

**BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING**



LESSON PLAN

SUBJECT: BUILDING MATERIAL & CONSTRUCTION TECHNOLOGY (TH 3)

FACULTY: MISS SANDHYARANI BARIK

ACCADEMIC SESSION: 2022-23

SEMESTER: 3RD

SEC: A

Sd/-

H O D (Civil Engg.)

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Discipline: Civil Engineering	Semester/Section : 3 rd / A		Name of Teaching Faculty: MISS SANDHYARANI BARIK
Subject: Building Material & Construction	No. of Days / week class allotted: 05 period per week (Mon-1,Tue-1,Thu-1&Sat- 2 Period)		Semester From Date : 15-09-2022 To Date 22-12-2022 No. of Weeks: 14
Week	Date	No. of periods available	Topics to be covered
1ST	15/09/2022	1	1 Stone 1.1 Classification of rock
	17/09/2022	2	1.1 Uses of stone, natural bed of stone
2ND	19/09/2022	1	1.2 Qualities of good building stone
	20/09/2022	1	1.3 Dressing of stone
	22/09/2022	1	1.4 Characteristics of different types of stone and their uses
	24/09/2022	2	2 Bricks 2.1 Brick earth -its composition
3RD	26/09/2022	1	2.2 Brick making – Preparation of brick earth, moulding, Drying, Burning in kilns (continuous Process)
	27/09/2022	1	2.3 Classification of bricks, size of traditional and modular bricks,
	29/09/2022	1	Qualities of good building brick

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	01/10/2022	2	3 Cement, Mortar and Concrete 3.1 Cement: Types of cements, Properties of cements, Manufacturing of cement 3.2 Importance and application of blended cement with fly ash and blast furnace slag.
4TH	10/10/2022	1	3.3 Mortar: Definition and types of mortar 3.4 Sources and classification of sand, Bulking of sand
	11/10/2022	1	3.5 Use of gravel, morrum and fly ash as different building material
	13/10/2022	1	3.6 Concrete: Definition and composition- Water cement ratio, Workability
	15/10/2022	2	mechanical properties and grading of aggregates, mixing, placing, compacting and curing of concrete
5TH	17/10/2022	1	4 Other Construction Materials 4.1 Timber: Classification and Structure of timber
	18/10/2022	1	4.3 Characteristics of good timber
	20/10/2022	1	4.4 Clay products and refractory materials – Definition and Classification
	22/10/2022	2	4.5 Properties and uses of refractory materials- tiles, terracotta, porcelain glazing
6TH	25/10/2022	1	5 Surface Protective Materials
	27 /10/2022	1	Monthly Class Test -1
	29/10/2022	2	5.2Types and uses of surface protective materials like Paints, Enamels, Types and uses of surface protective materials Varnishes, Distempers, Emulsion, French polish and Wax Polish
7TH	31/10/2022	1	Part - B
	01 /11/2022	1	2 Foundations
	03/11/2022	1	2.2 Types of foundations – shallow and deep

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	05/11/2022	2	2.3 Shallow foundation-constructural details of : Spread foundations for walls, thumb rules for depth and width of foundation and thickness of concrete block
8TH	07 /11/2022	1	2.4 Deep foundations: Pile foundations-their suitability, Classification of piles based on materials, function and method of installation.
	09 /11/2022	1	3 Walls & Masonry Works :
	11/11/2022	1	3.3 Classification of walls as per materials of construction: brick, stone, reinforced brick, reinforced concrete, precast, hollow and solid concrete block and composite masonry walls (Concept Only).
	12 /11/2022	1	3.4 Partition wall: Suitability and uses of brick and wooden partition walls
9TH	14/11/2022	1	3.5 Brick masonry: Definition of different terms
	15/11/2022	1	Internal Assessment
	17/11/2022	1	3.6 Bond – meaning and necessity: English bond for 1and 1-1/2 Brick thick walls. T, X and right angled corner junctions. Thickness for 1and 1-1/2 brick square pillars in English bond
	19 /11/2022	2	3.7 Stone masonry 3.8 Glossary of terms-string course, corbel, cornice, block in course, grouting moulding, templates, throating, through stones, parapet, coping, pilaster and buttress
10TH	21/11/2022	1	4 Doors, Windows And Lintels
	22/11/2022	1	4.2 Doors – different types of doors
	24/11/2022	1	4.4 Purpose of use of arches and lintels .
	26/11/2022	2	5 Floors, Roofs and Stairs 5.1 Floors: Glossary of terms ,Types of floor finishes – cast-in-situ, concrete flooring(monolithic, bonded), terrazzo tile flooring, cast in situ Terrazzo flooring, timber flooring (Concept only)

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11TH	28/11/2022	1	Monthly Class Test- 2
	29/11/2022	1	5.2 Roofs: Glossary of terms, Types of roofs, concept and function of flat, pitched, hipped and Sloped roofs.
	01/12/2022	1	5.4 Various types of stair case – straight flight, dog legged, open well, quarter turn, half turn (newel and geometrical stairs), bifurcated stair, spiral stair, cantilever stair, tread riser stair.
	03/12/2022	2	6 Protective, Decorative Finishes, Damp and Termite Proofing 6.1 Plastering – purpose – Types of plastering, Types of plaster finishes – Grit finish, rough cast, smooth cast, sand faced, pebble dash, acoustic plastering and plain plaster etc.
12TH	05/12/2022	1	6.2 Proportion of mortars used for different plasters, preparation of mortars, techniques of plastering and curing.
	06/12/2022	1	6.3 Pointing – purpose –Types of pointing
	08/12/2022	1	6.4 Painting – objectives – method of painting new and old wall surfaces, wood surface and metal surfaces – powder coating and spray painting on metal surfaces.
	10/12/2022	2	6.5 White washing – Color washing – Distemping – internal and external walls
13TH	12/12/2022	1	6.6 Damp and Termite proofing – Materials and Methods
	13/12/2022	1	7 Green Buildings, Energy Management and Energy Audit Of Buildings & Project
	15/12/2022	1	7.2 Introduction to Energy Management and Energy Audit of Buildings
	17/12/2022	2	7.3 Aims of energy management of building 7.4 Types of energy audit, Response energy audit questionnaire 7.5 Energy surveying and audit report.

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14TH	19/12/2022	1	Monthly Class Test- 3
	20/12/2022	1	Revision
	22/12/2022	1	Previous Year Question