

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING



LESSON PLAN

SUBJECT: CONCRETE TECHNOLOGY (TH 4)

FACULTY: MS MANISHA PRIYADASHINEE TRIPATHY

ACCADEMIC SESSION: 2022-23

SEMESTER: 6TH

SEC: B

Sd/-
H O D (Civil Engg.)

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING
LESSON PLAN

Discipline: Civil Engineering	Semester: 6th Sec: B		Name of Teaching Faculty: MANISHA PRIYADASHINEE TRIPATHY
Subject: Concrete Technology	No. of Days / week class allotted: 04 period per week (Tue- 1 Period, Wed- 1 Period, Thu- 1 period & Sat- 1 Period)		Semester From Date : 14-02-2023 To Date 23-05-2023 No. of Weeks: 15
Week	Date	No. of periods available	Topics to be covered
1ST	14/02/2023	1	1 Concrete as a construction material: 1.1 Grades of concrete. 1.2 Advantages and disadvantages of concrete.
	15/02/2023	1	2 Cement: 2.1 Composition, hydration of cement, water cement ratio and compressive strength,
	16/02/2023	1	2.1 fineness of cement, setting time, soundness, types of cement.
2ND	21/02/2023	1	2.1 fineness of cement, setting time, soundness, types of cement.
	22/02/2023	1	3 Aggregate, Water and Admixtures: 3.1 Classification and characteristics of aggregate, fineness modulus, grading of aggregate, I.S.383
	23/02/2023		3 Aggregate, Water and Admixtures:

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING
LESSON PLAN

		1	3.1 Classification and characteristics of aggregate, fineness modulus, grading of aggregate, I.S.383
	25/02/2023	1	3.2 Quality of water for mixing and curing
3RD	28/02/2023	1	3.3 Important functions, classification of admixtures, I.S 9103, accelerating admixtures, retarding admixtures, water reducing admixtures, air containing admixture
	01/03/2023	1	3.3 Important functions, classification of admixtures, I.S 9103, accelerating admixtures, retarding admixtures, water reducing admixtures, air containing admixture
	02/03/2023	1	4 Properties of fresh concrete: 4.1 Concept of fresh concrete, 4.1 workability, slump test, compacting factor test
	04/03/2023	1	4.1 V-bee consistency test and flow test, requirement of workability, I.S.1199.
4TH	09/03/2023	1	MONTHLY CLASS TEST 1
	11/03/2023	1	5 Properties of hardened concrete: 5.1 Cube and cylinder compressive strengths, flexural strength of concrete, stress-strain and elasticity,
5TH	14/03/2023	1	5.1 Phenomena of creep and shrinkage, permeability, durability of concrete
	15/03/2023	1	5.1 Sulphate, chloride and acid attack on concrete, efflorescence.
	16/03/2023	1	5.1 Sulphate, chloride and acid attack on concrete, efflorescence.
	18/03/2023	1	6 Concrete mix Design

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING
LESSON PLAN

			6.1 a) Introduction b) Data or input required for mix design.
6TH	21 /03/2023	1	6.2 Nominal mix concrete & design mix concrete.
	22/03/2023	1	6.3 Basic consideration for concrete mix design,
	23/03/2023	1	6.3 Methods of proportioning concrete mix – I.S Code method of mix design(I.S.10262)
	25/03/2023	1	6.3 Methods of proportioning concrete mix – I.S Code method of mix design(I.S.10262)
7TH	28/03/2023	1	7 Production of concrete: 7.1 Batching of materials, mixing of concrete materials, transportation, placing of concrete,
	29/03/2023	1	7.1 Compaction of concrete (vibrators),
8TH	04/04/2023	1	7.1 Curing of concrete
	05/04/2023	1	7.1 Formwork-requirements and types, stripping of forms
	06/04/2023	1	8 Inspection and Quality Control of Concrete 8.1 Quality control of Concrete as per I.S.456,
	08/04/2023	1	8.1 Factors causing the variations in the quality of concrete
9TH	11/04/2023	1	8.2 Mixing, Transporting, Placing & curing requirements of Concrete as per I.S.456.
	12/04/2023	1	8.3 Inspection and Testing as per Clause 17 of IS: 456.
	13/04/2023	1	8.4 Durability requirements of Concrete as per I.S:456.

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING
LESSON PLAN

	15/04/2023	1	MONTHLY CLASS TEST 2
10TH	18/04/2023	1	9 Special Concrete 9.1 Introduction to ready mix concrete.
	19/04/2023	1	9.1 high performance concrete, silica fume concrete.
	20/04/2023	1	9.1 high performance concrete, silica fume concrete.
	22/04/2023	1	9.1 Shot-Crete concrete or gunniting (Concepts only)
11TH	25/04/2023	1	Questions Answers Session
	26/04/2023	1	10 Deterioration of concrete and its prevention: 10.1 Types of deterioration,
	27/04/2023	1	10 Deterioration of concrete and its prevention: 10.1 Types of deterioration,
	29/04/2023	1	INTERNAL ASSESSMENT
12TH	02/05/2023	1	10.1 Prevention of concrete deterioration,
	03/05/2023	1	10.1 Corrosion of reinforcement, effects and prevention.
	04/05/2023	1	11 Repair technology for concrete structures: 11.1 Symptom, cause and, cracking of concrete due to different reasons.
	06/05/2023	1	11.1 Prevention and remedy of defects during construction
13TH	09/05/2023	1	11.1 Repair of cracks for different purposes
	10/05/2023	1	11.1 Selection of techniques for repair of Concrete.

BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF CIVIL ENGINEERING
LESSON PLAN

	11/05/2023	1	11.1 Polymer based repairs, common types of repairs.
	13/05/2023	1	Revision
14TH	16/05/2023	1	Revision
	17/05/2023	1	Revision
	18/05/2023	1	Revision
	20/05/2023	1	Previous Year Questions and Answers discussion
15TH	23/05/2023	1	Previous Year Questions and Answers discussion