

LESSON PLAN OF 6TH SEMESTER(2025-26) CIVIL ENGINEERING

WEEK	SEMESTER-6 th NO. OF DAYS PER WEEK CLASS ALLOTTED- 04	NAME OF THE TEACHING FACULTY- JAYALAXMI BEHERA (LECTURER)	
		SEMESTER FROM DATE-22/12/25 TO DATE-18/04/26 NO. OF WEEKS-17	
		THEORY TOPICS	
1 ST	1 st	1.0 Concrete as a construction material: 1.1 Grades of concrete.	
	2 nd	1.2 Advantages and disadvantages of concrete.	
	3 rd	Cement: 2.1 Composition of cement	
	4 th	hydration of cement	
2 ND	1 st	water cement ratio and compressive strength	
	2 nd	fineness of cement, setting time	
	3 rd	soundness, types of cement	
	4 th	Aggregate, Water and Admixtures: 3.1 Classification of aggregate	
3 RD	1 st	characteristics of aggregate	
	2 nd	Discussion	
	3 rd	fineness modulus of aggregate	
	4 th	grading of aggregate, I.S.383	
4 TH	1 st	3.2 Quality of water for mixing and curing	
	2 nd	3.3 Important functions of admixture.	
	3 rd	classification of admixtures, I.S 9103	
	4 th	accelerating admixtures, retarding admixtures,	
5 TH	1 st	water reducing admixtures	
	2 nd	air containing admixtures	
	3 rd	Properties of fresh concrete: 4.1 Concept of fresh concrete, workability,	
	4 th	slump test, compacting factor test	
6 TH	1 st	V-bee consistency test and flow test	
	2 nd	requirement of workability, I.S.1199.	
	3 rd	Properties of hardened concrete: 5.1 Cube and cylinder compressive strengths	
	4 th	flexural strength of concrete	
7 TH	1 st	stress-strain and elasticity of concrete	
	2 nd	phenomena of creep and shrinkage, permeability of concrete	
	3 rd	durability of concrete	
	4 th	sulphate, chloride and acid attack on concrete, efflorescence	
8 TH	1 st	Concrete mix Design	
	2 nd	6.1 a) Introduction	
	3 rd	b) Data or input required for mix design.	
	4 th	6.2 Nominal mix concrete & design mix concrete	
9 TH	1 st	6.3 Basic consideration for concrete mix design	
	2 nd	Discussion	
	3 rd	Methods of proportioning concrete mix – I.S Code method of mix design(I.S.10262)	

23.12.25

		4 th	Production of concrete: 7.1 Batching of materials,
10 TH		1 st	mixing of concrete materials
		2 nd	transportation, placing of concrete
		3 rd	compaction of concrete (vibrators)
		4 th	Curing of concrete
11 TH		1 st	Formwork-requirements and types
		2 nd	,stripping of forms. (Concepts only)
		3 rd	Inspection and Quality Control of Concrete 8.1 Quality control of Concrete as per I.S.456,
		4 th	Factors causing the variations in the quality of concrete
12 TH		1 st	8.2 Mixing, Transporting
		2 nd	Discussion
		3 rd	Placing requirement of Concrete as per I.S.456.
		4 th	curing requirement of Concrete as per I.S.456.
13 TH		1 st	Discussion
		2 nd	8.3 Inspection and Testing as per Clause 17 of IS:456.
		3 rd	8.4 Durability requirements of Concrete as per I.S:456.
		4 th	Discussion
14 TH		1 st	Special Concrete 9.1 Introduction to ready mix concrete
		2 nd	high performance concrete
		3 rd	silica fume concrete
		4 th	shot-crete concrete or gunniting (Concepts only).
15 TH		1 st	Discussion
		2 nd	Deterioration of concrete and its prevention: 10.1 Types of deterioration
		3 rd	prevention of concrete deterioration
		4 th	corrosion of reinforcement
16 TH		1 st	effects and prevention
		2 nd	Repair technology for concrete structures: 11.1 Symptom
		3 rd	cause and prevention and remedy of defects during construction
		4 th	cracking of concrete due to different reasons
17 TH		1 st	Repair of cracks for different purposes,
		2 nd	Discussion
		3 rd	selection of techniques, polymer based repairs
		4 th	Common types of repairs.

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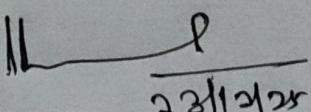
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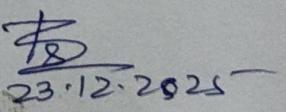
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M.J.M.
23.12.25

LECTURER


 PRINCIPAL
 23/12/25


 23.12.2025
 SR. LECTURER

 Sr. Lecturer
 Civil Engg. Dept.
 G.I.E.T(Poly), Jagatpur, Cuttack

 Principal
 GIET (Polytechnic)
 Jagatpur, Cuttack