

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF
ENGINEERING & TECHNOLOGY, BARGARH



PROGRESS REGISTER

Session-2022-2023

Discipline: Civil Engg.

Semester: 6th

Subject: Advance Construction Technique & Equipment

Name of the Teaching Faculty: Bikramaditya Bagh

Subject: ACTE No. of Days/per week class allotted 04

Semester From Date : 14/02/2023 To Date : 10/06/2023 No. of Weeks : 15

Date	Topics to be covered as per Lesson Plan	Topics actually covered	Points/contents Discussed (in brief)	Signature of Teacher
14/02/2023	Advance Construction material, Fibres, Type of fibres carbon, glass fibre	Fibre as construction material, Fibres Type of fibres	Introduction fibres as construction material, fibre definition, glass fibre, steel fibre description	<u>BdBasht</u>
16/02/2023	Use of fibre as construction material, Properties of fibre	carbon fibre properties of fibre	detailed description of carbon fibre, various point on properties of fibres	<u>BdBasht</u>
20/02/2023	Plastics, Types of plastic PVC, RPVC, FRP, GFRP etc. colored plastic sheets	plastic as a construction material, Types of plastic	Introduction plastic as a construction material Properties of plastic Types of plastic	<u>BdBasht</u>
21/02/2023	Use of plastic as construction material	Use of plastic as construction material	Flooring, Roofing, Wall Insulation, pipes, windows, doors etc PVC, RPVC, HDPE FRP, GFRP, colored plastic sheets	<u>BdBasht</u>
23/02/2023	Artificial timber- properties and uses of artificial timber	properties and uses of artificial timber	Introduction artificial timber properties different point discuss, uses of artificial timber.	<u>BdBasht</u>
25/02/2023	Types of artificial timber available in market	types of artificial timber available in market	plywood, block board, Impreg, Glulam, Fibre board, Flush door, hard board, veneers Compreg timber	<u>BdBasht</u>
27/02/2023	Strength of artificial timber	strength of artificial timber	compressive, Tensile Transverse strength of artificial timber	<u>BdBasht</u>
28/02/2023	Miscellaneous material properties and uses of acoustic materials	miscellaneous material properties and uses of acoustic materials	Introduction of miscellaneous material, acoustic material, various point of properties and uses of acoustic material	<u>BdBasht</u>
02/03/2023	Wall claddings, plaster board, micro silica	Wall cladding, plaster board, micro silica	Introduction and define of wall cladding, plaster board, micro silica	<u>BdBasht</u>
04/03/2023	artificial sand, bonding agents, adhesive	artificial sand bonding agents, adhesive	Introduction and define of artificial sand, bonding agents, adhesive	<u>BdBasht</u>
06/03/2023	Prefabrication- Introduction, necessity and scope of prefabrication of building	Prefabrication- Introduction, necessity and scope of prefabrication of building	Definition Introduction Prefabrication various point to be discuss in necessity and scope of prefabrication	<u>BdBasht</u>

