

**ACADEMIC SESSION : SUMMER 2023**

<b>Discipline</b> :civil Engg.	<b>Semester : 6<sup>th</sup></b>	<b>Name of the Teaching Faculty : SAIBALI MISHRA</b>
Subject : CONSTRUCTION MANAGEMENT	No. of days / week class allotted	Semester From date: 14/02/2023 to 23/05/2023 Nos. of Weeks : 14
<b>Week</b>	<b>Class Day</b>	<b>Theory/ Practical Topics</b>
1	1 <sup>st</sup>	Aims and objectives of construction management Functions of construction management
	2 <sup>nd</sup>	The construction team component owner, engineer, architect, contractor - their functions and interrelationship and jurisdiction
	3 <sup>rd</sup>	Resources for construction management - men, machines, materials, Money
	4 <sup>th</sup>	Importance of Construction Planning, Developing work breakdown structure for construction work
2	1 <sup>st</sup>	Construction Planning stages - Pre-tender stage, Post-tender stage
	2 <sup>nd</sup>	Construction scheduling by Bar charts - preparation of Bar Charts for simple construction works, Limitation of Bar charts
	3 <sup>rd</sup>	Preparation of schedules for labour materials, machinery, finance for small works
	4 <sup>th</sup>	Construction scheduling by network techniques - definition of terms, PERT and CPM techniques, advantages and disadvantages of network techniques, network analysis
3	1 <sup>st</sup>	estimation of time and critical path, application of PERT and CPM techniques in sample construction works
	2 <sup>nd</sup>	Classification of Stores - storage of stock
	3 <sup>rd</sup>	Issue of materials - indent, invoice, bin card
	4 <sup>th</sup>	Job Layout - Objectives, Review plans, specifications, Layout of equipments
4	1 <sup>st</sup>	Location of equipment, organizing labour at site
	2 <sup>nd</sup>	Job layout for different construction sites

	3 <sup>rd</sup>	Principle of storing material at site
	4 <sup>th</sup>	Introduction—Characteristics, Structure, importance
5	1 <sup>st</sup>	Organization types-line and staff, functions and their characteristics
	2 <sup>nd</sup>	Principles of organization-meaning and significance of terms- control, authority, responsibility, job & task
	3 <sup>rd</sup>	Leadership-necessity, styles of leadership, role of leader
	4 <sup>th</sup>	Human relations-relations with subordinates, Supervisors, characteristics of group behavior, mob psychology, handling of grievances, absenteeism, labour welfare
6	1 <sup>st</sup>	Conflicts in organization-genesis of conflicts, types-intrapersonal, interpersonal, intergroup, resolving conflicts
	2 <sup>nd</sup>	<b>Class Test</b>
	3 <sup>rd</sup>	Preparing Labour schedule, Essential steps for optimum labour output
	4 <sup>th</sup>	Labour characteristics, Wages & their payment, Labour incentives
7	1 <sup>st</sup>	Motivation-Classification of motives, different approaches to Motivation
	2 <sup>nd</sup>	Preparing the equipment schedule
	3 <sup>rd</sup>	Identification of different alternative equipment
	4 <sup>th</sup>	Importance of Owning & operating costs in making decisions for hiring & purchase of equipment
8	1 <sup>st</sup>	Inspection and testing of equipment
	2 <sup>nd</sup>	Equipment maintenance
	3 <sup>rd</sup>	Concept of quality in construction
	4 <sup>th</sup>	Quality Standards-during construction
9	1 <sup>st</sup>	Quality Standards-after construction
	2 <sup>nd</sup>	Quality Standards-destructive methods
	3 <sup>rd</sup>	Quality Standards-nondestructive methods
	4 <sup>th</sup>	Programme and progress of work
10	1 <sup>st</sup>	Methods of recording progress of work
	2 <sup>nd</sup>	Analysis of progress
	3 <sup>rd</sup>	Productivity analysis & work study

	4 <sup>th</sup>	Time study of work measurements
11	1 <sup>st</sup>	Importance of safety, causes and effects of accidents in construction works
	2 <sup>nd</sup>	Safety measures in work sites for excavation, scaffolding
	3 <sup>rd</sup>	Safety measures in work sites for formwork, fabrication
	4 <sup>th</sup>	Safety measures in work sites for erection, demolition
12	1 <sup>st</sup>	Development of safety consciousness
	2 <sup>nd</sup>	Safety legislation- Workman's compensation act
	3 <sup>rd</sup>	Safety legislation-contract labour act
	4 <sup>th</sup>	Introduction to Vulnerability Atlas of India, Concepts of natural hazards and disasters and vulnerability profile of India. Definition of disaster related terms
13	1 <sup>st</sup>	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.
	2 <sup>nd</sup>	Wind / Cyclone hazard and vulnerability, wind speed and pressures, wind hazard and cyclone occurrence maps, storm surveys and cyclone resistant measure
	3 <sup>rd</sup>	Flood hazard and vulnerability, Flood hazard and Flood prone areas of the country, General protection of habitant and flood resistant construction
	4 <sup>th</sup>	Landslides, Tsunamis and Thunderstorm hazards and vulnerability, Landslide & Thunderstorm incidence maps, Measures against Tsunami hazards.
14	1 <sup>st</sup>	Housing vulnerability risk tables and usage of vulnerability atlas of India, Inclusion of vulnerability atlas in Tender documents.
	2 <sup>nd</sup>	<b>Class Test</b>
	3 <sup>rd</sup>	<b>Discussion of Assignment Questions</b>
	4 <sup>th</sup>	<b>Previous semester Question Discussion</b>