

## LESSON PLAN ( SUMMER-2026 )

**SUBJECT - CONCRETE TECHNOLOGY-Th-4(a), SEMESTER- 6TH SEM. CIVIL**

**FACULTY- ER. SASHIDHAR BEHERA & ER. SYPHON PANDY**

S.No	Week	Unit	No of Classes	Topic to be Cover
1	Week-1 (22-27 Dec)	1	1	Grades of concrete, Advantages & disadvantages of concrete.
			1	Question answer discussion.
			1	Composition, hydration of cement, water cement ratio.
			1	Compressive strength, fineness of cement, soundness, setting time.
2	Week-2 (29 Dec-03 Jan)	2	1	Types of cement, Question answer discussion.
			1	Classification and characteristic of aggregate, fineness modulus.
			1	Quality of water for mixing and curing, Grading of aggregate IS-383.
			1	Important functions and classification of admixtures-IS-9103
3	Week-3 (05 -10 Jan)	3	1	Accelerating admixtures, Retarding admixtures.
			1	Water reducing admixtures, Air containing admixtures.
			1	Question answer discussion.
			1	Concept of fresh concrete, workability.
4	Week-4 (12-17 Jan)	4	1	Slump cone test, compaction factor test.
			1	<b>Monthly test- February</b>
			1	V-bee consistency test, Flow table test.
			1	Requirement of workability IS-1199
5	Week-5 (19-24 Jan)	5	1	Question answer discussion.
			1	Cube and cylinder compressive strength, Flexural strength of concrete
			1	Stress strain, elasticity, Phenomena of creep and shrinkage.
			1	Permeability, durability of concrete.
6	Week-6 (26-31 Jan)	6	1	Sulphate, chloride, acid attack on concrete and efflorescence.
			1	Question answer discussion.
			1	Introduction, data or input required for mix design.
			1	Nominal mix concrete and design mix concrete.
7	Week-7 (02-07 Feb)	7	1	Basic consideration of concrete mix design.
			1	Methods of proportioning concrete mix-IS code method -IS 10262
			1	Question answer discussion.
			1	<b>Monthly test- March</b>
8	Week-8 (09-14 Feb)	8	1	Batching of materials, mixing of raw materials, transportation.
			1	Placing of concrete, compaction of concrete, Curing of concrete.
			1	Formwork-Requirements and types.
			1	Stripping of forms ( Concepts only ), Question answer discussion.
9	Week-9 (16-21 Feb)	9	1	Quality control of concrete, Factors causing the variations in the quality.
			1	Mixing, Transporting, placing & curing requirement as per 456-2000
			1	Inspection and Testing and durability as per Clause 17 of IS 456-2000
			1	Question answer discussion.
10	Week-10 (23-28 Feb)	10	1	Introduction of redy mix concrete, High performance concrete
			1	Sillica fume concrete, shot-crete concrete or gunniting.
			1	Question answer discussion.
			1	Types of deterioration, Prevention of concrete deterioration
11	Week-11 (02-07 Mar)	11	1	corrosion of reinforcement, corrosion effects.
			1	Corrosion prevention,
			1	<b>Monthly test- April</b>
			1	Question answer discussion.
12	Week-12 (09-14 Mar)	12	2	Symptom, cause and prevention and remedy of defects during construction
			2	Cracking of concrete due to different reasons
13	Week-13(16-21 Mar)	12	2	Repair of cracks for different purpose, selection of techniques.
			2	Polymer based repairs, common types of repairs
14	Week-14(23-28 Mar)	4	4	Full Revision and mock test
15	Week-15 (30 Mar-04 Apr)	4	4	Full Revision and mock test
16	Week-16(06-15 Mar)	4	4	Full Revision and mock test

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