

# "Construction Management"

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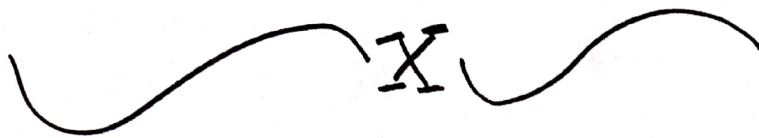
Section ≈ C

Semster ≈ 8th

Instructor ≈ Dr. Eng; ZEESHAN AHAD

## (a) Activity list of a Two story Building:

- \* Survey
- \* Mobilization
- \* Layout and Excavation
- \* Foundation and columns
- \* Brick masonry wall
- \* Formwork
- \* concreting (Beams and slab)
- \* curing
- \* Flooring
- \* wood work
- \* plumbing and sanitary work
- \* Electrification
- \* Finishing
- \* Miscellaneous



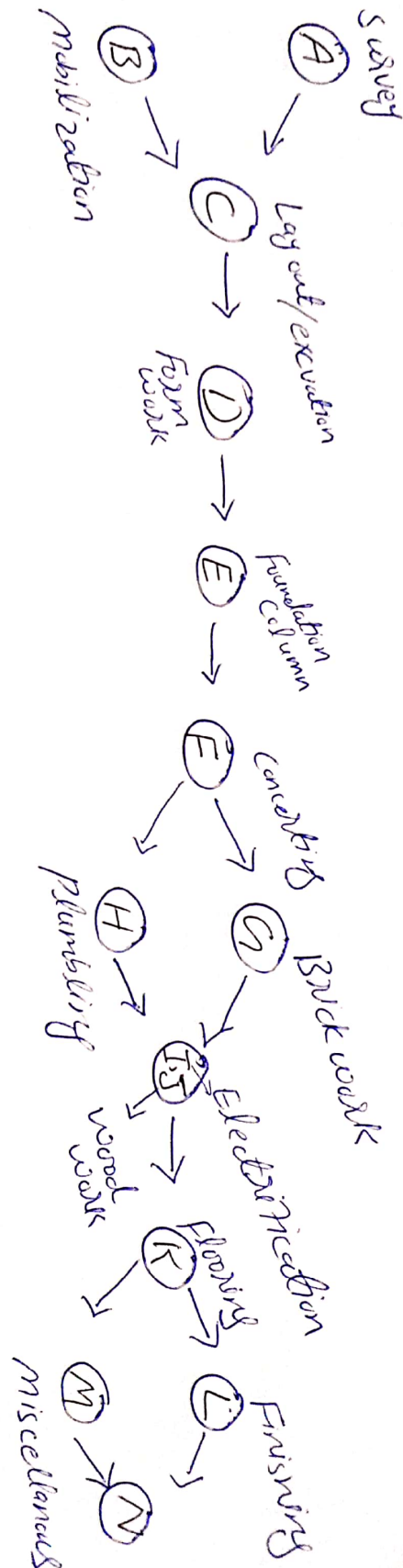


# critical path method of the project

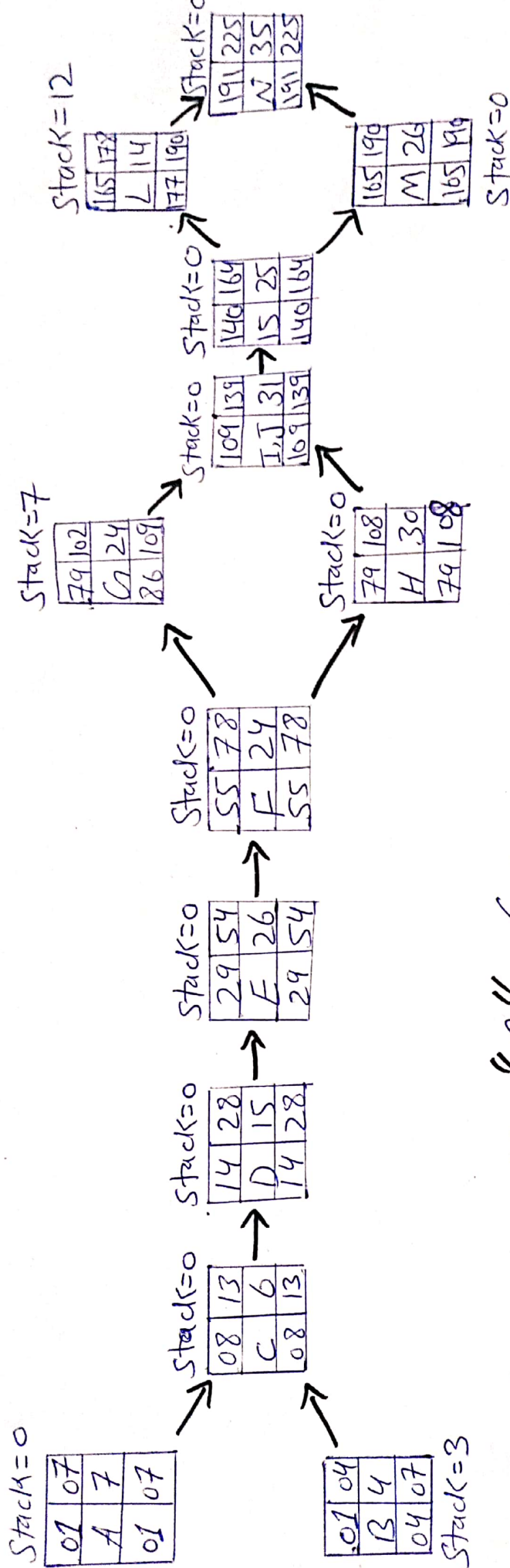
LC)  
Peg (3)

Activity		Duration (Days)	predecessors
Survey	A	7	.....
Mobilization	B	4	.....
Clearing of site	C	6	A
Lay out/Excavation	D	15	C
Form work	E	26	D
Foundation/Column	F	24	E
Concreting/ Beams/slab	G	24	E
Brick work	H	30	F
plumbing/sanitary work	I	16	G, H
Electrification	J	15	G, H
Finishing	K	25	I, J
Flooring	L	14	K
wood work	M	26	K
Miscellaneous	N	35	L, M

# In Activity-on-Arrow (AOA) Network:







path "A" = (A C D E F H I J K M N)  
 path "B" = (B C D E F G I J K L)

path A is our critical path. (more Time)  
 Maximum Time Taken by the project (225 days)

## \* Critical Path:

- \* Critical activities have zero slack and cannot be delayed without delaying the completion of the project.
- \* The slack for non-critical activities represents the amount of time by which start of these activities can be delayed without delaying the completion of entire project.
- \* The longest path on the network.
- \* could be those activities with the least slack.
- \* There are many possible paths.  
But in all these paths;

P. T. O

(7)  
But in all these paths;

path "A" (ACDEFHIJKMN)

path "B" (BCDEFCHIJKL)

So the critical path is "A."

X

(j) "Maximum Time taken by the project:."

As according to "forward pass"  
and "Backward pass" the maximum  
time taken for our project is  
"225 days"

(225 days)

X

P. T. O



(E) Slack Time for the activities;

$$\text{Slack} = \text{LFT} - \text{EFT} = \text{Late Finish} - \text{Early Finish}$$

There is no slack on critical path  
means path (ACDEFHIJKMN)  
while ::

$$B = 04 - 01 = 03$$

$$G = 86 - 79 = 07$$

$$L = 177 - 165 = 12$$

~X~