



**DEPARTMENT OF CIVIL ENGINEERING**  
**GANPATI INSTITUTE OF ENGINEERING AND TECHNOLOGY, JAGATPUR, CUTTACK**

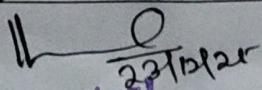
**LESSON PLAN OF 6<sup>TH</sup> SEMESTER(2025-26) CIVIL ENGINEERING**

Discipline: CIVIL ENGG.	Semester:-6 <sup>TH</sup>	Name of the Teaching Faculty BIBHU RANJAN SAMAL
Subject:- CONSTRUCTION MANAGEMENT (Th.2)	No of Days/per Week Class Allotted :-04	Semester From:- <u>22/12/2025</u> To:- <u>18/04/2026</u> No of Weeks:- 17
Week	Class Day	Theory/ Practical Topics
1 <sup>st</sup>	1 <sup>st</sup>	<b>Introduction To Construction Management</b> 1.1 Aims and objectives of construction management.
	2 <sup>nd</sup>	1.2 Functions of construction management.
	3 <sup>rd</sup>	1.3 The construction team components owner, engineer, architect, contractor-their functions and interrelationship and jurisdiction.
	4 <sup>th</sup>	1.4 Resources for construction management-men,machines,materials,money
2 <sup>nd</sup>	1 <sup>st</sup>	<b>Constructional Planning</b> 2.1 Importance of Construction Planning
	2 <sup>nd</sup>	2.2 Developing work breakdown structure for construction work
	3 <sup>rd</sup>	2.3 Construction Planning stages-Pre-tender stage, Post-tender stage. 2.4 Construction scheduling by Bar charts-preparation of Bar Charts for simple construction works.
	4 <sup>th</sup>	2.5 Preparation of schedules for labour materials, machinery, finance for small works
3 <sup>rd</sup>	1 <sup>st</sup>	2.6 Limitation of Bar charts
	2 <sup>nd</sup>	2.7 Construction scheduling by network techniques- definition of terms ,PERT and CPM techniques, advantages and disadvantages of two techniques, network analysis
	3 <sup>rd</sup>	Estimation of time and critical path,
	4 <sup>th</sup>	Application of PERT and CPM techniques in sample construction works.
4 <sup>th</sup>	1 <sup>st</sup>	<b>Materials and Stores Management</b> Introduction of Materials and Stores Management
	2 <sup>nd</sup>	3.1 Classification of Stores-storage of stock.
	3 <sup>rd</sup>	3.2 Issue of materials-indent
	4 <sup>th</sup>	Invoice
5 <sup>th</sup>	1 <sup>st</sup>	Bin card
	2 <sup>nd</sup>	<b>Construction Site Management</b> 4.1 Job Lay out-Objectives,
	3 <sup>rd</sup>	Review plans, specifications, Lay out of equipments
	4 <sup>th</sup>	4.2 Location of equipment, organizing labour at site.
6 <sup>th</sup>	1 <sup>st</sup>	4.3 Job lay out for different construction sites.
	2 <sup>nd</sup>	4.4 Principle of storing material at site.
	3 <sup>rd</sup>	<b>Construction Organization:</b>
	4 <sup>th</sup>	5.1 Introduction – Characteristics, Structure, importance.
7 <sup>th</sup>	1 <sup>st</sup>	5.2 Organization types-line and staff
	2 <sup>nd</sup>	functions and their characteristics
	3 <sup>rd</sup>	5.3 Principles of organization
	4 <sup>th</sup>	meaning and significance of terms- control, authority
8 <sup>th</sup>	1 <sup>st</sup>	Responsibility, job & task.
	2 <sup>nd</sup>	5.4 Leadership-necessity,
	3 <sup>rd</sup>	styles of leadership, role of leader
	4 <sup>th</sup>	5.5 Human relations-relations with subordinates, peers

9 <sup>th</sup>	1 <sup>st</sup>	Supervisors, characteristics of group behavior, mob psychology
	2 <sup>nd</sup>	Handling of grievances, absenteeism, labour welfare.
	3 <sup>rd</sup>	5.6 Conflicts in organization-genesis of conflicts
	4 <sup>th</sup>	types-intrapersonal, interpersonal
10 <sup>th</sup>	1 <sup>st</sup>	intergroup, resolving conflicts.
	2 <sup>nd</sup>	<b>Construction Labour and Labour Management:</b> 6.1 Preparing Labour schedule
	3 <sup>rd</sup>	6.2 Essential steps for optimum labour output
	4 <sup>th</sup>	6.3 Labour characteristics
11 <sup>th</sup>	1 <sup>st</sup>	6.4 Wages & their payment
	2 <sup>nd</sup>	6.5 Labour incentives
	3 <sup>rd</sup>	6.6 Motivation- Classification of motives,
	4 <sup>th</sup>	Different approaches to motivation.
12 <sup>th</sup>	1 <sup>st</sup>	<b>Equipment Management</b> 7.1 Preparing the equipment schedule
	2 <sup>nd</sup>	7.2 Identification of different alternative equipment
	3 <sup>rd</sup>	7.3 Importance of Owning & operating costs in making decisions for hiring
	4 <sup>th</sup>	Purchase of equipment
13 <sup>th</sup>	1 <sup>st</sup>	7.4 Inspection and testing of equipment
	2 <sup>nd</sup>	7.5 Equipment maintenance
	3 <sup>rd</sup>	<b>Quality Control</b> 8.1 Concept of quality in construction
	4 <sup>th</sup>	8.2 Quality Standards- during construction, after construction
14 <sup>th</sup>	1 <sup>st</sup>	Destructive & nondestructive methods.
	2 <sup>nd</sup>	Monitoring Progress 9.1 Programme
	3 <sup>rd</sup>	Progress of work
	4 <sup>th</sup>	9.2 Work study
15 <sup>th</sup>	1 <sup>st</sup>	9.3 Analysis and control of physical progress corrective measures Financial progress corrective measures.
	2 <sup>nd</sup>	Safety Management In Construction 10.1 Importance of safety
	3 <sup>rd</sup>	10.2 causes and effects of accidents in construction works
	4 <sup>th</sup>	10.3 Safety measures in worksites for excavation, scaffolding, formwork, fabrication and erection, demolition
16 <sup>th</sup>	1 <sup>st</sup>	10.4 Development of safety consciousness 10.5 Safety legislation- Workman's compensation act, contract labour act.
	2 <sup>nd</sup>	<b>Role of Vulnerability Atlas of India in construction projects</b> 11.1 Introduction to Vulnerability Atlas of India, Concepts of natural hazards and disasters and vulnerability profile of India. Definition of disaster related terms.
	3 <sup>rd</sup>	11.2 Earthquake hazard and vulnerability, Magnitude and intensity scales of earthquake, seismic zones, earthquake hazard maps, types of structures and dam
	4 <sup>th</sup>	11.3 Wind / Cyclone hazard and vulnerability, wind speed and pressures, wind hazard and cyclone occurrence maps, storm surveys and cyclone resistant measures
17 <sup>th</sup>	1 <sup>st</sup>	11.4 Flood hazard and vulnerability, Flood hazard and Flood prone areas of the country, General protection of habitants and flood resistant construction.
	2 <sup>nd</sup>	11.5 Landslides, Tsunamis and Thunderstorm hazards and vulnerability,
	3 <sup>rd</sup>	Landslide & Thunderstorm incidence maps, Measures against Tsunami hazards.
	4 <sup>th</sup>	11.6 Housing vulnerability risk tables and usage of vulnerability atlas of India, Inclusion of vulnerability atlas in Tender documents

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