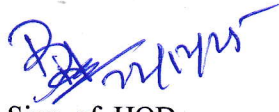


UGMIT, RAYAGADA
DEPARTMENT CIVIL ENGINEERING

Discipline: CIVIL ENGG	Semester: 6TH	Name of the Teaching Faculty: CHINMAYA MAHARANA ,GF
Subject: ADVANCE CONSTRUCTION TECHNIQUE AND EQUIPMENT	No. of days/per week class allotted: 04	Semester From date: 22.12.2025 To Date: 18.04.2026 No. of Weeks: 15
Week	Class Day	Theory / Practical Topics
1 ST	1 ST	Advanced construction materials :
	2 ND	Fibers and Plastics
	3 RD	Types of fibers- Steel, Carbon, glass fibers, Use of fibers as construction material, properties of Fibers.
	4 TH	Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets
2 ND	1 ST	Continuation
	2 ND	Artificial Timbers – Properties and uses of artificial timber
	3 RD	Types of artificial timber available in market, strength of artificial timber.
	4 TH	Miscellaneous materials – Properties and uses of acoustics materials
3 RD	1 ST	QUIZ
	2 ND	Wall claddings, plaster boards, micro-silica
	3 RD	Artificial sand, bonding agents, adhesives etc. 3 Prefabr
	4 TH	Prefabrication
4 TH	1 ST	Introduction, necessity and scope of prefabrication of buildings,
	2 ND	History of prefabrication, current uses of prefabrication , types of prefabricated systems, classification of prefabrication,
	3 RD	Advantages and disadvantages of prefabrication
	4 TH	Continuation
5 TH	1 ST	The theory and process of prefabrication,
	2 ND	design principle of prefabricated systems
	3 RD	Types of prefabricated elements,
	4 TH	modular coordination
6 TH	1 ST	QUIZ
	2 ND	Earthquake Resistant Construction
	3 RD	Building Configuration
	4 TH	Lateral Load resisting structures
7 TH	1 ST	Building characteristics
	2 ND	QUIZ
	3 RD	Effect of structural irregularities-vertical irregularities
	4 TH	, plan configuration problems.
8 TH	1 ST	Effect of structural irregularities-vertical irregularities,

	2 ND	Plan configuration problems.
	3 RD	Safety consideration during additional construction
	4 TH	Alteration of existing Buildings.
9 TH	1 ST	Continuation
	2 ND	Additional strengthening measures in masonry building-corner reinforcement,
	3 RD	lintel band, sill band, plinth band,
	4 TH	roof band, gable band etc
10 TH	1 ST	Building Services
	2 ND	Cold Water Distribution in high rise building,
	3 RD	lay out of installation
	4 TH	Hot water supply – General principles for central plants-layout
	5 TH	QUIZ
11 TH	1 ST	Sanitation –soil and waste water installation in high rise buildings
	2 ND	Electrical services – requirements in high rise buildings ,
	3 RD	Layout of wiring - types of wiring
	4 TH	Fuses and their types ,
12 TH	1 ST	Earthing and their uses
	2 ND	Lighting – Requirement of lighting,
	3 RD	Measurement of light intensity
	4 TH	Ventilation - Methods of ventilation (Natural and artificial Systems of ventilation) problems on ventilation
13 TH	1 ST	Continuation
	2 ND	Mechanical Services- Lifts, Escalator, Elevators – types and uses.
	3 RD	QUIZ
	4 TH	Construction and earth moving equipments –
14 TH	1 ST	Planning and selection of construction equipments
	2 ND	Study on earth moving equipments like drag line, t
	3 RD	Study and uses of compacting equipments like tamping rollers, Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors
	4 TH	Soil reinforcing techniques

Chinnmaya Mahavamsa
 Sign. of concerned Faculty D-22/12/25


 Sign. of HOD