

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING



LESSON PLAN

SUBJECT: CONCRETE TECHNOLOGY (TH 4)
FACULTY: IPSITA THAKUR

ACCADEMIC SESSION: 2023-24 (SUMMER)
SEMESTER: 6TH, SEC: B

Sd/-
HOD (Civil Engg.)

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Discipline: Civil Engineering	Semester: 6th B		Name of Teaching Faculty: IPSITA THAKUR
Subject: Concrete Technology	No. of Days / week class allotted: 04 period per week (MON-1, WED-1, THU-1, Fri-1Period)		Semester From Date: 16-01-2024 To Date 26-04-2024 No. of Weeks: 15
Week	Date	No. of periods available	Topics to be covered
1ST	17/01/2024	1	1 CONCRETE AS A CONSTRUCTION MATERIAL: 1.1 Grades of concrete. 1.2 Advantages and disadvantages of concrete.
	18/01/2024	1	2 CEMENTS: 2.1 Composition, hydration of cement, water cement ratio and compressive strength,
	29/01/2024	1	2.1 fineness of cement, setting time, soundness, types of cement.
2ND	22/01/2024	1	3 AGGREGATE, WATER AND ADMIXTURES: 3.1 Classification and characteristics of aggregate, fineness modulus, grading of aggregate, I.S.383
	24/01/2024	1	3.2 Quality of water for mixing and curing
	25/01/2024	1	3.3 Important functions, classification of admixtures, I.S 9103, accelerating admixtures, retarding admixtures, water reducing admixtures, air containing admixture
3RD	29/01/2024	1	4 PROPERTIES OF FRESH CONCRETE:

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			4.1 Concept of fresh concrete, workability, slump test, compacting factor test,
	31/01/2024	1	4 PROPERTIES OF FRESH CONCRETE: 4.1 Concept of fresh concrete, workability, slump test, compacting factor test,
	01/02/2024	1	4.1 V-tee consistency test and flow test, requirement of workability, I.S.1199.
	02/02/2024	1	4.1 V-tee consistency test and flow test, requirement of workability, I.S.1199.
4TH	05/02/2024	1	5 PROPERTIES OF HARDENED CONCRETE: 5.1 Cube and cylinder compressive strengths, flexural strength of concrete, stress-strain and elasticity,
	07/02/2024	1	5.1 Phenomena of creep and shrinkage, permeability, durability of concrete,
	08/02/2024	1	5.1 Sulphate, chloride and acid attack on concrete, efflorescence.
	09/02/2024	1	6 CONCRETE MIX DESIGN 6.1 a) Introduction b) Data or input required for mix design.
5TH	12/02/2024	1	6.2 Nominal mix concrete & design mix concrete and Basic consideration for concrete mix
	15/02/2024	1	6.2 Nominal mix concrete & design mix concrete and Basic consideration for concrete mix
	16/02/2024	1	6.3 Methods of proportioning concrete mix – I.S Code method of mix design (I.S.10262)
6TH	19/02/2024	1	Monthly Class Test 1
	21/02/2024	1	6.3 Methods of proportioning concrete mix – I.S Code method of mix design (I.S.10262)
	22/02/2024	1	7.1 Curing of concrete, Formwork-requirements and types, stripping of forms
	23/02/2024	1	7 PRODUCTIONS OF CONCRETE: 7.1 Batching of materials, mixing of concrete materials, transportation, placing of

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			concrete, Compaction of concrete (vibrators),
7 th	26/02/2024	1	7.1 Batching of materials, mixing of concrete materials, transportation, placing of concrete, Compaction of concrete (vibrators),
	28/02/2024	1	8 INSPECTION AND QUALITY CONTROL OF CONCRETE 8.1 Quality control of Concrete as per I.S.456, Factors causing the variations in the quality of concrete
	29/02/2024	1	8.1 Quality control of Concrete as per I.S.456, Factors causing the variations in the quality of concrete
	01/03/2024	1	8.2 Mixing, Transporting, Placing &curing requirements of Concrete as per I.S.456
8 th	04/03/2024	1	.8.2 Mixing, Transporting, Placing &curing requirements of Concrete as per I.S.456
	06/03/2024	1	8.3 Inspection and Testing as per Clause 17 of IS:456.
	07/03/2024	1	8.4 Durability requirements of Concrete as per I.S:456
9 th	11/03/2024	1	Monthly Class Test 2
	13/03/2024	1	9 SPECIAL CONCRETE 9.1 Introduction to ready mix concrete,
	14/03/2024	1	9.1 high performance concrete
	15/03/2024	1	9.1 silica fume concrete,
10 th	18/03/2024	1	9.1 Shot-Crete concrete or uniting (Concepts only).
	20/03/2024	1	10 DETERIORATION OF CONCRETE AND ITS PREVENTION:
	21/03/2024	1	10.1 Types of deterioration,
	22/03/2024	1	10.1 Prevention of concrete deterioration,

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11 th	27/03/2024	1	10.1 corrosion of reinforcement, effects and prevention.
	28/03/2024	1	11 REPAIR TECHNOLOGY FOR CONCRETE STRUCTURES:
12 th	03/04/2024	1	Internal Assesment
	04/04/2024	1	11.1 Symptom, cause and, cracking of concrete due to different reasons.
	05/04/2024	1	11.1 Symptom, cause and, cracking of concrete due to different reasons.
13 th	08/04/2024	1	11.1 Prevention and remedy of defects during construction
	10/04/2024	1	11.1 Repair of cracks for different purpose
	12/04/2024	1	11.1 Selection of techniques for repair of Concrete
14 th	15/04/2024	1	11.1 Polymer based repairs, common types of repairs.
	18/04/2024	1	Revision
	19/04/2024	1	Revision
15 th	22/04/2024	1	Revision
	24/04/2024	1	Previous year questions and answers discussion
	25/04/2024	1	Previous year questions and answers discussion
	26/04/2024	1	Previous year questions and answers discussion