

LESSION PLAN

DISCIPLINE: CIVIL ENGG.	SEMESTER: 6TH	NAME OF THE FACULTY: SUSHREE SOURAVI ROUT
SUBJECT: Th 4(a). CONCRETE TECHNOLOGY	NO OF DAYS/WEEK CLASS ALLOTTED: 60	SEMESTER FROM DATE: 22.12.2025 TO 18.04.2026
WEEK	CLASS/DAY	THEORY TOPICS
1st	1	1.1 Grades of concrete.
	2	1.2 Advantages and disadvantages of concrete.
	3	2.1 Composition, hydration of cement, water cement ratio and compressive strength, fineness of cement, setting time, soundness, types of cement.
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2nd	5	3.1 Classification and characteristics of aggregate, fineness modulus, grading of aggregate, I.S.383
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	7	3.2 Quality of water for mixing and curing.
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3rd	9	3.3 Important functions, classification of admixtures, I.S 9103, accelerating admixtures, retarding admixtures, water reducing admixtures, air containing admixtures
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	11	4.1 Concept of fresh concrete, workability, slump test, compacting factor test, V-tee consistency test and flow test, requirement of workability, I.S.1199.
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4th	13	5.1 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.
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5th	15	6.1 a) Introduction
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6th	18	b) Data or input required for mix design.
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7th	22	6.2 Nominal mix concrete & design mix concrete.
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8th	25	6.3 Basic consideration for concrete mix design, Methods of proportioning concrete mix – I.S Code method of mix design (I.S.10262)
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	32	7.1 Batching of materials, mixing of concrete materials,
9th	33	transportation, placing of concrete, compaction of concrete
	34	(vibrators), Curing of concrete, Formwork-requirements and
	35	types ,stripping of forms. (Concepts only)
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10th	37	10.1 Quality control of Concrete as per I.S.456, Factors
	38	causing the variations in the quality of concrete
	39	10.2 Mixing, Transporting, Placing & curing requirements of
	40	Concrete as per I.S.456.
11th	41	10.3 Inspection and Testing as per Clause 17 of IS:456.
	42	10.4 Durability requirements of Concrete as per I.S:456.
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12th	45	11.1 Introduction to ready mix concrete, high performance
	46	concrete, silica fume concrete, shot-crete concrete or
	47	gunniting (Concepts only).
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13th	49	
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	51	12.1 Types of deterioration, prevention of concrete
	52	deterioration, corrosion of reinforcement, effects and
14th	53	prevention
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	56	13.1 Symptom, cause and prevention and remedy of defects
15th	57	during construction, cracking of concrete due to different
	58	reasons. Repair of cracks for different purposes, selection of
	59	techniques, polymer based repairs, common types of repairs.
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Prepared by :-

[Signature]
24/12/25
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