

Discipline: Civil Engg.
Semester: 3rd
Name of the teaching faculty: En. PRAKASH CHANDRA MAYAK
Subject: Building material and construction Technology.
No of days/week: 5 Nos.
Semester from: 15.09.2022 to 22.12.2022
class allotted: 5 Nos.
No of weeks: 15 Nos.

WEEK	CLASS DAY	THEORY
	1 st	
12.09.2022	2 nd	
to	3 rd	
17.09.2022	4 th	classification of Rock
	5 th	BISWAKARMA PUJA
	1 st	Use of stone, natural bed of stone.
19.09.2022	2 nd	Qualities of good building stone.
to	3 rd	Dressing of stone.
24.09.2022	4 th	characteristics of different types of stone and their uses.
	5 th	Brick earth - its composition.
	1 st	Brick making - Preparation of brick earth, moulding, drying, Burning in kilns (continuous process)
26.09.2022		
to		
01.10.2022	2 nd	classification of bricks.
	3 rd	size of traditional and modular bricks, qualities of good building bricks.
	4 th	Types of cement.
	5 th	Properties of cements, Manufacturing of cement.
	1 st	
03.10.2022	2 nd	
to	3 rd	
08.10.2022	4 th	
	5 th	
	1 st	Importance and application of blended cement with fly ash and blast furnace slag.
10.10.2022		
to		
15.10.2022	2 nd	Mortar: Definition and types of mortar.
	3 rd	Source and classification of sand, bulking of sand.

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 ← PUJA HOLIDAY →
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WEEKS	CLASS DAY	THEORY
	4 th	Use of gravel, mortar and fly ash, as different building material.
	5 th	Water cement Ratio - Workability, mechanical properties and grading of aggregates.
17.10.2022	1 st	Mixing, placing, compacting and curing of concrete.
to	2 nd	Concrete :- Definition and composition.
22.10.2022	3 rd	Timber: Elab classification of structural timber.
	4 th	Seasoning of timber - importance, characteristics of good timber.
	5 th	Clay products and refractory materials - Definition and classification.
	1 st	← DIWALI →
24.10.2022	2 nd	Properties and uses of refractory materials - Tiles, terracotta, porcelain glazing.
to		
29.10.2022	3 rd	Iron and steel :- Uses of cast iron, wrought iron, mild steel and tool steel.
	4 th	Surface protective materials, composition of paints, enamels, varnishes.
	5 th	Types and uses of surface protective materials like paints, Enamels, Varnishes, Distempers, Emulsion, French polish and wax polish.
31.10.2022	1 st	Buildings and classification of buildings based on occupancy, components.
to		
05.11.2022		

WEEKS	CLASS DAY	THEORY
	2 nd	Concept of foundation and its purpose.
	3 rd	Type of foundations - shallow and deep.
	4 th	shallow foundation - construction details of:- spread foundations for walls, thumb rules for depth and width of foundation and thickness of concrete block.
	5 th	Deep foundations:- pile foundation their suitability, classification of piles based on materials, function and method of installation.
	1 st	LAST MONDAY OF KARTIKA
07.11.2022	2 nd	RASHA PURNIMA
to	3 rd	Purpose of walls, classification of walls - load bearing, non-load bearing walls, retaining walls.
12.11.2022	4 th	Partition walls:- Suitability and uses of brick and wooden partition walls, Brick masonry Definition of different terms.
	5 th	Bond - meaning and necessity :- English bond for 1 and 1-1/2 brick thick walls. T, X and Right angled corner junctions. Thickness for 1 and 1-1/2 brick square pillars in English bond.
	1 st	Glossary of terms - string course, corbel, cornice, block-in-course, grouting, mouldings, templates.

<u>WEEKS</u>	<u>CLASS DAY</u>	<u>THEORY</u>
14.11.2022 to 19.11.2022		Throating, through stones, parapet, coping, pilaster and buttress.
19.11.2022	2 nd	Doors, windows and Lintels.
	3 rd	PRATHAMASTAMI
	4 th	Doors - different types of Doors.
	5 th	Doors - windows :- diff ⁿ types of windows.
21.11.2022 to 26.11.2022	1 st	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).
	2 nd	Roofs : Glossary of terms, Types of Roofs, concept and function of flat, pitched, hipped and sloped roofs.
	3 rd	Stairs : Glossary of terms, stair-case, winder, landing, stringer, newel, baluster, rise and tread, width of stair case, hand rail, nosing, head room, mummy Room.
	4 th	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.
	5 th	continuing
	1 st	continuing
	2 nd	Protective, Decorative Finishes,

<u>WEEKS</u>	<u>Class DAY</u>	<u>THEORY</u>
28.11.2022 to 03.12.2022	3 rd	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.
	4 th	Continuing.....
	5 th	Proportion of mortars used for different plasters, preparation of mortars, techniques of plastering and curing.
05.12.2022 to 10.12.2022	1 st 2 nd	Continuing..... Pointin Painting - objectives - method of painting new and old wall surfaces, wood surface and metal surface - Powder coating and spray painting on metal surfaces - Purpose - Types of pointing.
	3 rd	White washing, colour washing.
	4 th	LAST THURSDAY OF MARGASIRA
	5 th	Distemping, internal and external walls.
12.12.2022 to 17.12.2022	1 st 2 nd 3 rd	Damp and Termite proofing - materials and methods. Continuing..... Green buildings, Energy management Energy.
	4 th	Audit of Buildings & Project.
	5 th	Continuing.

<u>WEEKS</u>	<u>CLASS DAY</u>	<u>THEORY</u>
	1 st	Concept of Green building.
19.12.2022 to	2 nd	Introduction of Energy management and Energy Audit of buildings.
22.12.2022	3 rd	Aims of Energy management of buildings.
	4 th	Types of Energy audit, Response energy audit questi- onnaire & 5 Energy surveying and audit report.
	5 th	
		Seen in June 15.9.2022