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ID : 7449

Section : A

Semester : 12th

Exam : Midterm

Subject : Construction Management

Instructor : Engr. Muhammad Zeeshan Ahad

1. Activity list of a two story building
2. Survey
3. Mobilization
4. Grubbing of site
5. Layout and Excavation
6. Foundation And columns
7. Brick masonry Walls
8. Formwork
9. Concreting ( beams and Slab)
10. Curing
11. Flooring
12. Wood work
13. Plumbing and sanitary work
14. Electrification
15. Finishing
16. Miscellaneous

Work Breakdown structure of building

**Q.03 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 |
|  |  |  |  |
| M  Precedence Diagram |  |  |  |
|  |  |  |  |
| M |  |  |  |
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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.04 provide maximum time taken by project….

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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 11 | G | 14 |  |  |  |  |  |  |  |  |  | 21 | L | 23 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 11 | 3 | 14 |  |  |  |  |  |  |  |  |  | 21 | 2 | 23 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 | A | 1 |  | 1 | C | 2 |  | 2 | D | 4 |  | 4 | E | 8 |  | 8 | F | 11 |  |  |  |  |  | 14 | I,J | 18 |  | 18 | K | 21 |  |  |  |  |  |
| 0 | 1 | 1 |  | 1 | 1 | 2 |  | 2 | 2 | 4 |  | 4 | 4 | 8 |  | 8 | 3 | 11 |  |  |  |  |  | 14 | 4 | 18 |  | 18 | 3 | 21 |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 11 | H | 14 |  |  |  |  |  |  |  |  |  | 23 | M | 26 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 11 | 3 | 14 |  |  |  |  |  |  |  |  |  | 23 | 3 | 26 |  |
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As according to forward pass and backward pass the maximum time for our project is 26 weeks.

Q.05 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.