[Summary]

[Quantitative Techniques for Management]

Subject: Business Economics

Course: B.A., 4th Semester,
Undergraduate

Paper No. & Title: Paper – 403
Quantitative Techniques for Management

Unit No. & Title: Unit - 5
CPM/PERT Analysis, Simulation, Simple Inventory Models

Lecture No. & Title: 1:
CPM/PERT Analysis

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Summary:

In today's topic we have learn about two basic planning and controlling techniques that utilize a network to complete a pre-determined project or schedule which are Programme evaluation review technique (PERT) and Critical path method (CPM).To understand the network techniques some basic terms of both PERT and CPM are activity, event, network, dummy activity and critical path. There are number of rules like **Fulkerson's Rule and rules of network construction** in connection with the handling of events and activities of a project network. After the network of a project is constructed, the time analysis of the network becomes essential for planning various activities of the project. For each non-critical activity of the project we define float like total float, independent float and free float.

PERT is used when the activities are non-deterministic in nature. It is a probabilistic method and activity time are represented by three different time estimates and they are 1.Optimistic Time estimate 2. Most likely time estimate 3.Pessimistic time estimate. From these time estimates we can calculate expected time and variance of an activity. PERT procedure is explained with the help of Example.
At the end we learned project cost like direct cost and indirect cost, cost slope and time cost trade of procedure.