

Project Scheduling Using PERT and CPM

Dr. Ashwini Kumar Nagpal, Professor, Department of mathematics, Seth G.L. Bihani S.D. P.G. College, Sri Ganganagar

Abstract

Effective project scheduling is essential for completing projects within the planned time and available resources. This paper presents the application of two important Operations Research techniques, **Program Evaluation and Review Technique (PERT)** and **Critical Path Method (CPM)**, for project planning and scheduling. PERT is useful for projects where activity durations are uncertain, while CPM is primarily used when activity times are known and focuses on identifying the critical activities that determine the project completion time. The study demonstrates how project activities can be represented using network diagrams and analyzed to determine the critical path, expected project duration, and scheduling priorities. The application of PERT and CPM provides a systematic mathematical approach for monitoring project progress and improving time management.

Keywords: PERT, CPM, Operations Research, Project Scheduling, Critical Path, Network Analysis, Project Management.