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09/03/2023	history of pre fabrication current uses of pre fabrication	history of pre fabrication current uses of pre fabrication	Sinhale king of ancient Sweet track construction Santo Antonio, Crystal place, Postage, Reduce maintenance is less	<u>BdBasht</u>
11/03/2023	types of pre fabrication systems, classification of pre fabrication	types of pre fabrication system, classification of pre fabrication	Volumetric, Penallised small, cast-in-site, open system, medium, large partial, Total pre fabrication	<u>BdBasht</u>
13/03/2023	advantages and disadvantages of pre fabrication	advantages and disadvantages of pre fabrication	Factory tools, Deploying, moving partial assemble, higher precision Transport cost, heavy duty	<u>BdBasht</u>
14/03/2023	The theory and process of pre fabrication	process and theory	Introduction to process and theory of pre fabrication brick, timber, cement, sand, steel	<u>BdBasht</u>
16/03/2023	design principle of pre fabricated system	design principle of pre fabricated system	Economy in large scale special requirement fast speed constraints overall assessments	<u>BdBasht</u>
18/03/2023	types of pre fabricated elements, modular coordination	types of pre fabricated elements, modular coordination	Flooring/roofing system pre cast beam, column wall panel, slabs modular coordination grid advantages of modular coordination	<u>BdBasht</u>
20/03/2023	Indian standard recommendation for modular planning	Indian standard recommended for modular planning	Preferred horizontal dimension, room size, axial planning, 5m module residential building	<u>BdBasht</u>
21/03/2023	Earthquake Resistant Construction Building configuration	Building configuration	Plan irregularities vertical irregularities highly torsional configuration	<u>BdBasht</u>
23/03/2023	Lateral load resisting structures	Lateral load resisting structures	moment resisting frame braced frame, shear wall	<u>BdBasht</u>
25/03/2023	Building characteristic	Building characteristics	Introduction to building characteristics mode shapes. Building frequency Damping	<u>BdBasht</u>
27/03/2023	Effect of structural irregularities - vertical irregularity	Effect of structural irregularities	Vertical discontinuity load path, irregularity on strength & stiffness mass irregularities	<u>BdBasht</u>

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28/03/2023	Plan configuration problems	plan configuration problem	torsional irregularities, re-entrant corners, Non-parallel system.	<u>Bd Bash</u>
03/04/2023	Safety consideration during additional construction and alteration of existing building	Safety consideration during additional construction and alteration of existing building	total or partial change extension, partial demolition, linking or separating space	<u>Bd Bash</u>
04/04/2023	Additional strengthening measures in masonry building corner reinforcement, lintel band, sill band	additional strengthening measure in masonry building	corner reinforcement, lintel band, sill band	<u>Bd Bash</u>
06/04/2023	plinth band, roof band, gable band	plinth band, roof band, gable band	plinth band, roof band, gable band	<u>Bd Bash</u>
08/04/2023	Retrofitting structures seismic retrofitting of reinforced concrete building	seismic retrofitting of reinforced concrete building	Introduction to seismic retrofitting of reinforced concrete building	<u>Bd Bash</u>
10/04/2023	seismic retrofitting of reinforced concrete building	seismic retrofitting of reinforced concrete building	details description of seismic retrofitting of reinforced concrete building	<u>Bd Bash</u>
11/04/2023	Sources of weakness in RC frame building	sources of weakness in RC frame building	structural damage due to discontinuous load path	<u>Bd Bash</u>
13/04/2023	Sources of weakness in RC frame building	sources of weakness in RC frame building	structural damage due to lack of deformation	<u>Bd Bash</u>
15/04/2023	Sources of weakness in RC frame building	sources of weakness in RC frame building	quality workmanship	<u>Bd Bash</u>
17/04/2023	classification of retrofitting techniques and their uses	global retrofitting	Introduction retrofitting Adding shear wall Adding stiff wall Adding bracing Adding wing wall	<u>Bd Bash</u>
18/04/2023	classification of retrofitting techniques and their uses	global retrofitting	wall thickening mass reduction supplemental damping base isolation	<u>Bd Bash</u>

