



SYNERGY SCHOOL OF ENGINEERING, DHENKANAL
LESSON PLAN
SESSION 2026-2027
DEPARTMENT OF CIVIL ENGINEERING

Discipline: Civil Engineering	Semester: 3 rd /W 2026	Name of the Faculty: MANMOHAN MURMU(Lecturer) Email: manmohan19murm@gmail.com
Subject: BUILDING CONSTRUCTION	No. of Days/week: 03	Start Date: 01/07/2026 End Date: 05/11/2026

Week	Class Day	Theory Topics
1st	1st	Classification of Buildings as per National Building Code Group A to I, as per Types of Constructions- Load Bearing Structure
	2nd	Framed Structure, Composite Structure, Building Components – Functions of Building Components
	3rd	substructure – Foundation, Plinth. Superstructure – Walls, Partition wall, Cavity wall, Sill, Lintel
2nd	1st	Doors and Windows, Floor, Mezzanine floor, Roof, Columns, Beams, Parapet.
	2nd	Job Layout: Site Clearance, Layout for Load Bearing Structure
	3rd	Layout of Framed Structure by Center Line and Face Line Method, Precautions.
3rd	1st	Earthwork: Excavation for Foundation
	2nd	Timbering and Strutting, Earthwork for embankment, Material for plinth Filling
	3rd	Tools and plants used for earthwork, Foundation: Functions of foundation
4th	1st	Types of foundation – Shallow Foundation, Stepped Footing, Wall Footing,
	2nd	Column Footing, Isolated and Combined Column Footing, Raft Foundation, Grillage Foundation.
	3rd	Deep Foundation – Pile Foundation, Well foundation and Caissons, Pumping Methods of Dewatering, Deep wells, Well points, Cofferdams (Introduction only).
5th	1st	Stone Masonry: Terms used in stone masonry- facing, backing, hearting, through stone
	2nd	corner stone, cornice. Types of stone masonry: Rubble masonry, Ashlar Masonry and their types. Joints in stone masonry and their purpose
	3rd	Selection of Stone Masonry, Precautions to be taken in Stone Masonry Construction
6th	1st	Brick masonry: Terms used in brick masonry- header, stretcher, closer, quoins, course, face, back, hearting, bat bond, joints, lap, frog line, level and plumb
	2nd	Bonds in brick masonry- header bond, stretcher bond, English bond and Flemish bond.
	3rd	Requirements of good brick masonry. Junctions in brick masonry and their purpose and procedure
7th	1st	Precautions to be observed in Brick Masonry Construction
	2nd	Comparison between stone and Brick Masonry. Tools and plants required for construction of stone and brick masonry.
	3rd	Hollow concrete block masonry and composite masonry, Scaffolding and Shoring: Purpose
8th	1st	Types of Scaffolding, Process of Erection and Dismantling.

M. Murmu
11/04/26



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

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