

SYNERGY SCHOOL OF ENGINEERING, DHENKANAL
LESSON PLAN
 Session: 20224-2025

Discipline: Civil Engineering	Semester: 6 th	Name of the Teaching Faculty: Kedarnath Behera Mail.id : kedarnathbehera2015@gmail.com
Subject: Concrete Technology	No. Of Days/Week: 4	Start Date: End Date:
Week	Class Day	Theory/Practical Topics
1st	1st	Concrete as a construction material Grades of concrete.
	2nd	Advantages and disadvantages of concrete
	3rd	Cement: Composition, hydration of cement
	4th	Water cement ratio , compressive strength, and fineness of cement
2nd	1st	Setting time, soundness,
	2nd	Types of cement
	3rd	Aggregate, Introduction, Classification
	4th	Characteristics of aggregate, fineness modulus
3rd	1st	Grading of aggregate,
	2nd	Quality of water for mixing and curing
	3rd	Impurities present in water
	4th	Introduction, Important functions, classification of admixtures,
4th	1st	Accelerating admixtures, retarding admixtures, water reducing admixtures, air containing admixtures
	2nd	Concept of fresh concrete
	3rd	Workability ,factors affecting workability
	4th	Slump test, compacting factor test
5th	1st	V-bee consistency test and flow test,
	2nd	Requirement of workability,
	3rd	Properties of hardened concrete introduction
	4th	Cube and cylinder compressive strengths
6th	1st	Flexural strength of concrete, stress-strain and elasticity
	2nd	Phenomena of creep and shrinkage, permeability
	3rd	Durability of concrete
	4th	Sulphate, chloride and acid attack on concrete, efflorescence.
7th	1st	Important question discission
	2nd	Concrete mix Design introduction
	3rd	Data or input required for mix design
	4th	Nominal mix concrete & design mix concrete

K. Behera
29/1/25

S. Behera
29/1/25

8 th	1st	Basic consideration for concrete mix design, Methods of proportioning concrete mix I.S Code method of mix design(I.S.10262)
	2nd	Production of concrete Batching of materials,
	3rd	Mixing of concrete materials, transportation, placing of concrete
	4th	Compaction of concrete (vibrators), Curing of concrete
9 th	1st	Formwork-requirements
	2nd	Formwork types ,
	3rd	Stripping of forms
	4th	Doubt Clearing class
10 th	1st	Inspection and Quality Control of Concrete
	2nd	Quality control of Concrete as per I.S.456
	3rd	Factors causing the variations in the quality of concrete
	4th	Mixing, Transporting, Placing & curing requirements of Concrete as per I.S.456
11 th	1st	Inspection and Testing as per Clause 17 of IS:456
	2nd	Durability requirements of Concrete as per I.S:456
	3rd	Special Concrete Introduction to ready mix concrete
	4th	High performance concrete
12 th	1st	Silica fume concrete
	2nd	Shot-Crete concrete or gunitting
	3rd	Doubt Clearing class
	4th	Deterioration of concrete and its prevention, introduction
13 th	1st	Types of deterioration
	2nd	Prevention of concrete deterioration
	3rd	Corrosion of reinforcement
	4th	Effects and prevention
14 th	1st	Repair technology for concrete structures Symptoms
	2nd	Cause and prevention of defect in concrete
	3rd	Remedy of defects during construction
	4th	Cracking of concrete due to different reasons
15 th	1st	Repair of cracks for different purposes
	2nd	Selection of techniques
	3rd	Polymer based repairs ,
	4th	Common types of repairs of concrete
		Previous year question paper discussion

29/11/25

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