#### Badriprasad Institute of Technology, Sambalpur

# Lesson plan for Theory -3, Advanced Construction Techniques & Equipment Semester & Branch : 6th Sem Civil Engineering Total Periods-6

Name of the faculty : Mr. Firoz Kumar Patel

**Total Periods-60** No of periods /week-4

Fibers and Plastics- Types of fibers- Steel, Carbon,       IST     glass fibers,       3RD     glass fibers,       4TH     Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc.       4TH     Types of plastics severs       2ND     2ND       3RD     -Use of plastic severs       2ND     1ST       2ND     -Use of plastic severs       2ND     -Use of artificial timbers - Properties and uses of artificial timber.       2ND     -Use of artificial timber available in market,       3RD     Artificial Timbers - Properties and uses of acoustics materials,       3RD     Strength of artificial timber.       3RD     Null claddings,       3RD     wall claddings,       4TH     plaster boards, micro-silica,       3RD     artificial sand,       2ND     bonding agents,.       3RD     adhesives etc       4TH     Prefabrication       4TH     introduction, necessity and scope of prefabrication       3RD     classification of prefabrication,       4TH     advantages and disadvantages of prefabrication,       4TH     advantages and disadvantages	WEEK	CLASS DAY	THEORY TOPICS
Image: Types of fibers, Steel, Carbon,       3RD     glass fibers,       3RD     Use of fibers as construction material, properties of Fibers.       4TH     Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc.       2ND     1ST     Colored plastic sheets       2ND     3RD     - Use of plastic as construction material.       2ND     3RD     Artificial Timbers – Properties and uses of artificial timber.       4TH     Types of artificial timber.     Miscellaneous materials – Properties and uses of acoustics materials,       3RD     Miscellaneous materials – Properties and uses of acoustics materials,       3RD     Wall claddings,       4TH     plaster boards, micro-silica,       1ST     artificial sand,       2ND     bonding agents,.       3RD     adhesives etc       4TH     Introduction, necessity and scope of prefabrication of buildings,       1ST     history of prefabricated systems       3RD     classification of prefabrication       4TH     advantages and disadvantages of prefabrication,       4TH     advantages and disadvantages of prefabrication,       5TH     3RD     classification of prefabricated systems,		157	Fibers and Plastics-
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		4TH	alteration of existing Buildings.

### Badriprasad Institute of Technology, Sambalpur

# Lesson plan for Theory -3, Advanced Construction Techniques & Equipment Semester & Branch : 6th Sem Civil Engineering Total Periods-6

### Name of the faculty : Mr. Firoz Kumar Patel

**Total Periods-60** No of periods /week-4

9TH	1ST	Additional strengthening measures in masonry building-corner reinforcement
	2ND	sill band, plinth band, roof band, gable band
	3RD	lintel band
	4TH	Retrofitting of Structures
		Seismic retrofitting of reinforced concrete buildings :
	1ST	-Sources of weakness in RC frame building
	2ND	Classification of retrofitting techniques and their uses
10TH	3RD	Building Services
		Cold Water Distribution in high rise building, lay out of installation
	4TH	Continue of 3rd Class
	1ST	Hot water supply – General principles for central plants-layout
	2ND	Sanitation –soil and waste water installation in high rise buildings
11TH	3RD	Electrical services – i) requirements in high rise buildings ii) Layout of wiring -
	4TH	types of wiring iii) Fuses and their types iv)Earthing and their uses
	1ST	Lighting – Requirement of lighting, Measurement of light intensity
	2ND	Ventilation - Methods of ventilation (Natural and artificial Systems of ventilation)
12TH		problems on ventilation
1210	3RD	Mechanical Services- Lifts, Escalator
		Elevators – types and uses.
	4TH	Construction and earth moving equipments –
		Planning and selection of construction equipments
	1ST	Study on earth moving equipments like drag line,
	2ND	tractor, bulldozer, Power shovel
13TH	3RD	Study and uses of compacting equipments like tamping rollers
	4TH	Smooth wheel rollers
		Pneumatic tired rollers and
	1ST	Owning and operating cost – problems
4.4711	2ND	vibrating compactors
14TH	3RD	Soil reinforcing techniques
	4TH	Necessity of soil reinforcing.
	1ST	Use wire mesh and geo-synthetics.
	2ND	Strengthening of embankments
15TH	3RD	embankments by soil reinforcing techniques
	4TH	Slope stabilization in cutting