

# DEPARTMENT OF CIVIL ENGINEERING, OSME KEONJHAR

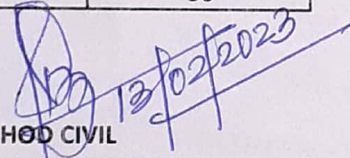
## LESSON PLAN FOR SUMMER-2023

Discipline: <u>Civil</u>		Semester: 6th	Name of the faculty: <u>Er.Sashidhar Behera</u>
Subject: <u>Concrete Technology-Th-4(a)</u>		No of days/per week class allotted: <u>4 h</u>	Semester from date: <u>14.02.2023 to 23.05.2023</u> No. of Weeks : <u>15</u>
WEEK	DATE/CLAS S DAY	PERIODS AVAILABLE	TOPIC TO BE COVER
<b><u>CHAPTER-1-Concrte as a construction material.</u></b>			
Week-1	14.02.2023	1	Briefing about syllabus and Introduction about subject, its objective ,marks distribution, books name to be refer etc.
	15.02.2023	1	Grades of concrete, Advantages & disadvantages of concrete. Question answer discussion.
	<b><u>CHAPTER-2-Cement</u></b>		
	16.02.2023	1	Composition, hydration of cement, water cement ratio.
	16.02.2023	1	Compressive strength, fineness of cement, soundness, setting time.
Week-2	21.02.2023	1	Types of cement, Question answer discussion.
	<b><u>CHAPTER-3- Aggregate, Water and Admixtures</u></b>		
	22.02.2023	1	Classification and characteristic of aggregate, fineness modulus.
	23.02.2023	1	Quality of water for mixing and curing , Grading of aggregate IS-383 .
	23.02.2023	1	Important functions and classification of admixtures-IS-9103
Week-3	28.02.2023	1	Accelerating admixtures, Retarding admixtures.
	01.03.2023	1	Water reducing admixtures, Air containing admixtures.
	02.03.2023	1	Question answer discussion.
	02.03.2023	1	Monthly test-february
<b><u>CHAPTER-4-Properties of fresh concrete</u></b>			
Week-4	09.03.2023	1	Concept of fresh concrete, workability.
	09.03.2023	1	Slump cone test, compaction factor test.
Week-5	14.03.2023	1	V-bee consistency test, Flow table test.
	15.03.2023	1	Requirement of workability IS-1199
	16.03.2023	1	Question answer discussion.
	<b><u>CHAPTER-5-Properties of hardened concrete</u></b>		
	16.03.2023	1	Cube and cylinder compressive strength , Flexural strength of concrete
Week-6	21.03.2023	1	Stress strain, elasticity , Pheonomena of creep and shrinkage.
	22.03.2023	1	Permeability, durability of concrete.
	23.03.2023	1	Sulphate, chloride, acid attack on concrete and efflorescence.
	23.03.2023	1	Question answer discussion.
Week-7	28.03.2023	1	Monthly test-march
	<b><u>CHAPTER-6-Concrete mix Design</u></b>		
	29.03.2023	1	Introduction, data or input required for mix design.
Week-8	04.04.2023	1	Nominal mix concrete and design mix concrete.
	05.04.2023	1	Basic consideration of concrete mix design.
	06.04.2023	1	Methods of proportioning concrete mix-IS code method -IS 10262
	06.04.2023	1	Question answer discussion.
<b><u>CHAPTER-7-Production of Concrete</u></b>			
Week-9	11.04.2023	1	Batching of materials, mixing of raw materials , transportation.
	12.04.2023	1	Placing of concrete, compaction of concrete, Curing of concrete.
	13.04.2023	1	Formwork-Requirements and types.
	13.04.2023	1	Stripping of forms ( Concepts only ), Question answer discussion.



**CHAPTER-8-Inspection and Quality Control of Concrete**

10 Week-11	18.04.2023	1	Quality control of concrete, Factors causing the variations in the quality.
	25.04.2023	1	Mixing, Transporting, placing & curing requirement as per 456-2000
	26.04.2023	1	Inspection and Testing and durability as per Clause 17 of IS 456-2000
	27.04.2023	1	Question answer discussion.
<b>CHAPTER-9-Special Concrete</b>			
Week-12	27.04.2023	1	Introduction of redy mix concrete, High performance concrete
	02.05.2023	1	Silica fume concrete, shot-crete concrete or gunnitting.
	03.05.2023	1	Question answer discussion.
	04.05.2023	1	Monthly test-april
<b>CHAPTER-10-Deterioration of Concrete and its prevention.</b>			
Week-13	04.05.2023	1	Types of deterioration, Prevention of concrete deterioration
	09.05.2023	1	corrosion of reinforcement, corrosion effects.
	10.05.2023	1	Corrosion prevention & Question answer discussion.
	<b>CHAPTER-11-Repair technology for concrete structures.</b>		
Week-14	11.05.2023	1	Symptom, cause and prevention and remedy of defects during construction
	11.05.2023	1	Cracking of concrete due to different reasons
	16.05.2023	1	Repair of cracks for different purpose, selection of techniques.
	17.05.2023	1	Polymer based repairs, common types of repairs
Week-15	18.05.2023	1	Monthly test-may
	18.05.2023	1	full revision
TOTAL		50	

  
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