

GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN- 2021-22 (WINTER)

Discipline : CIVIL ENGG.		Semester: 3rd Sem	Name of the Teaching Faculty : Padmabhusan Naik		
Subject : BM&CT (C203)		No. of Days / per week class allotted : 05	Semester From date : 01.10.2021 To Date : 08.01.2022		
MONTH	Week	Day	Unit	Topics	
AUGUST	1st	2nd	UNIT-1	PART :A (BUILDING MATERIALS)	
		3rd		1. Stone:	
		4th		Classification of rock, uses of stone, natural bed of stone,	
		5th		Qualities of good building stone,	
		1st		Dressing of stone	
	2nd	2nd	UNIT-2	Characteristics of different types of stone and their uses	
		3rd		Question Discussion	
		4th		2. Bricks:	
		5th		Brick earth – its composition	
		1st		Brick making – Preparation of brick earth, Moulding,	
	3rd	2nd	UNIT-3	Drying, Burning in kilns (continuous Process)	
		3rd		Classification of bricks, size of traditional and modular bricks, qualities of good building bricks	
		4th		Question Discussion	
		5th		Independence day	
		1st		3. Cement, Mortar and Concrete:	
	4th	2nd	UNIT-3	Cement: Types of cements, 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	
		1st		Use of gravel, morrum and fly ash as different building material	
	5th	2nd	UNIT-3	Concrete: Definition and composition- Water cement ratio- Workability, mechanical properties and grading of aggregates, mixing, placing, compacting and curing of concrete.	
		3rd		Question Discussion	
		4th		CLASS TEST-1	
		5th		4. Other Construction Materials:	
		1st		Timber: Classification and Structure of timber.	
5th	2nd	UNIT-3	Seasoning of timber – Importance.		
	3rd		Jhulana Purnima		
	4th		Characteristics of good timber.		

SEPTEMBER	1st	5th	UNIT-4	Clay products and refractory materials – Definition and Classification.
	2nd	1st		Properties and uses of refractory materials- tiles, terracotta, porcelain glazing.
		2nd		Iron and Steel: Uses of cast iron, wrought iron, mild steel and tor steel
		3rd		Janmastami
		4th		Question Discussion
	5th		5. Surface Protective Materials:	
	3rd	1st	UNIT-5	Composition of Paints, enamels, varnishes.
		2nd		Types and uses of surface protective materials like Paints, Enamels, Varnishes,
		3rd		Types and uses of surface protective materials like Distempers, Emulsion, French polish and Wax Polish.
		4th		Question Discussion
	5th		PART: B (CONSTRUCTIONS TECHNOLOGY)	
	4th	1st	UNIT-1	1. Introduction:
		2nd		Buildings and classification of buildings based on occupancy
		3rd		Ganesh Puja
		4th		Nuakhai
		5th		Different components of a building.
	5th	1st	UNIT-2	Site investigation – objectives, site reconnaissance and explorations.
		2nd		Question Discussion
		3rd		2. Foundations:
		4th		Concept of foundation and its purpose
5th		Types of foundations – shallow and deep		
1st	1st	UNIT-3	Shallow foundation-constructional details of : Spread foundations for walls, thumb rules for depth and width of foundation and thickness of concrete block	
	2nd		Birthday of Prophet Muhammad	
	3rd		Gandhi Jayanti	
	4th		Deep foundations: Pile foundations-their suitability, classification of piles based on materials, function and method of installation.	
2nd	1st	UNIT-3	Question Discussion	
	2nd		Internal Assessment	
	3rd		3. Walls & Masonry Works :	
	4th		Purpose of walls	
2nd	1st	UNIT-3	Classification of walls – load bearing, non-load bearing walls, retaining walls.	
	2nd		Classification of walls as per materials of construction: brick, stone, reinforced brick, reinforced concrete, precast, hollow and solid concrete block and composite masonry walls (Concept Only).	
	3rd		Partition Walls : Suitability and uses of brick and wooden partition walls	
	4th		Brick masonry : Definition of different terms	

OCTOBER		5th		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	
	3rd	1st		Stone Masonry : Glossary of terms –String course, corbel, cornice, block-in-course, grouting, mouldings, templates, throating, through stones, parapet, coping, pilaster and buttress	
		2nd		Question Discussion	
		3rd	UNIT-4		4. Doors, Windows And Lintels :
		4th			Glossary of terms used in doors and windows
		5th			Doors – different types of doors
	4th	1st			Puja Holidays
		2nd			Puja Holidays
		3rd		Puja Holidays	
		4th		Puja Holidays	
5th	5th		Puja Holidays		
	1st		Windows – different types of windows		
NOVEMBER	1st	2nd		Purpose of use of arches and lintels	
		3rd		Question Discussion	
		4th	UNIT-5		5. Floors, Roofs and Stairs :
	5th			flooring, cast in situ Terrazzo flooring, timber flooring (Concept only)	
	2nd	1st			Roofs: Glossary of terms, Types of roofs, concept and function of flat, pitched, hipped and Sloped roofs
		2nd			Stairs: Glossary of terms; Stair case, winder, landing, stringer, newel, baluster, rise, tread, width of stair case, hand rail, nosing, head room, mumty room.
		3rd			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.
		4th		Question Discussion	
	3rd	5th			CLASS TEST-2
		UNIT-6			6. Protective, Decorative Finishes, Damp and Termite Proofing :
			1st		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
			2nd		Proportion of mortars used for different plasters, preparation of mortars, techniques of plastering and curing
			3rd		Pointing – purpose –Types of pointing
			4th		Painting – objectives – method of painting new and old wall surfaces, wood surface and metal surfaces – powder coating and spray painting on metal surfaces.
		5th		White washing – Colour washing – Distempering – internal and external walls.	
		4th	1st		Damp and Termite proofing – Materials and Methods.
2nd			Question Discussion		
				7. Green Buildings, Energy Management and Energy Audit Of Buildings & Project :	
				Concept of green building	

	7th	3rd	UNIT-7	Introduction to Energy Management and Energy Audit of Buildings.
		4th		Aims of energy management of buildings.
		5th		Types of energy audit, Response energy audit questionnaire
5th	1st	Rasa Purnima		
	2nd	Energy surveying and audit report.		
	3rd	Question Discussion		
	4th	Semester Questions Discussion		