



Name

Shah Fahad

ID no

7682

Section

A

Exam

Midterm

Subject

Construction Management

Semester

8th

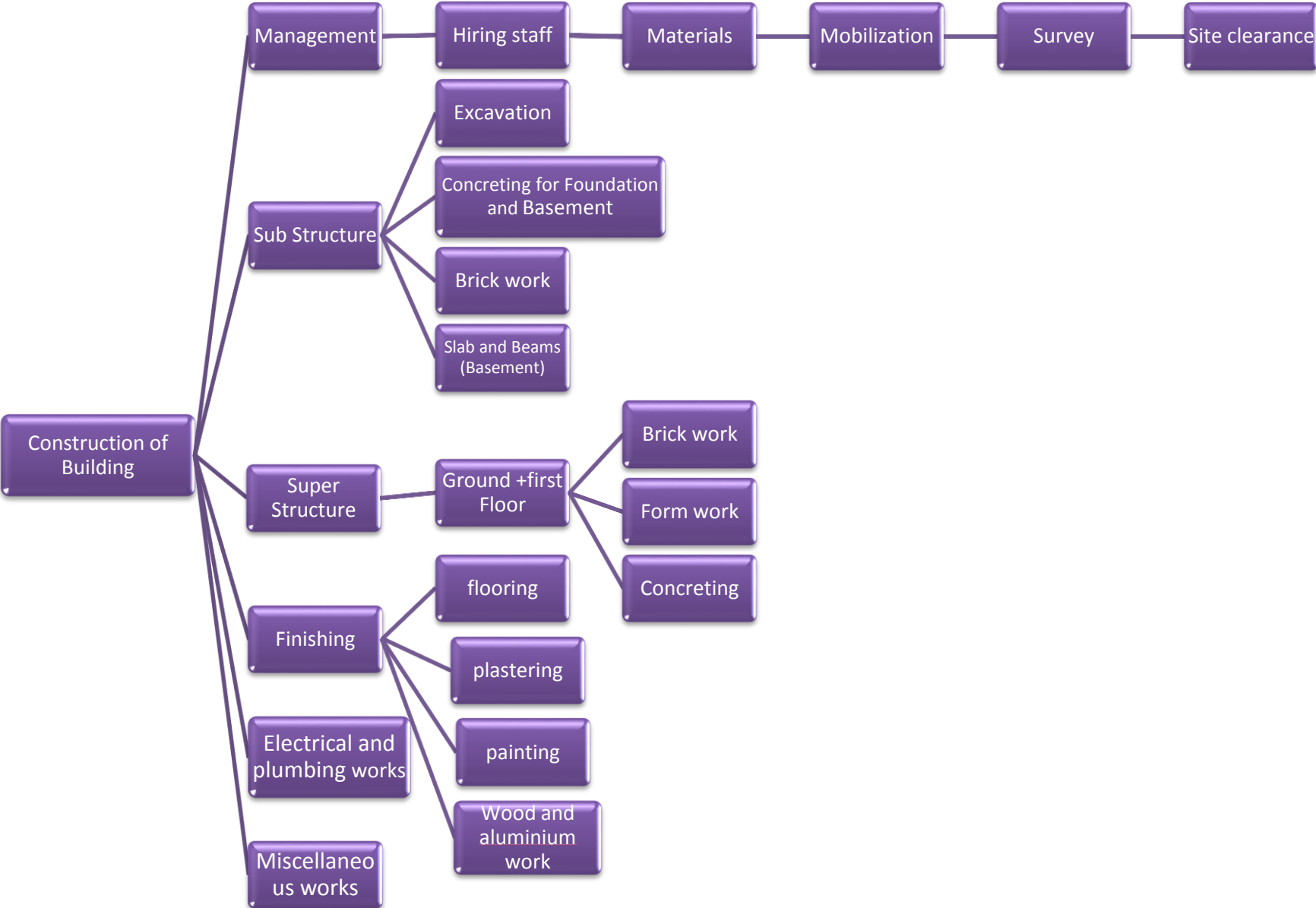
Submitted to

Dr Zeeshan Ahad

Activity list of a two story building

- 1) **Survey**
- 2) **Mobilization**
- 3) **Grubbing of site**
- 4) **Layout and Excavation**
- 5) **Foundation And columns**
- 6) **Brick masonry Walls**
- 7) **Formwork**
- 8) **Concreting (Beams and Slab)**
- 9) **Curing**
- 10) **Flooring**
- 11) **Wood work**
- 12) **Plumbing and sanitary work**
- 13) **Electrification**
- 14) **Finishing**
- 15) **Miscellaneous**

