



Lesson plan of BMCT 3rd sem 2022-2023

UNIT	TOPIC	PERIOD
BUILDING MATERIALS Stone	Classification of rock, uses of stone, natural bed of stone	1
	Qualities of good building stone	2
	Dressing of stone	3
	Characteristics of different types of stone and their uses	
Bricks	Brick earth – its composition	4
	Brick making – Preparation of brick earth, Moulding, Drying, Burning in kilns (continuous Process)	5
	Classification of bricks, size of traditional and modular bricks, qualities of good building bricks	6
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Cement, Mortar and Concrete	Cement: Types of cements, Properties of cements, Manufacturing of cement	8
	Importance and application of blended cement with fly ash and blast furnace slag.	9
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	Sources and classification of sand, Bulking of sand	11
	Use of gravel, morrum and fly ash as different building material	12
	Concrete: Definition and composition- Water cement ratio- Workability, mechanical properties and grading of aggregates, mixing, placing, compacting and curing of concrete	13
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Other Construction Materials	Timber: Classification and Structure of timber	15
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	Clay products and refractory materials – Definition and Classification.	
	Properties and uses of refractory materials- tiles, terracotta, porcelain glazing	18
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	Iron and Steel: Uses of cast iron, wrought iron, mild steel and tor steel	20
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	Types and uses of surface protective materials like Paints, Enamels, Varnishes, Distempers, Emulsion, French polish and Wax Polish.	22
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	Different components of a building.	
	Site investigation – objectives, site reconnaissance and explorations	25
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	Types of foundations – shallow and deep	
	Shallow foundation-constructional details of: Spread foundations for walls, thumb rules for depth and width of foundation and thickness of concrete block	27
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	Deep foundations: Pile foundations-their suitability, classification of piles based on materials, function and method of installation	29
Walls & Masonry Works	Purpose of walls	30
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	Classification of walls as per materials of construction: brick, stone, reinforced brick, reinforced concrete, precast, hollow and solid concrete block and composite masonry walls.	32
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	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 .	35
	Stone Masonry : Glossary of terms –String course, corbel, cornice, block-in-course, grouting, mouldings, templates, throating, through stones, parapet, coping, pilaster and buttress.	36
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	Roofs: Glossary of terms, Types of roofs, concept and function of flat, pitched, hipped and Sloped roofs.	42
	Stairs: Glossary of terms; Stair case, winder, landing, stringer, newel, baluster, rise, tread, width of stair case, hand rail, nosing, head room, mumty room.	43
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	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	45
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	Proportion of mortars used for different plasters, preparation of mortars, techniques of plastering and curing.	49
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