

PNS SCHOOL OF ENGINEERING & TECHNOLOGY

LESSION PLAN

BRANCH- CIVIL	SEMESTER- 3RD	NAME OF THE FACULTY-SUDEEPTA MISHRA
SUBJECT- BUILDING MATERIAL & CONSTRUCTIO N MANGEMENT	NO OF DAYS PER WEEK -6 CLASS ALLOTTED-60	SEMESTER FROM-01/08/2023 TO 30/11/2023
WEEK	CLASS DAY	THEORY TOPIC
AUGUST-1ST	1ST	Stone- Classification of rock, uses of stone, natural bed of stone,
	2ND	Qualities of good building stone,
	3RD	Dressing of stone
	4TH	Characteristics of different types of stone and their uses
	5TH	CONTINUE & COMPLETE
2ND	1ST	Bricks- Brick earth – its composition
	2ND	Brick making – Preparation of brick earth , Moulding, Drying, Burning in kilns (continuous Process)
	3RD	CONTINUEING
	4TH	Classification of bricks, size of traditional and modular bricks , qualities of good building bricks
	5TH	CONTINUEING & COMPLETE
	6TH	Cement, Mortar and Concrete- Types of cements,
3RD	1ST	Properties of cements, Manufacturing of cement
	3RD	Importance and application of blended cement with fly ash and blast furnace slag.
	4TH	Mortar: Definition and types of mortar
	5TH	Sources and classification of sand, Bulking of sand
	6TH	Use of gravel, morrum and fly ash as different building material
4TH	1ST	Concrete: Definition and composition-
	2ND	Water cement ratio- Workability, mechanical properties and grading of aggregates , mixing, placing, compacting and curing of concrete.
	3RD	CONTINUING & COMPLETE
	4TH	Other Construction Materials- Timber: Classification and Structure of timber
	5TH	Seasoning of timber – Importance
	6TH	Characteristics of good timber.

5TH	1ST	Clay products and refractory materials – Definition and Classification
	2ND	Properties and uses of refractory materials- tiles, terracotta, porcelain glazing
	4TH	Iron and Steel: Uses of cast iron, wrought iron, mild steel and tor steel
SEPTEMBER-1ST	5TH	Surface Protective Materials- Composition of Paints, enamels, varnishes
	6TH	Types and uses of surface protective materials like Paints, Enamels, Varnishes , Distempers, Emulsion, French polish and Wax Polish.
2ND	1ST	PART: B (CONSTRUCTIONS TECHNOLOGY)- Introduction- Buildings and classification of buildings based on occupancy
	4TH	Different components of a building.
	5TH	Site investigation – objectives, site reconnaissance and explorations.
	6TH	Foundations- Concept of foundation and its purpose
3RD	1ST	Types of foundations – shallow and deep
	2ND	Shallow foundation-constructural details of : Spread foundations for walls , thumb rules for depth and width of foundation and thickness of concrete block
	3RD	Deep foundations: Pile foundations-their suitability,classification of piles based on materials, function and method of installation.
	4TH	ITS CONTINUING AND END
	5TH	Walls & Masonry Works :- Purpose of walls
	6TH	Classification of walls – load bearing, non-load bearing walls, retaining walls.
4TH	1ST	Classification of walls as per materials of construction: brick, stone, reinforced brick
5TH	1ST	reinforced concrete, precast, hollow and solid concrete block and composite masonry walls (Concept Only).
	2ND	Partition Walls : Suitability and uses of brick and wooden partition walls Brick masonry : Definition of different terms
	3RD	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
	4TH	Stone Masonry : Glossary of terms –String course, corbel, cornice, block-in-course, grouting, mouldings, templates, throating, through stones, parapet, coping, pilaster and buttress
	6TH	ITS CONTINUING &END
OCTOBER-1ST	2ND	Doors, Windows And Lintels- Glossary of terms used in doors and windows Doors – different types of doors
	3RD	Windows – different types of windows Purpose of use of arches and lintels
	1ST	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)

2ND	2ND	Roofs: Glossary of terms, Types of roofs, concept and function of flat, pitched, hipped and Sloped roofs
	3RD	Stairs: Glossary of terms; Stair case, winder, landing, stringer, newel, baluster, rise, tread, width of stair case, hand rail, nosing, head room, mumty room.
	4TH	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.
	5TH	Protective, Decorative Finishes, Damp and Termite Proofing- 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.
3RD	1ST	Proportion of mortars used for different plasters, preparation of mortars, techniques
	2ND	Pointing – purpose –Types of pointing Painting – objectives – method of painting new and old wall surfaces , wood surface and metal surfaces – powder coating and spray painting on metal surfaces.
	3RD	White washing – Colour washing – Distempering – internal and external walls
5TH	1ST	Damp and Termite proofing – Materials and Methods
	2ND	ITS CONTINUING &END
NOVEMBER-1ST	3RD	Green Buildings, Energy Management and Energy Audit Of Buildings & Project- Concept of green building
	4TH	Introduction to Energy Management and Energy Audit of Buildings
	5TH	ITS CONTINUING &END
2ND	1ST	Aims of energy management of buildings
	2ND	ITS CONTINUING &END
	3RD	Types of energy audit, Response energy audit questionnaire
	4TH	ITS CONTINUING &END
	5TH	Energy surveying and audit report.
	6TH	DOUT CLEARING CLASS
3RD	2ND	DOUT CLEARING CLASS
	3RD	DOUT CLEARING CLASS
	4TH	DOUT CLEARING CLASS
	5TH	DOUT CLEARING CLASS
4TH	1ST	NOTE SUBMISSION
	2ND	NOTE SUBMISSION
	3RD	IMPORTANT QUESTIONS DISCUSSION
	4TH	IMPORTANT QUESTIONS DISCUSSION
	5TH	IMPORTANT QUESTIONS DISCUSSION
	6TH	IMPORTANT QUESTIONS DISCUSSION
5TH	2ND	IMPORTANT QUESTIONS DISCUSSION
	3RD	IMPORTANT QUESTIONS DISCUSSION
	4TH	IMPORTANT QUESTIONS DISCUSSION

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