

Subject :- **Advanced Construction Techniques & Equipment**

(Code) TH-3

Name of faculty:- *Sandeep Khatur*Semester :- 6TH

Class allotted 60p

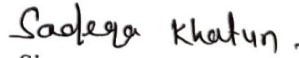
Branch :- Civil engg.

Discipline	Semester:-4 TH	From date:- 16/01/24 To date:26/04/24	Teaching Aid
Subject:	No. of days/ per week 4p/w :	Theory/ Practical –Topics/Lesson	
Week	Date/Period		

1	16/01/24 TO 20/01/24	1 Advanced construction materials 1.1 Fibers and Plastics- Types of fibers- Steel, Carbon, glass fibers, Use of fibers as construction material, properties of Fibers. Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets. Use of plastic as construction material.	White board & marker
2	22/01/24 TO 27/01/24	1.2 Artificial Timbers – Properties and uses of artificial timber. Types of artificial timber available in market, strength of artificial timber.	White board & marker
3	29/01/24 TO 03/02/24	1.3 Miscellaneous materials – Properties and uses of acoustics materials, wall claddings, plaster boards, micro-silica, artificial sand, bonding agents, adhesives etc.	White board & marker
4	05/02/24 TO 10/02/24	2 Prefabrication 2.1 Introduction, necessity and scope of prefabrication of buildings, history of prefabrication, current uses of prefabrication , types of prefabricated systems, classification of prefabrication, advantages and disadvantages of prefabrication,	White board & marker
5	12/02/24 TO 17/02/24	2.2 The theory and process of prefabrication, design principle of prefabricated systems, types of prefabricated elements, modular coordination 2.3 Indian standard recommendation for modular planning.	White board & marker
6	19/02/24 TO 24/02/24	3 Earthquake Resistant Construction 3.1 Building Configuration 3.2 Lateral Load resisting structures 3.3 Building characteristics 3.4 Effect of structural irregularities-vertical irregularities, plan configuration problems	White board & marker
7	26/02/24 TO 02/03/24	3.5 Safety consideration during additional construction and alteration of existing Buildings. 3.6 Additional strengthening measures in masonry building-corner reinforcement, lintel band, sill band, plinth band, roof band, gable band etc.	White board & marker
8	04/03/24 TO 09/03/24	4 Retrofitting of Structures 4.1 Seismic retrofitting of reinforced concrete buildings : 4.2 -Sources of weakness in RC frame building 4.3 -Classification of retrofitting	White board & marker

9	11/03/24 TO 16/03/24	techniques and their uses 5. Building Services 5.1 Cold Water Distribution in high rise building, lay out of installation 5.2 Hot water supply – General principles for central plants-layout	White board & marker
10	18/03/24 TO 23/03/24	5.3 Sanitation –soil and waste water installation in high rise buildings 5.4 Electrical services – i) requirements in high rise buildings ii) Layout of wiring - types of wiring iii) Fuses and their types iv)Earthing and their uses 5.5 Lighting – Requirement of lighting, Measurement of light intensity	White board & marker
11	27/03/24 TO 30/03/24	5.6 Ventilation - Methods of ventilation (Natural and artificial Systems of ventilation) problems on ventilation 5.7 Mechanical Services- Lifts, Escalator, Elevators – types and uses.	White board & marker
12	02/04/24 TO 06/04/24	6 Construction and earth moving equipments – 6.1 Planning and selection of construction equipments 6.2 Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel	White board & marker & smart board
13	08/04/24 TO 13/04/24	6.3 Study and uses of compacting equipments like tamping rollers, Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors 6.4 Owning and operating cost – problems	White board & marker
14	15/04/24 TO 20/04/24	7 Soil reinforcing techniques 7.1 Necessity of soil reinforcing. 7.2 Use wire mesh and geo-synthetics	White board & marker
15	22/04/24 TO 26/04/24	7.3 Strengthening of embankments, Slope stabilization in cutting and embankments by soil reinforcing techniques.	White board & marker & smart board


Signature of HOD


Signature of faculty