

CONSTRUCTION MANAGEMENT

Discipline Civil Engg	Semester 6 th .	Name of the teaching faculty Ms. Geetanjali Bhatia
Subject Construction Management	No of day/ Per week class allotted:- 4	Semester from date 13/02/23 to date 23/05/23
		No of weeks - 15
week	class day	Theory
		<u>Introduction :-</u>
1 st	1 st	Aims and objectives of Construction management.
		Functions of construction management.
	2 nd	The construction team Components - owner, engineer, architect, Contractor - their functions and interrel- ationship and jurisdiction.
	3 rd	Resources for construction management - men, machine materials, money.

CONSTRUCTIONAL PLANNING

	4th	Importance of construction planning.
	1st	Developing work breakdown structure for construction work.
2nd		
	2nd	Construction planning stages - pre-tender stage, post-tender stage.
	3rd	Construction scheduling by Barc charts - preparation of Barc charts for simple construction work.
	4th	preparation of schedules for labour, materials, machinery finance for small works.
		Limitation of Barc charts.
3rd	1st	Construction schedule by network tech - definition of terms, PERT and CPM tech advantages and disadvantages of two tech, network analysis, estimation of time and critical path, application of PERT and CPM
	2nd	

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7 th	8 th	techniques in sample construction works.
		Materials and stores Management.
	4 th	classification of stores - storage of stock.
4 th	1 st	Issue of materials - indent invoice, bin card.
		Construction Site Management
	2 nd	Job lay out - objectives Review plans, specifications, Lay out of equipments.
	3 rd	Location of equipment, organizing labour at site.
		Job lay out for different construction sites.
	4 th	principle of storing materials at site.
5 th	1 st	Construction Organization:
		Introduction - characteristics, structure importance.

	2nd	Organization types - line and staff, functions and their characteristics.
	3rd	principles of organization - meaning and significance of terms - control, authority, responsibility, job & task.
	4th	Leadership - necessity, styles of leadership, role of leader.
6th	1st	Human relations - relations with subordinates, peers, supervisors, characteristics of group behaviour, mob psychology, handling of grievances, absenteeism, labour welfare.
	2nd	
	3rd	Conflicts in organization
	4th	genesis of conflicts, types intrapersonal, interpersonal, intergroup, resolving conflicts.
7th	1st	Construction Labour and Labour Management :-
	2nd	preparing Labour schedule.
		Essential steps for optimum labour output.

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	3rd	Labour characteristics.
	4th	Wages & their payment. Labour incentives.
8th	1st	Motivation - classification of motives, different approaches to motivation.
	2nd	Equipment Management preparing the equipment schedule.
	3rd	Identification of different alternative equipment.
9th	1st	Importance of Owning & operating costs in making decisions for hiring & purchase of equipment.
	2nd	Inspection and testing of equipment.
	3rd	Equipment maintenance. Quality Control
	4th	Concept of quality in construction.

		Quality standards - during construction, after construction, destructive & non destructive methods.
	7th	Monitoring Progress Programme and progress of work.
10th	2nd	Work study.
	3rd	Analysis and control of physical and financial progress: corrective measures.
	4th	Safety Management In Construction. Importance of safety. Causes and effects of accident in construction works.
11th	7th	Safety measures in work sites for excavation, scaffolding, formwork, fabrication and erection, demolition.

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	2nd	Development of safety consciousness.
	3rd	Safety legislation -
	4th	Workman's compensation act, contract labour etc.
12th	1st	Role of Vulnerability Atlas of India in construction projects.
	2nd	Introduction to vulnerability Atlas of India, Concepts of natural hazards and disasters and vulnerability profile of India.
	3rd	Definition of disaster related terms.
	4th	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.
13th	1st	
	2nd	Wind / Cyclone hazard and vulnerability, wind speed and pressures, wind

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	3rd	hazard and cyclone occurrence maps, storm surveys and cyclone resistant measures
	4th	Flood hazard and vulnerability, Flood hazard and flood prone areas of the country, General protection of habitants and flood resistant construction.
14th	1st	Landslides, Tsunami's and Thunderstorm hazards and vulnerability, Landslides & Thunderstorm incidence maps, Measures against Tsunami hazards.
	2nd	
	3rd	Housing vulnerability risk tables and usage of vulnerability atlas of India, Inclusion of vulnerability atlas in Tender documents.
	4th	
15th	}	Revision