 + 1 + 1 + 5 + 1 + 1 + 1 + 5 + 1 \\ + 2 + 1 + 5 + 10$$

$$= 36 \text{ days}$$

2) A, B, C, D, I, P, Q, R, T, J₁₀

$$\text{Duration} = 1 + 1 + 1 + 1 + 5 + 1 + 1 + 1 + 5 + 10 \\ \text{Duration} = 27 \text{ days}$$

3) A, B, C, D, I, J₁₀

$$\text{Duration} = 1 + 1 + 1 + 1 + 5 + 10$$

$$= 19 \text{ Days}$$

- In above paths, path 1 is critical path of the project.
- Maximum time taken by project is 36 days
- Slack time is mentioned in timeline table.