

**III Year II Semester**

**L T P C**

**Code: 20CE6410**

**3 0 0 3**

**CONSTRUCTION TECHNOLOGY AND MANAGEMENT**

**Course Learning Objectives**

The objectives of this course are:

1. To introduce to the student the concept of project management including network drawing and monitoring
2. To introduce various equipment like construction equipment, concreting equipment
3. To understand about construction methods, safety engineering

**Course Outcomes**

Upon the successful completion of this course, the students will be able to:

1. Gain knowledge of project management, scheduling.
2. Gain knowledge of PERT and can able to do cost analysis.
3. Understand the functioning of various hoisting equipment like cranes, tractors etc.,
4. Gain knowledge related to concreting equipment
5. Gain knowledge related to construction methods, quality control and safety engineering

**UNIT-I**

Construction project management and its relevance – qualities of a project manager – project planning – coordination –scheduling - monitoring – bar charts – milestone charts – critical Path Method – Applications

**UNIT-II**

Project Evaluation and Review Technique – cost analysis - updating – crashing for optimum cost – crashing for optimum resources – allocation of resources

**UNIT-III**

Construction equipment – economical considerations – hoisting equipment – hoists – cranes – bulldozers – graders – scrapers– draglines - clamshell buckets and compaction equipment – types of compaction rollers

**UNIT -IV**

Concreting equipment – crushers – jaw crushers – gyratory crushers – impact crushers – selection of crushing equipment - screening of aggregate – concrete mixers – mixing and placing of concrete – consolidating and finishing

**UNIT-V**

Construction methods – earthwork – piling – placing of concrete – form work –fabrication and erection – quality control and safety engineering

**Text Books:**

1. Construction Planning Equipment and Methods, Peurifoy and Schexnayder , Shapira, TataMcgrawhill
2. Construction Project Management Theory and Practice, Kumar NeerajJha (2011), Pearson.
3. Construction Technology, Subir K. Sarkar and SubhajitSaraswati, Oxford University press.
4. Project Planning and Control with PERT and CPM, B. C. Punamia and K Khandelwal, Laxmi Publications Pvt Ltd. Hyderabad.

**References:**

1. Construction Project Management - An Integrated Approach, Peter Fewings , Taylor and Francis
2. Construction Management Emerging Trends and Technologies, Trefor Williams, Cengage learning.
3. Hand Book of Construction Management, P. K. Joy, Trinity Press Chennai, New Delhi.