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Subject

Construction
management

Teacher

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Bs (Civil)

Part 1

List of Activities

- 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 Brick work upto ground level
- ⑩ Plastering
- ⑪ Electrification work
- ⑫ Sanitary and Plumbing
- ⑬ Reinforcement for plinth beam
- ⑭ Form work for plinth beam
- ⑮ Concrete work for plinth beam
- ⑯ Basement Slab form work
- ⑰ Basement beam form work
- ⑱ Basement Slab & beam concreting

- (19) Extension of first column Reinforcement.
- (20) Brickwork upto first floor level.
- (20) Formwork for columns of ground story.
- (21) Concrete work for column of ground story.
- (22) Formwork for beam and slab of ground floor.
- (23) Reinforcement for beam and slab of ground floor.
- (24) Concrete work for beam and slab of ground floor.
- (25) Extension of columns reinforcement for 1st floor.
- (26) Brick work of first floor.
- (27) Form work for column of first floor
- (28) Concrete work for column of first floor
- (29) Formwork for beam and slab of first floor
- (30) Reinforcement for beam and slab of first floor
- (31) Concreting for beam and slab of first floor
- (32) Tile work
- (33) Over head tank.

(34) White wash & colour wash

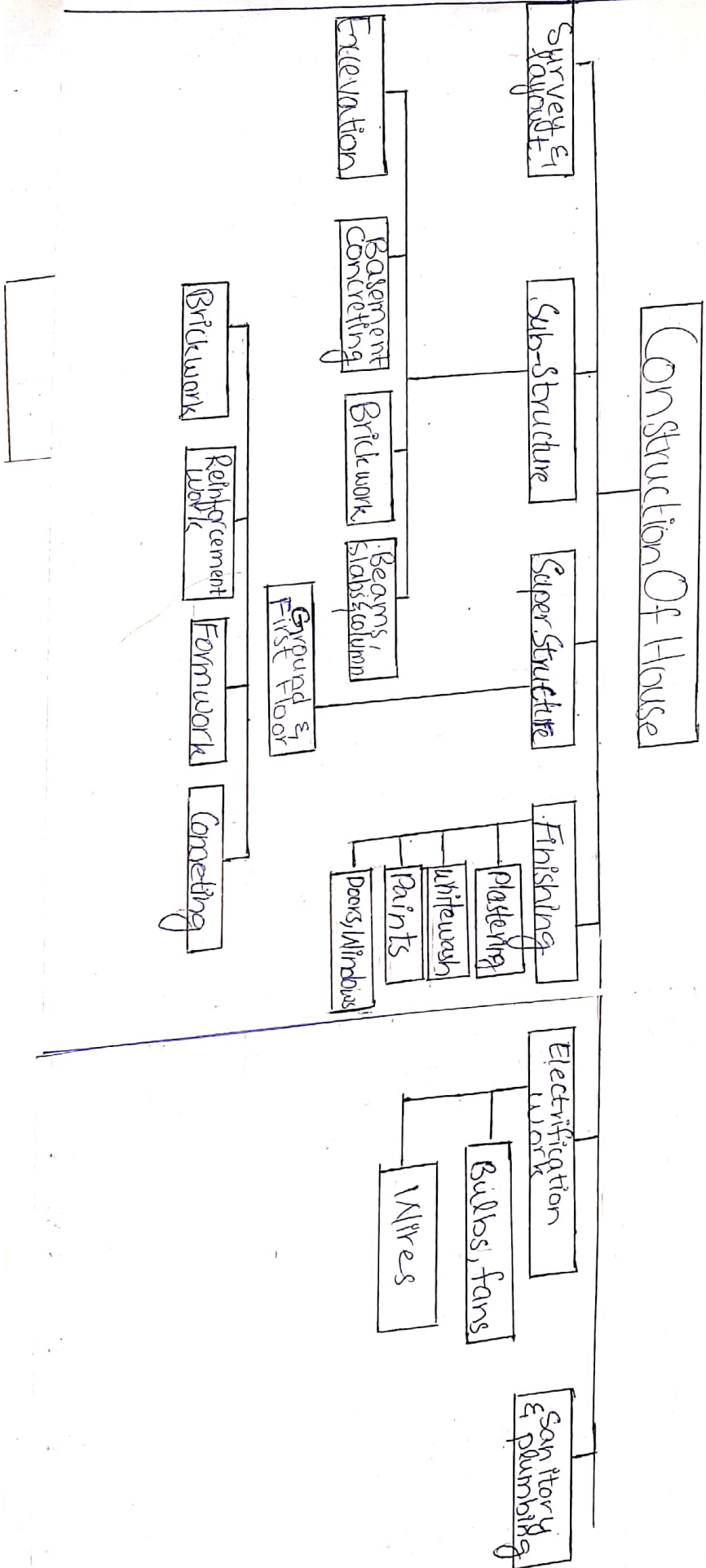
(35) Window frames & door frames

(36) Stair case basement

(37) Ground floor stair case

(38) First floor stair case.

