

**Name of faculty : SACHIN SHARMA**  
**Discipline : Civil Engineering**  
**Semester : 3rd**  
**Subject : Building Construction**

Week		Theory		Practical
	Lecture Day	Topic	Practical Day	Topic
1st	1st	Definition of a building, Different parts of a building, classification of buildings Types of foundation – Shallow foundation (thumb rules for depth and width of foundation) and Deep foundation	1st	Demonstration of tools and plants used in building construction
	2nd	Excavation of foundation – Trenches, Shoring, Underpinning, Timbering and De- watering	2nd	Do
2nd	1st	Classification of walls based on load - Load bearing, non-load bearing, retaining walls Classification of walls as per materials of construction	1st	To prepare Layout of a building: 2BHK with front verandah
	2nd	Partition walls: Constructional details, suitability and uses of brick and wooden partition walls Scaffolding, construction details and suitability of mason's brick layers and tubular scaffolding.	2nd	Do
3rd	1st	Glossary of terms used in brick masonry - Header, Stretcher, Queen closer, King closer etc. Brick Masonry Bonds – English and Flemish Bonds	1st	To construct brick bonds (English Bond) in One, One & half and Two brick thick: (a) Walls for L, T and Cross Junction (b) Columns
	2nd	Construction of brick walls – New wall Construction, Methods of bonding new brick work with old (Toothing and Raking Methods)	2nd	Do
4th	1st	Mortars: types, selection of mortar and its preparation Glossary of terms used in arches -Intrados, Extrados, Crown, Key stone etc.	1st	To construct brick bonds (Flemish Bond) in One, One & half and Two brick thick: (a) Walls for L, T and Cross Junction (b) Columns
	2nd	Types of Arches – Semi-circular, Segmental and Parabolic arches Lintels – Cast-in-situ and pre-cast lintels	2nd	Demonstration of “Timbering of Excavated Trenching” through a model and visit at construction site
5th		<b>1st sessional</b>		
6th	1st	Glossary of terms used – Door Frame, Door Shutter, Hold fast, Horns, Jamb, Reveal, Soffit, Styles, Rails: Top, Bottom and Lock rails etc. Doors and window frames – Materials and Sections, Fixtures and Fasteners	1st	Demonstration of “Laying Damp Proof Courses” through a model and visit at construction site
	2nd	Doors – Framed and Panelled door, Glazed or sash door, Flush door, Sliding door, Rolling steel shutter doors	2nd	Do
7th	1st	Windows – Fixed window, Sliding window, Glazed or sash window, Corner window	1st	Demonstration of “Construction of Masonry Walls” through a model and visit at construction site
	2nd	Ventilators	2nd	Do
8th	1st	Dampness and its ill effects in buildings Sources of dampness in building	1st	Demonstration of “Brick Layers Scaffolding” through a model and visit at construction site
	2nd	Damp proofing of basement, Plinth and walls, Kitchen, Washroom, Roof , Glossary of terms used – Floor finish, Topping, Under layer, Base course, Rubble filling and their purpose	2nd	Demonstration of “Steel Scaffolding” through a model and visit at construction site
9th		<b>2nd sessional</b>		
10th	1st	Types of floor finishes – Concrete flooring, Ceramic tile flooring, Stone (marble and kota) flooring, Wooden flooring , Special emphasis on level / slope / reverse slope in bathrooms, toilets, kitchen, balcony	1st	Demonstration of “Laying of Vitrified Tile Flooring” through visit at construction site
	2nd	Types of roofs, concept of flat and pitched roofs, Glossary of terms for pitched roofs – Batten, Eaves, Facia board, Gable, Hip, Lap, Purlin, Rafter, Rag bolt, Ridge, Rain water gutter, Anchoring bolts	2nd	Demonstration of “Pre-construction and post construction termite treatment of building and woodwork” through visit at construction site
11th	1st	False ceilings – Gypsum false ceiling, POP false Ceiling, PVC false , Wooden false ceiling, Cellotex false ceiling Glossary of terms used in stairs: Landing, Stringer, Newel, Baluster, Riser, Tread, Width of staircase, Hand-rail, Nosing	1st	Demonstration of “Plastering and Pointing Exercise” through visit at construction site
	2nd	Types of stairs on the basis of materials used: RCC and Steel stairs Various types of layout – Straight flight, Dog legged, Quarter turn, Half turn	2nd	Demonstration of “Constructing RCC work – Foundations, Columns, Beams and Slabs” through visit at construction site
12th	1st	Ramps and Elevators – Excavation and construction Escalators pits and landings – Excavation and construction , Plastering – Plain plaster, Stone cladding and Tile work Pointing – Different types of pointing and their methods , Painting – Preparation of surface, Primer coat and application of paints on wooden, steel and plastered wall surfaces	1st	Demonstration of “False Ceiling” through visit at construction site
	2nd	Selection of appropriate paints/finishes for interior and exterior surfaces	2nd	demonstration of “Interlocking Tiles” through visit at construction site
13th	1st	3rd Sessional	1st	3rd Sessional