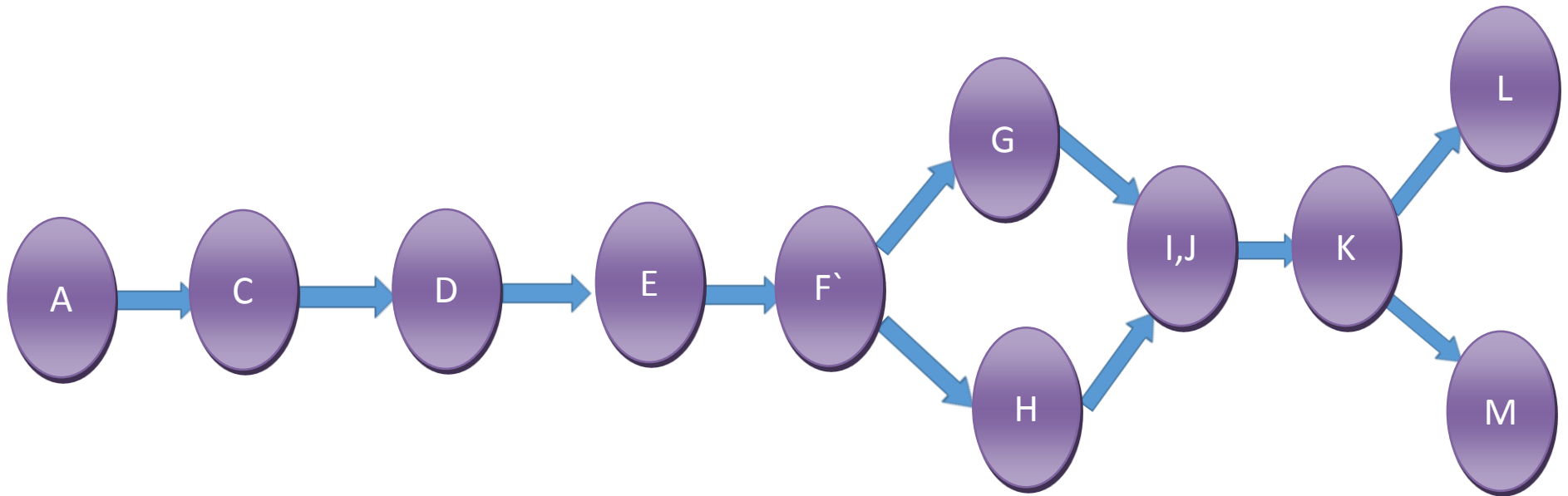
Work Breakdown structure of building



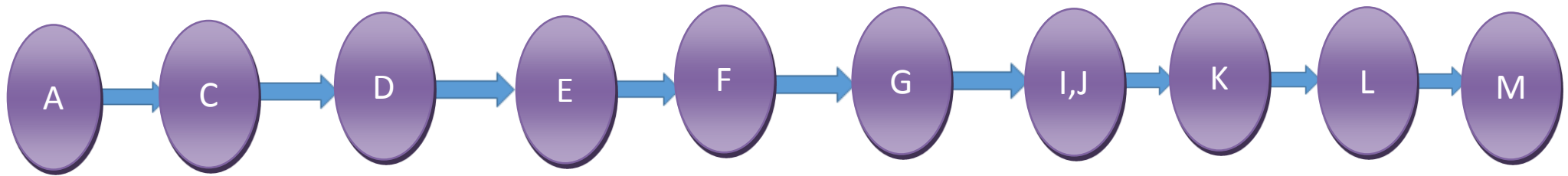
Q.02) Critical path Method of the project

Activity	Predecessors		Duration in weeks
Survey	A		1
Mobilization	B		1
Grubbing of site	C	A	1
Layout and Excavation	D	C	2
Formwork	E	D	4
Foundation and column	F	E	3
Concreting (beams and Slab)	G	F	3
Brick work	H	F	3
Plumbing and sanitary work	I	G,H	2
Electrification	J	G,H	2
Finishing	K	I,J	3
Flooring	L	k	2
Wood work	M	K,L	3
Miscellaneous	N		3

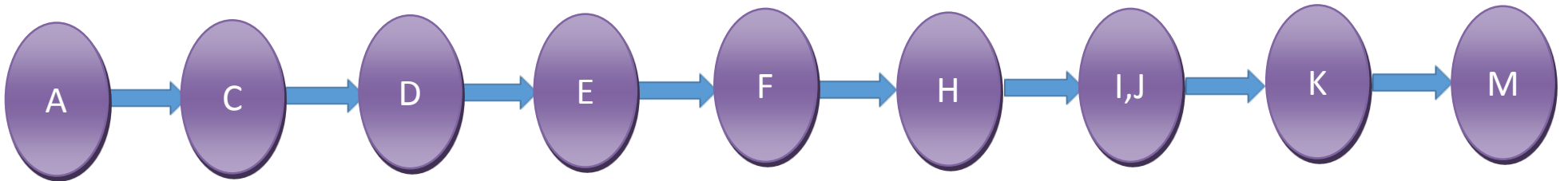
Precedence Diagram



Path A



Path B



There are two paths of our project path A and path B

Path A (ACDEFGIJKLM) having 26 weeks

Path B (ACDEFHIJKM) having 24 weeks

So the critical path of our project is path A which has more time

Q.03 provide maximum time taken by project....

0	A	1
0	1	1

1	C	2
1	1	2

2	D	4
2	2	4

4	E	8
4	4	8

8	F	11
8	3	11

11	G	14
11	3	14

14	I,J	18
14	4	18

18	K	21
18	3	21

11	H	14
11	3	14

21	L	23
21	2	23

23	M	26
23	3	26

As according to forward pass and backward pass the maximum time for our project is 26 weeks.

Q.04 provide Slack time for the activities if any....

Slack = late finish – early finish

$$A = 1 - 1 = 0$$

$$C = 2 - 2 = 0$$

$$D = 4 - 4 = 0$$

$E = 8 - 8 = 0$ and so on all values comes zero so no slack

Slack = late start – early start

$$A = 0 - 0 = 0$$

$$C = 1 - 1 = 0$$

$$D = 2 - 2 = 0$$

$$E = 4 - 4 = 0$$

And so on all values comes zero so no slack.



Q.05) Timeline of the project in the excel spread sheet is given below :

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Q.02 Time line of the building project