Work Breakdown Structure

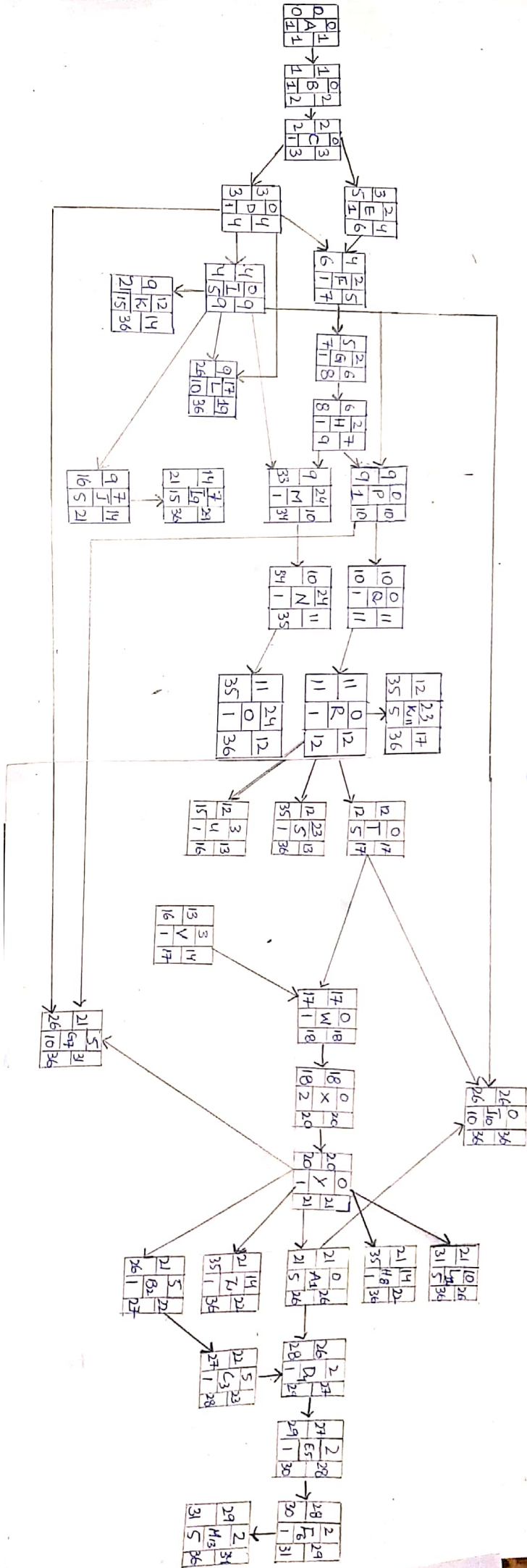


Symbol	Activity	Predecessor	Duration	Slack Time
A	Survey	-	1	0
B	Layout	A	1	0
C	Excavation	B	1	0
D	Lean concrete (1:4:8)	C	+1	0
E	Column footing	C	1	2
F	Column Reinforcement	E	1	2
G	Column formwork	F	1	2
H	Concrete for column	G	1	2
I	Brick work upto ground level	D	5	0
J	Plastering	I	5	7
K	Electrification work	I	5	12

L	Sanitary and Plumbing	I, D.	10	17
M	Reinforcement for Plinth beam	I, H	1	24
N	Form work for Plinth	M	1	24
O	Concrete work for Plinth beam.	N	1	24
P	Basement slab form work	I, H	1	0
Q	Basement beams form work	P	1	0
R	Basement slab and beam concreting	Q	1	0
S	Extension of column Reinforcement	R	1	23

T	Brick work upto first floor level	R	5	0
U	Formwork for columns of ground story	R	1	3
V	Concrete work for columns of ground story	U	1	3
W	Formwork for beam and slab of ground floor	V, T	1	0
X	Reinforcement for beam and slab of ground floor.	W	2	0
Y	Concrete work for beam and slab of ground floor	X	1	0
Z	Extension of columns reinforcement for 1st floor	Y	1	14
A ₁	Brick work of first floor	Y	5	0
B ₂	Form work for column of first floor	Y	1	5
C ₃	Concrete work for column of first floor	B ₂	1	5
D ₄	Formwork for beam and slab of first floor	C ₃ , A ₁	1	2
E ₅	Reinforcement for beam and slab of first floor	D ₄	1	2

F ₆	Concreting for beam and slab of first floor	ES	10	2
G ₇	Tile work	D, P, Y	60	5
H ₈	over head tank	Y	10 6	14
I ₉	white wash and colour wash	J	10 15	7
J ₁₀	Window frames and door frames	I, T, A ₁	5 10	0
K ₁₁	Stair case basement	R	5	23
L ₁₂	Ground floor stair case	Y	5	10
M ₁₃	First floor stair case.	F ₆	5	2



Paths

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

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

$$= 27 \text{ days}$$

3) A, B, C, D, I, J₁₀

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

$$= 19 \text{ days}$$

So, Path 1 is critical path and maximum time taken by project is 36 days.