

Construction Management (PCCE6040T)

Teaching Scheme

Lectures : 02 Hrs./week

Tutorial : NIL Hr/week

Credit : 02

Examination Scheme

Term Test : 15 Marks

Teacher Assessment: 20 Marks

End Sem Exam : 65 Marks

Total Marks : 100 Marks

Course Objectives

1. An ability to understand Construction activities.
2. To identify organization chart of various construction industries with their forms.
3. Analyze network techniques by using PERT, Bar charts, etc
4. Ability to understand Engineering economics; banking systems, profit and loss accounts concepts.

COs	Course Outcomes	Blooms Level	Blooms Description
CO1	Students will able to learn the Construction Organization and various team members	2	Understand
CO2	Students will able to Analyze network technique	4	Analyzing
CO3	Students will able to understand the material management EOQ techniques	5	Evaluating
CO4	Ability to understand Engineering economics	2	Understand

Course Contents

Unit- I Construction Industry

06 Hrs.

Construction industry, construction team, Construction activities, classification of construction, stages in construction, Need of management in construction, Job layout and value engineering. Leadership and its quality, Organization, meaning and function, forms of organization - line, line and staff, functional, Type A, Type B and Type C

Unit-II Network Technique

05 Hrs.

Network Technique: - History, Advantages, Bar charts, S –Curve etc. various terms used in network technique, activity, event, critical path, duration etc Development of networks, network scheduling, to find various times and float, EST, EFT, TF etc Monitoring of Network, Three phases of network technique.

Unit-III Various Acts Related to Construction Industry

06 Hrs.

Important acts and laws related to constructions Industry- factory act, the employees provident fund Act, minimum wage act, workman compensation act, Indian trade union act, arbitration act, Safety measures in handling of building materials, construction of elements of building, demolition of buildings, hot bituminous works, scaffolding, formwork etc.

Unit-IV Material Management

05 Hrs.

Materials management, its aims and functions, inventory analysis, inventory models, ABC analysis, inventory management, buffer stock, lead time, EOQ, material requirement, planning, market research, system of purchase of materials, stock of material at site, Engineering economics, its definition and importance, demand and supply, factors affecting demand and supply, cost concept. Bank, its type, uses and functions, banking systems, profit and loss account, appreciation and depreciation of money.

Unit-V Contract

05 Hrs.

Contract, essentials, types, registration and law of contract, free consent, contract documents, performance of contract, breach of contract, advances to contractor, bills of contract and payments , subletting , inspection of works, tender, tender notice , various terms used in tender notice such as SD, EMD, estimated cost, time period of work ,cost of tender form, invitation of tender, concept of e-tendering, time schedule of calling tender, tender documents two envelopes system, scrutiny and acceptance , revocation of tender, extra items , additions and alterations , defect liability , liquidated and un-liquidated damages , escalation of rates, work order

Text Books:

- 1) R.L.Peurifoy - Construction planning, Equipments and Methods.
- 2) Mahesh Verma - Construction equipments and its planning and application, Vikas publication
- 3) U.K. Shrivastava - Construction planning and Management, 3rd edition 2005 reprint 2013
- 4) S.V.Deodhar - Construction equipment and job planning, Khanna publishers, 4th edition 2010 reprint 2012.
- 5) Chitkara - Construction Project Management, TMH, New Delhi, 2009

Referance Books:

1. B.N.Dutta - Estimating and Costing, UBS Publishers
2. M.Chakroborty - Estimating and Costing, EWP
3. B.S.Patil - Estimating and Costing -Vol-1& 2, Orient Blackson
4. Seetharaman – Construction Engineering and Management, Umesh Publication.
5. P.S.Gahlot & B.M.Dhir – Construction Planning & Management-2010

Evaluation Scheme:**Continuous Assessment (A):**

Subject teacher will declare Teacher Assessment criteria at the start of Semester.

Continuous Assessment (B):

1. Two term tests of 15 marks each will be conducted during the semester.
2. Total duration allotted for writing each of the paper is 1 hr.
3. Average of the marks scored in both the two tests will be considered for final grading.

End Semester Examination (C):

13. Question Paper will be based on entire syllabus summing up to 65 marks