

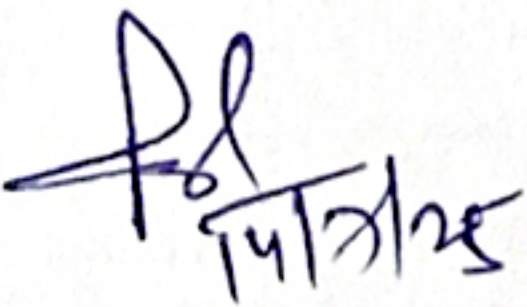
ACADEMIC SESSION: WINTER-2025

Discipline : Civil engg	Semester:3rd	Name of the Teaching Faculty : Padma Lochan Behera, Sr. Lect. (Civil)
Subject:Building Construction	No. of Days / Week class allotted:3	Semester Duration: 14/07/2025 to 15/11/2025 No. of Weeks :18
Week	Class day	Theory/Practical Topics:
1 st	1 st	Classification of Buildings as per National Building Code Group A to I, as per Types of Constructions- Load Bearing Structure, Framed Structure, Composite Structure.
	2 nd	Building Components – Functions of Building Components, substructure – Foundation, Plinth.
	3 rd	Superstructure – Walls, Partition wall, Cavity wall, Sill, Lintel, Doors and Windows .
2 nd	1 st	Floor, Mezzanine floor, Roof, Columns, Beams, Parapet.
	2 nd	Job Layout: Site Clearance, Layout for Load Bearing Structure by Center Line and Face Line Method, Precautions.
	3 rd	Layout for Framed Structure by Center Line and Face Line Method, Precautions.
3 rd	1 st	Earthwork: Excavation for Foundation, Timbering and Strutting
	2 nd	Earthwork for embankment, Material for plinth Filling, Tools and plants used for earthwork.
	3 rd	Foundation: Functions of foundation, Types of foundation – Shallow Foundation, Stepped Footing
4 th	1 st	Wall Footing, Column Footing, Isolated and Combined Column Footing
	2 nd	Raft Foundation, Grillage Foundation.
	3 rd	Deep Foundation – Pile Foundation, Well foundation
5 th	1 st	Caissons, Pumping Methods of Dewatering, Deep wells, Well points, Cofferdams (Introduction only) .
	2 nd	Stone Masonry: Terms used in stone masonry- facing, backing, hearting, through stone, corner stone, cornice.
	3 rd	Types of stone masonry: Rubble masonry, Ashlar Masonry and their types.
6 th	1 st	Joints in stone masonry and their purpose.
	2 nd	Selection of Stone Masonry, Precautions to be taken in Stone Masonry Construction.
	3 rd	Brick masonry: Terms used in brick masonry- header, stretcher, closer, quoins, course, face, back, hearting, bat bond, joints, lap, frog line, level and plumb.
7 th	1 st	Bonds in brick masonry- header bond, stretcher bond.
	2 nd	English bond and Flemish bond.
	3 rd	Requirements of good brick masonry. Junctions in brick masonry and their purpose and procedure.

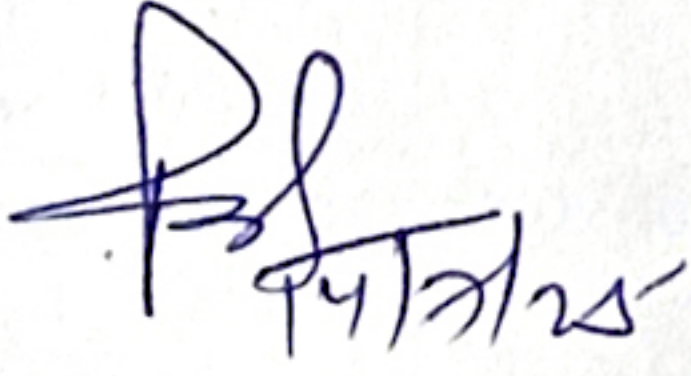
8 th	1 st	Precautions to be observed in Brick Masonry Construction. Comparison between stone and Brick Masonry.
	2 nd	Tools and plants required for construction of stone and brick masonry. Hollow concrete block masonry and composite masonry.
	3 rd	Scaffolding and Shoring: Purpose, Types of Scaffolding, Process of Erection and Dismantling.
9 th	1 st	Purpose and Types of Shoring, Underpinning.
	2 nd	Formwork: Definition of Formwork, Requirements of Formwork, Materials used in Formwork.
	3 rd	Types of Formwork, Removal of formwork.
10 th	1 st	Horizontal Communication: Doors – Components of Doors, Full Paneled Doors, Partly Paneled and Glazed Doors.
	2 nd	Flush Doors, Collapsible Doors, Rolling Shutters, Revolving Doors, Glazed Doors. Sizes of Door recommended by BIS.
	3 rd	Windows: Component of windows, Types of Windows – Full Paneled, Partly Paneled and Glazed, wooden, Steel, Aluminum windows.
11 th	1 st	Sliding Windows, Louvered Window, Bay window, Corner window, clear storey window.
	2 nd	Gable and Dormer window, Skylight. Sizes of Windows recommended by BIS. Ventilators.
	3 rd	Fixtures and fastenings for doors and windows . Material used and functions of Window Sill and Lintels, Shed /Chajja.
12 th	1 st	Vertical Communication: Means of Vertical Communication- Stair Case, Ramps, Lift, Elevators and Escalators.
	2 nd	Terms used in staircase steps, tread, riser, nosing, soffit, waist slab, baluster, balustrade, scotia, hand rails, newel post, landing, headroom, winder.
	3 rd	Types of staircase (On the basis of shape): Straight, dog-legged, open well, Spiral, quarter turn, bifurcated.
13 th	1 st	Three quarter turn and Half turn, (On the basis of Material): Stone, Brick, R.C.C., wooden and Metal.
	2 nd	Floors and Roofs: Types of Floor Finishes and its suitability- Kota, Marble, Granite, Ceramic Tiles, Vitrified .
	3 rd	Chequered Tiles, Paver Blocks, Concrete Floors, wooden Flooring, Skirting and Dado.
14 th	1 st	Process of Laying and Construction, Finishing and Polishing of Floor.
	2 nd	Roofing Materials- RCC, Mangalore Tiles, AC Sheets, G.I. sheets, Corrugated G.I. Sheets, Plastic and Fibre Sheets.
	3 rd	Types of Roof: Flat roof, Pitched Roof- King Post truss, Queen Post Truss, terms used in roofs.
15 th	1 st	Wall Finishes: Plastering – Necessity of Plastering, Procedure of Plastering .
	2 nd	Single Coat Plaster, Double Coat Plaster, Rough finish, Neeru Finishing

	3 rd	Special Plasters- Stucco plaster, sponge finish, pebble finish.
16 th	1 st	Plaster Board and Wall Claddings. Precautions to be taken in plastering, defects in plastering.
	2 nd	Painting – Necessity, Types of painting and procedure of Painting.
	3 rd	Painting –Necessity, Surface Preparation for painting, Methods of Application.
17 th	1 st	Revision
	2 nd	Revision
	3 rd	Revision
18 th	1 st	Question Discussion
	2 nd	Question Discussion
	3 rd	Question Discussion

Prepared By :

Radmalocher Behera

 14/7/25

Approved By:


 14/7/25
 HOD(Civil)