

LESSON PLAN : TH.2-CONSTRUCTION MANAGEMENT

Discipline: civil engineering	Semester: 6TH	Name of the Teaching Faculty: <i>Ganesh Pradhan</i>
Subject: TH.2- CONSTRUCTION MANAGEMENT	No. of days/ per week class allotted: 4	Semester From Date : <i>14/02/2023</i> to Date: No. of Weeks: 15
Week	Class Day	Theory/ Practical Topics
		1 Introduction To Construction Management
1ST	1	1.1 Aims and objectives of construction management
	2	1.2 Functions of construction management.
	3	1.3 The construction team components-owner,engineer,architect,contractor-their functions and interrelationship and jurisdiction.
	4	1.4 Resources for construction management-men,machines,materials,money
		2 Constructional Planning
2ND	1	2.1 Importance of Construction Planning 2.2 Developing work breakdown structure for construction work
	2	2.3 Construction Planning stages-Pre-tender stage, Post-tender stage.
	3	2.4 Construction scheduling by Bar charts-preparation of Bar Charts for simple construction works.
	4	2.5 Preparation of schedules for labour materials,machinery, finance for small works
3RD	1	2.6 Limitation of Bar charts
	2	2.7 Construction scheduling by network techniques-defination of terms ,PERT and CPM techniques, advantages and disadvantages of two techniques
	3	network analysis, estimation of time and critical path, application of PERT and CPM techniques in sample construction works.
		3 Materials and Stores Management
4TH	1	3.1 Classification of Stores-storage of stock.
	2	3.2 Issue of materials-indent , invoice, bin card
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		4 Construction Site Management
5TH	1	4.1 Job Lay out-Objectives, Review plans, specifications, Lay out of equipments.
	2	4.2 Location of equipment, organizing labour at site.
	3	4.3 Job lay out for different construction sites.
	4	4.4 Principle of storing material at site.
		5 Construction Organization:
6TH	1	5.1 Introduction – Characteristics, Structure, importance.
	2	5.2 Organization types-line and staff, functions and their characteristics
	3	5.3 Principles of organization- meaning and significance of terms- control, authority, responsibility, job & task
	4	5.4 Leadership-necessity, styles of leadership, role of leader
7TH	1	5.5 Human relations-relations with subordinates, peers, Supervisors, characteristics of group behavior, mob psychology, handling of grievances, absenteeism, labour welfare.
	2	5.6 Conflicts in organization-genesis of conflicts, types-intrapersonal, interpersonal, intergroup, resolving conflicts.
		6 Construction Labour and Labour Management:
	3	6.1 Preparing Labour schedule
	4	6.2 Essential steps for optimum labour output
8TH	1	6.3 Labour characteristics

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	2	6.4 Wages & their payment
	3	6.5 Labour incentives
	4	6.6 Motivation- Classification of motives, different approaches to motivation.
		7 Equipment Management
9TH	1	7.1 Preparing the equipment schedule
	2	7.2 Identification of different alternative equipment
	3	7.3 Importance of Owning & operating costs in making decisions for hiring & purchase of equipment
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10TH	1	7.4 Inspection and testing of equipment
	2	7.5 Equipment maintenance
		8 Quality Control
	3	8.1 Concept of quality in construction
	4	8.1 Concept of quality in construction
11TH	1	8.2 Quality Standards- during construction, after construction, destructive & non destructive methods.
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		9 Monitoring Progress
	4	9.1 Programme and progress of work
12TH	1	9.1 Programme and progress of work
	2	9.2 Work study
	3	9.2 Work study
	4	9.3 Analysis and control of physical and financial progress corrective measures.
13TH	1	9.3 Analysis and control of physical and financial progress corrective measures.
		10 Safety Management In Construction
	2	10.1 Importance of safety 10.2 causes and effects of accidents in construction works
	3	10.3 Safety measures in worksites for excavation, scaffolding, formwork, fabrication and erection, demolition.
	4	10.3 Safety measures in worksites for excavation, scaffolding, formwork, fabrication and erection, demolition.
14TH	1	10.4 Development of safety consciousness
	2	10.5 Safety legislation- Workman's compensation act, contract labour act.
		11 Role of Vulnerability Atlas of India in construction projects
	3	11.1 Introduction to Vulnerability Atlas of India, Concepts of natural hazards and disasters and vulnerability profile of India. Definition of disaster related terms.
	4	11.2 Earthquake hazard and vulnerability, Magnitude and intensity scales of earthquake, seismic zones, earthquake hazard maps, types of structures and damage classification, effects in housing and resistant measures.
15TH	1	11.3 Wind / Cyclone hazard and vulnerability, wind speed and pressures, wind hazard and cyclone occurrence maps, storm surveys and cyclone resistant measures.
	2	11.4 Flood hazard and vulnerability, Flood hazard and Flood prone areas of the country, General protection of habitans and flood resistant construction.
	3	11.5 Landslides, Tsunamis and Thunderstorm hazards and vulnerability, Landslide & Thunderstorm incidence maps, Measures against Tsunami hazards.
	4	11.6 Housing vulnerability risk tables and usage of vulnerability atlas of India, Inclusion of vulnerability atlas in Tender documents.

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