

Detailed Teaching Plan

<u>Lecture No.</u>	<u>Unit No.</u>	<u>Topics to be covered</u>	<u>Planned Date</u>	<u>Execution Date</u>	<u>Remark</u>	
1	1	Unit-1.0 Stone, aggregate and brick		10/9/24		
2		1.1 Properties of construction materials	}			
3		1.1.1 Importance of Building materials in civil engineering		10/9/24	11/9/24	
4		1.1.2 Basic properties of construction materials-Physical properties- bulk density, durability, porosity, water absorption, specific gravity, permeability, frost resistance.		11/9/24	16/9/24	
5		1.1.3 Criteria for Selection of construction material based on prescribed load, serviceability, aesthetics, economy and environment.	18/9/24	17/9/24		
6		1.2 STONE AND AGGREGATE	}			
7		1.2. 1 Geological, Physical and Chemical Classification of rocks.		24/9/24	18/9/24	
8		1.2.2 Properties of good building stones				
		1.2.3 Methods of quarrying and dressing of stones			24/9/24	
		1.2.4 Common building stones of INDIA: characteristics and uses.				
	1.2.5 Definition, types of aggregate coarse and fine aggregate	25/9/24	25/9/24			
	1.2.6 Grading of aggregates, fineness modulus, Bulking of sand.	11/10/24	26/9/24			

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9	1.3 BRICKS:1.3.1 Clay Bricks: definition, shape and size, Ingredients of good brick earth, harmful substances in brick earth.	8/10/24	4/10/24	
	1.3.2 Properties of good building bricks		4/10/24	
	1.3.3 Classification and specifications of bricks as per BIS: 1077	9/10/24	9/10/24	
	1.3.4 Defects of clay bricks.			
1.3.4 Testing of Bricks (as per BIS Code) and field test on bricks				
11	1.3.4 Fly ash & Hollow bricks: properties, preparation & uses.		16/10/24	
12	2.BINDING MATERIAL	15/10/24		
	2.1 Cement, Chemical composition of cement, Composition of cement clinker : Bogue compounds, Hydration of cement and heat of hydration.		19/10/24	
	2.2 Ingredients used for manufacturing of cement, Methods of manufacture of cement by (i) wet process (ii) dry process flow chart)	16/10/24	21/10/24	
	2.3 Laboratory test of cement as per IS consistency, setting time, fineness, soundness, compressive strength, tensile	22/10/24		
	2.4 Field tests on cement.		22/10/24	
15	2.5 Types and grades of cement and suitability-Ordinary Portland cement, rapid hardening cement, low heat cement, high alumina cement,	23/10/24	23/10/24	

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16	Portland slag cement, white and coloured cement, Portland puzzolana cement, super sulphate cement, quick setting	23/10/24	24/10/24	
17	2.6 Puzzolanas-Introduction, effects, use and classification of puzzolanas.		24/10/24	
18	2.7 Cement admixtures and their applications as per requirements mortars, as risin of a good mortar. Cement mortar, lime mortar, surkhi mortar, Selection of mortar.	5/11/24	6/11/24	
19	Unit- 3 Flooring Materials, Roofing Materials, False Ceiling and Tiles :			
20	3.1 Flooring Materials-Flag stone floor, Cement concrete floor Mosaic flooring , Tile floors, Ceramic tile floor, vitrified tile floors,	6/11/24	8/11/24	
21	Granite Flooring, PVC tiles, Linoleum floor, Paver blocks, Wooden floor, Glass floor.		8/11/24	
22	3.2 Roofing Materials- 3.2.1 Roof covering materials-bamboo mats, galvanized iron sheets, asbestos cement sheet, profiled steel and aluminum sheets, polycarbonate roofing material.	12/11/24	27/11/24	
23	3.2.2 Clay tiles- Allahabad tiles, flat tiles, Mangalore tiles, half round tiles, local country tiles.		30/11/24	
23	3.3 Materials used for false ceiling- Gypsum Board Ceiling, Plaster of Paris Ceiling, Fiber Ceiling, Wooden Ceiling, Synthetic Leather Ceiling, Glass Ceiling, Metal Ceiling	13/11/24	2/12/24	

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24	3.4 Cladding materials-Clay Tiles Claddings, Stone Claddings, Timber Claddings, Fiber Cement Claddings, Clay Tiles Claddings, Steel Claddings, Aluminum Claddings, Aluminum Composite Panel (ACP)	19/11/24	21/12/24
25	4. TIMBER, GLASS, STEEL, ALUMINIUM AND PLASTIC		
26	4.1.1 Timber, Properties of timber, requirement of timber to be used for building.	} 20/11/24	31/12/24
26	4.1.2 Seasoning of timber: Purpose, methods of seasoning and Preservation of timber and methods of treatment as per BIS		4/11/24
27	4.1.3 Defects in timber		
27	4.1.4 Other wood based products, their uses: laminated board, block board, fiber board, hard board, sunmica, plywood, veneers, nu-wood, Moulded Door.	} 26/11/24	4/11/24
28	4.2 Glass-ingredients, commercial forms of glasses, Characteristics and performance of glass, glass wool.		
29	4.3 Frame/truss Steel-4.3.1 Properties and uses :Mild Steel, High Carbon Steel, High Tensile steel	} 27/11/24	5/11/24
30	4.3.2 Rolled steel sections, Steel sections-L, T, I, PIPE section		
30	4.4 Aluminium-Advantages of Aluminum in construction, available forms of aluminum, use of aluminum material glass.		9/11/24
31	4.5 Plastics		
	4.5.1 Plastic, Thermoplastic and Thermosetting Plastic,	} 31/12/24	9/11/24
	4.5.2 Rubber, use of rubber in building construction		12/11/24

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32	5	5. MISCELLNEOUS, BUILDING, MATERIALS 5.1 Paints, Enamels and Varnishes -Composition of oil paint, Characteristics of ideal paints, Paints commonly used in building, factors affecting selection of paint.	4/12/24	12/12/24
33		Enamel paint and Varnish and its type. Distemper, primers		
34		5.2 Water proofing materials	10/12/24	14/12/24
		5.3 Fire proofing materials		
		5.4 Acoustic materials.		
35		5.5 Heat insulating materials.	11/12/24	20/12/24
		5.6 Adhesive materials. and chemicals, coating materials.		
		5.7 Water proofing resins and chemicals, coating materials.		
36		5.8 Termite proofing materials.		23/12/24
37		5.9 Bitumein, Tar, Asphalt- Forms of bitumen, properties and use of bitumen as water proofing material	14/12/24	24/12/24

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