Network Technique

Network technique is a technique for planning, scheduling (programming) and controlling the progress of projects. This is very useful for projects which are complex in nature or where activities are subject to considerable degree of uncertainty in performance time.

This technique provides an effective management, determines the project duration more accurately, identifies the activities which are critical at different stages of project completion to enable to pay more attention on these activities, analyze the scheduling at regular interval for taking corrective action well in advance, facilitates in optimistic resources utilization, helps management for taking timely and better decisions for effective monitoring and control during execution of the project.

Network Analysis

Network analysis is a system which plans the projects by analyzing the project activities.

Projects are broken down into individual tasks or activities, which are arranged in logical sequence. It is also decided that which tasks will be performed simultaneously and which other sequentially.

A network diagram is prepared, which presents visually the relationship between all the activities involved and the cost for different activities. Network analysis helps designing, planning, coordinating, controlling and in decision-making in order to accomplish the project economically in the minimum available time with the limited available resources. The network analysis fulfils the objectives of reducing total time, cost, idle resources, interruptions and conflicts.

Objectives of Network Analysis

A network analysis has following objectives:

1. Powerful tool of planning, scheduling and control.
2. Shows the inter-relationships of the activities of a project or a programme.

3. Minimizes total cost where the cost of delays and cost of resources required to carry out the tasks can be measured.
4. Minimize total time where required e.g. in maintenance of production-line machinery in a factory.
5. Minimization of idle resources.
6. Minimize production delays.
7. To provide systematic approach in planning and scheduling.
8. Follow an integrated approach and bring about better coordination between the departments.
9. Focuses' attention on critical activities of the project.
10. Provides up-to-date status information.
11. Suggest areas for increasing efficiency, and reduction of cost.

Managerial applications of network analysis are as follows

1. Assembly line scheduling,
2. Research and development,
3. Inventory planning and control,
4. Shifting of manufacturing plant from one site to another,
5. Launching of new products and advertising campaigns,
6. Control of traffic flow in cities,
7. Budget and audit procedures,
8. Launching space programmes,
9. Installation of new equipment,
10. Long-range planning and developing staffing plans, etc.