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20/04/2023	Classification of retrofitting techniques and their uses	Local retrofitting	Jacketing of beam, column, beam-column joint, strengthening individual footing	<u>BdBagh</u>
24/04/2023	Building Services Cold water distribution in high rise building layout of installation	building services cold water distribution in high rise building layout of installation	Introduction building service. By normal water pressure overhead feed system direct up feed system layout	<u>BdBagh</u>
25/04/2023	Hot water supply-General principles for central plants layout	hot water supply General principles for central plants layout	Introduction to hot water supply, details procedure, sketch of central plants	<u>BdBagh</u>
27/04/2023	Sanitation-soil and waste water installation in high rise building	soil and waste water installation in high rise building	grey water, black water, steeper slope	<u>BdBagh</u>
29/04/2023	Electrical services-its requirement in high rise building its layout of wiring-types of wiring	requirements in high rise building layout of wiring-types of wiring	Introduction to requirement in high rise building layout, junction system loop system	<u>BdBagh</u>
01/05/2023	its Fuses and their types, its Earthing and their uses	Fuses and their types Earthing and their uses	AC & DC fuse, fuses and earthing definition, uses lighting	<u>BdBagh</u>
02/05/2023	Lighting: Required of lighting, measurement of light intensity	Lighting: Required of lighting, measurement of light intensity	definition of lighting candle, measurement of light intensity	<u>BdBagh</u>
04/05/2023	Ventilation- Methods of ventilation (natural and artificial systems of ventilation) problems of ventilation	Ventilation-methods of ventilation (natural and artificial systems of ventilation) problems on ventilation	definition of ventilation natural and artificial ventilation system of ventilation problem on ventilation	<u>BdBagh</u>
06/05/2023	Mechanical Services- Lifts Escalators, Elevators, types and uses	Lifts, Escalator, elevator, types and uses	definition of lift, escalator elevator, store lift, institution lift, traction hydraulic, traction-hydraulic elevators, parallel cross axis	<u>BdBagh</u>
08/05/2023	Construction and earth moving equipments: planning and selection of construction equipments	planning, selection of construction equipments	Material, labor, finance power factors affecting the selection of construction equipment	<u>BdBagh</u>
09/05/2023	study on earth moving equipments like dragline	dragline	Introduction to drag line, components hoist, rope, coupler	<u>BdBagh</u>

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11/05/2023	tractor	tractor	pulling equipment introduction tractor types	<u>BdBagh</u>
13/05/2023	bulldozer	bulldozer	bulldozer introduction types, crawler, wheel mini bulldozer	<u>BdBagh</u>
16/05/2023	power shovel	power shovel	Introduction to power shovel, types of power shovel	<u>BdBagh</u>
20/05/2023	Study and uses of compacting equipments like tamping rollers	tamping rollers	detail discussion with sketch of tamping roller	<u>BdBagh</u>
22/05/2023	smooth wheel rollers, Pneumatic tired rollers	smooth wheel rollers, Pneumatic tired rollers	detail description of smooth wheel and pneumatic tired rollers	<u>BdBagh</u>
23/05/2023	vibrating compactors	vibrating compactors	detail description of vibrating compactors	<u>BdBagh</u>
25/05/2023	owning and operating cost-problem)	owning and operating cost problem	Invest cost, depreciation cost, Major repair cost operating cost, fuel lubricant, maintainers labour, field repairs	<u>BdBagh</u>
27/05/2023	owning and operating cost problem)	owning and operating cost problem	numeric problem on owning and operating cost	<u>BdBagh</u>
29/05/2023	Soil reinforcing technique Necessity of soil reinforcing	Necessity of soil reinforcing	bearing capacity is low loose soil chances of erosion	<u>BdBagh</u>
30/05/2023	Use wire mesh and geosynthetics	Use wire mesh and geosynthetics	definition of use wire mesh and geosynthetic Types of geosynthetic geotextile, geogrid	<u>BdBagh</u>
01/06/2023	Use wire mesh and geosynthetics	Use wire mesh and geosynthetics	geonet, geo composite geocell details description	<u>BdBagh</u>

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03/06/2023	Use wire mesh and geosynthetics	use wire mesh and geosynthetics	geomembrane geosynthetic clay water	<u>Ed Begh</u>
05/06/2023	strengthening of embankments	strengthening of embankments	Introduction to strengthening of embankment- Reinforced soil slopes and embankment	<u>Ed Begh</u>
06/06/2023	strengthening of embankments	strengthening of embankments	Soil reinforcing technique	<u>Ed Begh</u>
08/06/2023	slope stabilization in cutting	slope stabilization in cutting	application of soil reinforcement Balance cut & fill	<u>Ed Begh</u>
10/06/2023	embankments by soil reinforcing techniques	embankments by soil reinforcing techniques	bull bench cut Typical fill	<u>Ed Begh</u>