LESSON PLAN OF 6th SEMESTER CIVIL ENGINEERING

Discipline,**Civil Engg.**	Semester; **6th**	Name of The Teaching Faculty:-**Tapas Kumar Mallick**
Subject; **CONSTRUCTION MANAGEMENT**	No. of days/per week class allotted ; **04**	Semester From . **Date; 04.02.2025To Date ; 17.05.2025** No of Weeks : **15**
Week	**Class Day**	**Theory/Practical Topics**
1st	1st	**1.0:NTRODUCTION TO CONSTRUCTION MANAGEMENT** 1.1; Aims and objectives of construction management.
	2nd	1.2; Functions of construction management.
	3rd	1.3; The construction team components- Owner ,Engineer, Architect, Contractor –their functions and interrelationship and jurisdiction.
	4th	1.4:Resources for construction management – men, machines, money
2nd	1st	**2.0: Constructional Planning** 2.1: Importance of construction planning.
	2nd	2.2:Developing work breakdown structure for construction work.
	3rd	2.3: Construction planning stages-pre tender stage, post –tender stage.
	4th	2.4: Construction scheduling by Bar charts-preparation of Bar charts for simple construction work.
3rd	1st	2.5: Preparation of schedules for labour materials, machinery, finance for small works.
	2nd	2.6: Limitation of Bar charts.
	3rd	2.7: Construction scheduling by network techniques-definition of terms, PERT and CPM techniques, advantages and disadvantages of two techniques, network analysis, estimation of time and critical path, application of PERT and CPM techniques in sample construction works.
	4th	**3.0: Materials and stores Management** 3.1: Classification of stores- Storage of stock
4th	1st	Storage of stock
	2nd	3.2: Issue of materials –Indent ,Invoice ,Bin card
	3rd	Issue of materials –Indent ,Invoice ,Bin card
	4th	**4.0: Construction site Management:** 4.1: Job lay out-objectives, Review plans, specifications
5th	1st	lay out of equipments
	2nd	4.2: Location of equipment, organizing labour at site.
	3rd	4.3: Job lay out for different construction site,
	4th	4.4: Principles of storing material at site,
6th	1st	**5.0: Construction Organization:** 5.1: Introduction – Characteristics, Structure, importance,
	2nd	5.2: Organization types – line and staff, functions and their characteristics
	3rd	5.3: Principles of Organization – Meaning and significance of terms-control, authority, responsibility ,job & task.
	4th	5.4: Leadership- necessity, styles of leadership, role of leader.
7th	1st	5.6: Human relations – relations with subordinate, peers, supervisors, characteristics of group behavior, mob psychology,handling of grievances, absenteeism, labour welfare.
	2nd	5.7: Conflicts in organization – genesis of conflicts, types-intrapersonal, intergroup, resolving conflicts.
	3rd	**6.0: Construction Labour and Labour Management:** 6.1: Preparing labour schedule
	4th	6.2: Essential steps for optimum labour output.

8th	1st	6.3: Labour characteristics
	2nd	6.4: Wages & their payment
	3rd	6.5: Labour incentives
	4th	6.6: Motivation –Classification of motives, different approaches to motivation.
9th	1st	**7.0: Equipment Management** 7.1: Preparing the equipment schedule.
	2nd	7.2: Identification of different alternative equipment.
	3rd	7.3: Importance of Owning & operating costs in making decisions for hiring & purchase of equipment.
	4th	7.4: Inspection and testing of equipment.
10th	1st	7.5: Equipment maintenance and minor repairs
	2nd	Equipment maintenance and minor repairs
	3rd	**8.0: Quality Control:**
	4th	8.1: Concept of quality in construction .
11th	1st	8.2: Quality Standards – during construction ,after construction
	2nd	8.2: Quality Standards – during construction ,after construction
	3rd	destructive & non destructive methods.
	4th	**9.0: Monitoring Progress:**
12th	1st	9.1: Programme and progress of work.
	2nd	9.2: Work study
	3rd	9.2: Work study
	4th	9.3: Analysis and control of physical and financial progress corrective measures.
13th	1st	9.3: Analysis and control of physical and financial progress corrective measures.
	2nd	**10..0:Safety Management In Construction:** 10.1: Importance of safety
	3rd	10.2: Causes and effects of accidents in construction works
	4th	10.3: Safety measures in worksites for excavation, scaffolding, formwork, fabrication and erection, demolition.
14th	1st	10.4: Development of safety consciousness
	2nd	10.5: Safety legislation – Workman's compensation act, contract labour act.
	3rd	**11.Role of Vulnerability Atlas of India in construction projects** 11.1 Introduction to Vulnerability Atlas of India, Concepts of natural hazards and disasters and vulnerability profile of India. Definition of disaster related terms
	4th	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	1st	11.3 Wind / Cyclone hazard and vulnerability, wind speed and pressures, wind hazard and cyclone occurrence maps, storm surveys and cyclone resistant measures
	2nd	11.4 Flood hazard and vulnerability, Flood hazard and Flood prone areas of the country, General protection of habitants and flood resistant construction
	3rd	11.5 Landslides, Tsunamis and Thunderstorm hazards and vulnerability, Landslide & Thunderstorm incidence maps, Measures against Tsunami hazards.
	4th	11.6 Housing vulnerability risk tables and usage of vulnerability atlas of India, Inclusion of vulnerability atlas in Tender documents

29.09.25