**5. CRASHING**

**CRASHING:** It’s an expansion of CPM that considers a compromise between cost & time.

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| --- | --- | --- |
| **IT CONSISTS TWO TYPE OF COST** | | |
| **DIRECT COST** | **INDIRECT COST** | **TOTAL COST** |
| It includes cost of labours, materials, etc… | It includes cost of accommodation of labours, etc… |  |

**CRASH TIME ():**

It’s the minimum activity duration to which an activity can be reduced by increasing the direct cost.

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| --- | --- | --- |
| Cost-Time slope represents the extra cost of reducing the duration by one-time unit. | Crash Time,  Normal Time,  Crash Cost,  Normal Cost, |  |

**STEPS OF CRASHING:**

1. In critical path, select the critical activity having maximum cost slope.
2. Reduce the duration of this critical activity by one-time unit prior.
3. Revise the network diagram by adjusting the time & cost of crashed activity.
4. Again, find critical path, project duration & the total cost of project.
5. If the optimum project duration is obtained then stop otherwise repeat from steps.

**IMPORTANT POINTS:**

1. Crashing is done in critical path & in critical path the activity (Critical) Which is having minimum slope should be crashed first.
2. In crashing,

|  |  |  |  |
| --- | --- | --- | --- |
| Direct Cost increases | In-direct Cost decreases | Total Cost decreases | Project duration decreases |

1. **Resource Levelling:** Project Duration is fixed + Resource is unlimited.
2. **Resource Smoothening**: Project Duration is unlimited + Resource is limited.