

## GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN- 2020-21 (SUMMER)

Discipline : CIVIL ENGG.		Semester: 6th Sem	Name of the Teaching Faculty : Padmabhusan Naik			
Subject : CT (C312)		No. of Days / per week class allotted : 04	Semester From date : 25.01.2021                      To Date : 30.04.2021			
MONTH	Week	Day	Unit	Topics		
JANUARY	3rd		UNIT-1	<b>1. Concrete as a construction material:</b>		
		2nd		Grades of concrete		
		3rd		Advantages and disadvantages of concrete.		
	4th	5th		UNIT-2	<b>2. Cement:</b>	
			1st		Composition, hydration of cement, water cement ratio and compressive strength	
			2nd		Fineness of cement, setting time, soundness	
		3rd	<b>Subash Ch. Bose Jayanti</b>			
		5th	<b>Republic Day</b>			
		1st	Question Discussion			
	5th	2nd		UNIT-3	<b>3. Aggregate, Water and Admixtures:</b>	
			3rd		Classification and characteristics of aggregate, fineness modulus, grading of aggregate, I.S.383	
					Quality of water for mixing and curing.	
FEBRUARY	1st	5th		Important functions, classification of admixtures, I.S 9103, accelerating admixtures, retarding admixtures, water reducing admixtures, air containing admixtures		
	2nd	1st		Question Discussion		
		2nd	<b>CLASS TEST-1</b>			
		3rd	UNIT-4	<b>4. Properties of fresh concrete:</b>		
	5th	Concept of fresh concrete, workability, slump test, compacting factor test				
		V-bee consistency test and flow test, requirement of workability, I.S.1199.				
	3rd	1st			Question Discussion	
		2nd	UNIT-5	<b>5. Properties of hardened concrete:</b>		
		3rd		Cube and cylinder compressive strengths, flexural strength of concrete,		
		5th		<b>Basant Panchami</b>		
		Stress-strain and elasticity, phenomena of creep and shrinkage,				
	4th	1st			Permeability, durability of concrete	
2nd				Sulphate, chloride and acid attack on concrete, efflorescence.		
3rd				Question Discussion		

		5th	<b>UNIT-6</b>	<b>6. Concrete mix Design</b>
	5th	1st		a) Introduction
		2nd		b) Data or input required for mix design.
		3rd		Nominal mix concrete & design mix concrete.
				Basic consideration for concrete mix design, Methods of proportioning concrete mix – I.S
				Question Discussion
<b>MARCH</b>	1st	5th		<b>Internal Assessment</b>
	2nd	1st	<b>UNIT-7</b>	<b>7. Production of concrete:</b>
		2nd		Batching of materials, mixing of concrete materials,
		3rd		<b>Panchayatiraj Dibas</b>
		5th		Transportation, placing of concrete, compaction of concrete (vibrators),
	3rd	1st	<b>UNIT-8</b>	<b>Maha Shivaratri</b>
		2nd		Curing of concrete, Formwork-requirements and types ,stripping of forms. (Concepts only)
		3rd		Question Discussion
	4th	1st	<b>UNIT-8</b>	<b>8. Inspection and Quality Control of Concrete</b>
		2nd		Quality control of Concrete as per I.S.456, Factors causing the variations in the quality of concrete
		3rd		Mixing, Transporting, Placing & curing requirements of Concrete as per I.S.456.
		5th		Inspection and Testing as per Clause 17 of IS:456.
	5th	1st	<b>UNIT-9</b>	Durability requirements of Concrete as per I.S:456.
		2nd		Question Discussion
		3rd		<b>9. Special Concrete</b>
		5th		Introduction to ready mix concrete, high performance concrete,
1st	1st	<b>UNIT-9</b>	<b>Dola Purnima</b>	
	2nd		<b>Holi</b>	
	3rd		Silica fume concrete, shot-crete concrete or gunitting (Concepts only).	
	5th		<b>Good Friday</b>	
<b>APRIL</b>	1st		<b>Utkal Divas</b>	
			2nd	Question Discussion
			3rd	<b>CLASS TEST-2</b>
	2nd	5th	<b>UNIT-10</b>	<b>10. Deterioration of concrete and its prevention:</b>
		1st		Types of deterioration, ,
		2nd		Prevention of concrete deterioration
		3rd		Corrosion of reinforcement,
		5th		Effects and prevention
			Question Discussion	

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3rd	1st	UNIT- 11	<b>11. Repair technology for concrete structures:</b>
	2nd		Symptom, cause and prevention and remedy of defects during construction,
	3rd		Cracking of concrete due to different reasons.
	5th		<b>Ram Navami</b>
	1st		Repair of cracks for different purposes,
	2nd		Selection of techniques, polymer based repairs, common types of repairs.
	3rd		Question Discussion
	3rd		Semester Question Discussion
	5th		Semester Question Discussion