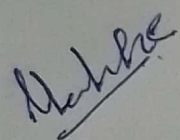


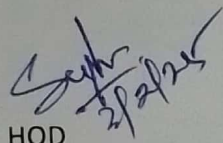
LESSON PLAN for session Summer-2024-25			
Discipline: CIVIL ENGG. Semester: 6TH		Name of the Teaching Faculty: MANAS RANJAN MEHER	
Subject: Advanced Construction Techniques & Equipments		No. of days/ per week class allotted: 4	Semester from date: 04.02.2025 To date: 17.05.2025
		No. of weeks: 15	
SL NO.	WEEK	Class Day	Theory/Practical Topic
1	WEEK-1	1	Advanced construction materials: 1.1 Fibers and Plastics-Types of fibers- Steel,Carbon, Glass fiber. Use of fibre as construction material.
		2	Advanced construction materials: 1.1 Fibers and Plastics-Types of fibers- Steel,Carbon, Glass fiber. Use of fibre as construction material.
		3	Properties of fibre, Types of Plastic-PVC, RPVC,FRP, GRP etc. Coloured plastic sheets, Use of plastic as construction material
		4	Properties of fibre, Types of Plastic-PVC, RPVC,FRP, GRP etc. Coloured plastic sheets, Use of plastic as construction material
2	WEEK-2	5	1.2 Artificial Timbers- Properties and uses of artificial timber,
		6	1.2 Artificial Timbers- Properties and uses of artificial timber,
		7	Types of artificial timber available in market, Strength of artificial timber.
		8	Types of artificial timber available in market, Strength of artificial timber.
3	WEEK-3	9	1.3 Miscellaneous materials- Properties and uses of acoustics materials wall cladding, plaster boards, micro-silica, artificial sand, bonding agents, adhesives.
		10	1.3 Miscellaneous materials- Properties and uses of acoustics materials wall cladding, plaster boards, micro-silica, artificial sand, bonding agents, adhesives.
		11	2.1 Prefabrication- Introduction, necessary and scope of prefabrication of building. History of prefabrication, current uses of prefabrication
		12	2.1 Prefabrication- Introduction, necessary and scope of prefabrication of building. History of prefabrication, current uses of prefabrication
4	WEEK-4	13	Types of prefabricated systems, classification of prefabrication, advantages and disadvantages of prefabrication.
		14	Types of prefabricated systems, classification of prefabrication, advantages and disadvantages of prefabrication.
		15	2.2 The theory and process of prefabrication, design principle of prefabricated systems, types of prefabricated elements.
		16	2.2 The theory and process of prefabrication, design principle of prefabricated systems, types of prefabricated elements.
5	WEEK-5	17	2.3 Modular coordination, Indian standard recommendation for modular planning.
		18	2.3 Modular coordination, Indian standard recommendation for modular planning.
		19	Earthquake Resistant Construction:
		20	3.1 Introduction to Earthquake,P-wave, S-wave, seismograph, 3.2 Building configuration 3.3 Lateral load resisting structure

6	WEEK-6	21	3.3 Building characteristics
		22	3.4 Effect of structural Irregularities-Plan configuration problems.
		23	3.5 Safety consideration during construction of alteration and existing building.
		24	3.5 Safety consideration during construction of alteration and existing building.
7	WEEK-7	25	3.6 Additional strengthening measures in masonry buildings, Corner reinforcement, lintel band, sill band, Plinth band, roof band gable band etc.
		26	3.6 Additional strengthening measures in masonry buildings, Corner reinforcement, lintel band, sill band, Plinth band, roof band gable band etc.
		27	INTERNAL EXAM
		28	4.0 Retrofitting of Structures-
8	WEEK-8	29	4.1 Seismic retrofitting of reinforced concrete buildings.
		30	4.2 Sources of weakness in RC frame building.
		31	4.2 Sources of weakness in RC frame building.
		32	Cont..
9	WEEK-9	33	4.3 Classification of retrofitting techniques and their uses.
		34	4.3 Classification of retrofitting techniques and their uses.
		35	Cont..
		36	Cont..
10	WEEK-10	37	Building Services-
		38	5.1 Cold water distribution in high rise building, lay-out of installation
		39	5.2 Hot water supply- General principles for central plants-layout.
		40	5.3 Sanitation- soil and waste water installation in high rise building.
11	WEEK-11.	41	5.3 Sanitation- soil and waste water installation in high rise building.
		42	5.4 Electrical services- requirements in high rise buildings- Layout of wiring, types of wiring, Fuses and their types, Earthing and their uses.
		43	5.5 Lighting- requirement of lighting, measurement of light intensity.
		44	5.6 Ventilation- Methods of ventilation (Natural and Artificial systems) Problems on ventilation.
12	WEEK-12	45	5.7 Mechanical services- Lifts, Escalators, Elevators- Types and uses.
		46	Construction and earth moving equipments-
		47	6.1 Planning and selection of construction equipment.
		48	6.2 Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel.
13	WEEK-13	49	6.2 Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel.
		50	6.3 Study and uses of compacting equipments like tempering rollers, smooth wheel rollers, Pneumatic tyre rollers and vibrating compactors
		51	6.4 Owning and Operating cost- Problems
		52	7.0 Soil reinforcing techniques
			7.1 necessity of soil reinforcing.

14	WEEK-14	53	7.2 Use of wire mesh and geo-synthetics.
		54	7.2 Use of wire mesh and geo-synthetics.
		55	7.3 Strengthening of embankments, Slope stabilization in cutting
		56	and embankment.
15	WEEK-15	57	7.3 Strengthening of embankments, Slope stabilization in cutting
		58	and embankment.
		59	7.3 Soil reinforcing techniques.
		60	7.3 Soil reinforcing techniques. Doubt clearing class and revision. Doubt clearing class and revision.

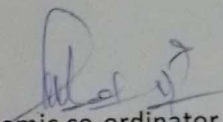


Lecturer

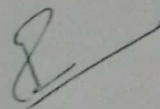


HOD

Civil Engg. Dept.



Academic co-ordinator



Principal

GP Nabarangpur