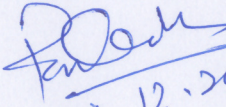


GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN- 2025/26 (SUMMER)

Discipline : CIVIL ENGG.		Semester: 6th Sem	Name of the Teaching Faculty : Padmabhusan Naik		
Subject : CT		No. of Days / per week class allotted : 04	Semester From date : 22.12.2025 To Date : 18.04.2026		
MONTH	Week	Day	Unit	Topics	
DECEMBER 2025	4th	1st	UNIT-1	1. Concrete as a construction material:	
		2nd		Grades of concrete Advantages and disadvantages of concrete.	
		3rd	UNIT-2	2. Cement: Composition, hydration of cement, water cement ratio and compressive strength X-Max Day	
		4th		Fineness of cement, setting time, soundness	
	5th	1st		Types of cement.	
		2nd		Question Discussion	
		3rd		CLASS TEST-1	
	JANUARY 2026	1st	4th		3. Aggregate, Water and Admixtures:
		2nd	1st	UNIT-3	Classification and characteristics of aggregate, fineness modulus, grading of aggregate, I.S.383
2nd			Quality of water for mixing and curing.		
3rd			Important functions, classification of admixtures, I.S 9103, accelerating admixtures, retarding admixtures, water reducing admixtures, air containing admixtures		
3rd		4th	UNIT-4	4. Properties of fresh concrete: Concept of fresh concrete, workability, slump test, compacting factor test	
		1st		V-tee consistency test and flow test, requirement of workability, I.S.1199.	
		2nd		Question Discussion	
		3rd		Makar Sankranti	
4th		4th	UNIT-5	5. Properties of hardened concrete: Cube and cylinder compressive strengths, flexural strength of concrete, Stress-strain and elasticity, phenomena of creep and shrinkage, Permeability, durability of concrete Sulphate, chloride and acid attack on concrete, efflorescence.	
		1st			
		2nd			
		3rd			
5th		4th		Question Discussion	
		1st		Republic Day	
		2nd		6. Concrete mix Design a) Introduction b) Data or input required for mix design.	

FEBRUARY 2026	1st	3rd	UNIT-6	Nominal mix concrete & design mix concrete.
		4th		Basic consideration for concrete mix design, Methods of proportioning concrete mix – I.S
		1st		Question Discussion
		2nd		7. Production of concrete:
	2nd	2nd	UNIT-7	Batching of materials, mixing of concrete materials,
		3rd		Transportation, placing of concrete, compaction of concrete (vibrators),
		4th		Curing of concrete, Formwork-requirements and types ,stripping of forms. (Concepts only)
		1st		INTERNAL ASSESSMENT
	3rd	2nd	UNIT-8	8. Inspection and Quality Control of Concrete
		3rd		Quality control of Concrete as per I.S.456, Factors causing the variations in the quality of concrete
		4th		Mixing, Transporting, Placing & curing requirements of Concrete as per I.S.456.
		1st		Inspection and Testing as per Clause 17 of IS:456.
	4th	2nd	UNIT-9	Durability requirements of Concrete as per I.S:456.
		3rd		Question Discussion
		4th		9. Special Concrete
		1st		Introduction to ready mix concrete, high performance concrete,
MARCH 2026	1st	UNIT-10	Silica fume concrete, shot-crete concrete or gunniting (Concepts only).	
			2nd	Question Discussion
			3rd	10. Deterioration of concrete and its prevention:
			4th	Types of deterioration, ,
	2nd	3rd	Prevention of concrete deterioration	
		4th	Corrosion of reinforcement,	
		1st	Effects and prevention	
		2nd	Dola Purnima	
	3rd	3rd	Holi	
		4th	Question Discussion	
1st		Question Discussion		
2nd		11. Repair technology for concrete structures:		
3rd		Symptom, cause and prevention and remedy of defects during construction,		
4th		Cracking of concrete due to different reasons.		
1st		Repair of cracks for different purposes,		
2nd		Selection of techniques, polymer based repairs, common types of repairs.		
3rd	3rd	Question Discussion		
	4th	Question Discussion		
	CLASS TEST-2			


 20.12.2018