LESSON PLAN OF 6TH SEMESTER CIVIL ENGINEERING(2021-22)

Discipline :- CIVIL	Semester:-6TH	Name of the Teaching Faculty:- ER. PRANA KRUSHNA PANI
Subject:- CONCRETE TECHNOLOGY	No of Days/per Week Class Allotted :-04	Semester From:- 16-01-2024 To:- 23-04-2024 No of Weeks:- 20

Weeks	Class Day	Theory/ Practical Topics
1ST	1st	**CH-1-Concrete as a construction material:** 1.1 Grades of concrete.
	2nd	1.2 Advantages and disadvantages of concrete.
	3rd	**CH-2-Cement:** 2.1 Composition
	4th	hydration of cement, water cement ratio
2ND	1st	compressive strength, fineness of cement, setting time, soundness
	2nd	types of cement
	3rd	**CH-3-Aggregate, Water and Admixtures:** 3.1 Classification and characteristics of aggregate
	4th	fineness modulus, grading of aggregate,I.S.383
3RD	1st	3.2 Quality of water for mixing and curing
	2nd	3.3 Important functions, classification of admixtures, I.S 9103
	3rd	accelerating admixtures, retarding admixtures
	4th	water reducing admixtures, air containing admixtures
4TH	1st	**CH-4-Properties of fresh concrete:** 4.1 Concept of fresh concrete, workability
	2nd	slump test
	3rd	compacting factor test
	4th	V-bee consistency test
5TH	1st	FLOW TEST
	2nd	requirement of workability,I.S.1199.
	3rd	**CH-5--Properties of hardened concrete:** 5.1 Cube and cylinder compressive strengths,
	4th	flexural strength of concrete
6TH	1st	stress-strain and elasticity
	2nd	phenomena of creep and shrinkage
	3rd	permeability, durability of concrete
	4th	sulphate, chloride and acid attack on concrete, efflorescence.
7TH	1st	**CH-6-Concrete mix Design** 6.1 a) Introduction b) Data or input required for mix design. 6.2 Nominal mix concrete &design mix concrete. 6.3 Basic consideration for concrete mix design, Methods of proportioning concrete mix – I.S Code method of mix design(I.S.10262)
	2nd	b) Data or input required for mix design.
	3rd	6.2 Nominal mix concrete & design mix concrete
	4th	6.3 Basic consideration for concrete mix design

8th	1st	Methods of proportioning concrete mix – I.S Code method of mix design(I.S.10262)
	2nd	NUMERICAL PROBLEM SOLVING
	3rd	CH-7-PRODUCTION OF CONCRETE 7.1 Batching of materials, mixing of concrete materials,
	4th	transportation, placing of concrete
9th	1st	compaction of concrete (vibrators),
	2nd	Curing of concrete
	3rd	Formwork-requirements and types
	4th	stripping of forms. (Concepts only)
10th	1st	**CH-10-Inspection and Quality Control of Concrete** 10.1 Quality control of Concrete as per I.S.456
	2nd	Factors causing the variations in the quality of concrete
	3rd	10.2 Mixing, Transporting as per I.S.456.
	4th	Placing &curing requirements of Concrete as per I.S.456.
11th	1st	10.3 Inspection as per Clause 17 of IS:456.
	2nd	Testing as per Clause 17 of IS:456.
	3rd	10.4 Durability requirements of Concrete as per I.S:456.
	4th	**CH-11-Special Concrete** 11.1 Introduction to ready mix concrete
12th	1st	high performance concrete
	2nd	silica fume concrete
	3rd	shot-crete concrete or gunitting (Concepts only).
	4th	**CH-12--Deterioration of concrete and its prevention:** 12.1 Types of deterioration
13th	1st	prevention of concrete deterioration
	2nd	corrosion of reinforcement
	3rd	effects and prevention
	4th	effects and prevention
14th	1st	**CH-13--Repair technology for concrete structures:** 13.1 Symptom, cause and prevention and remedy of defects during construction, cracking of concrete due to different reasons. Repair of cracks for different purposes, selection of techniques, polymer-based repairs, common types of repairs.
	2nd	Prevention and remedy of defects during construction
	3rd	Cracking of concrete due to different reasons
	4th	Repair of cracks for different purposes
15th	1st	Selection of techniques, polymer-based repairs
	2nd	Common Types of Repairs.
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE
	4th	PREVIOUS YEAR QUESTIONS PRACTICE
	1st	PREVIOUS YEAR QUESTIONS PRACTICE
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE

16st	3rd	PREVIOUS YEAR QUESTIONS PRACTICE
	4th	PREVIOUS YEAR QUESTIONS PRACTICE
17nd	1st	DOUBT CLEARING CLASS
	2nd	DOUBT CLEARING CLASS
	3rd	DOUBT CLEARING CLASS
	4th	DOUBT CLEARING CLASS
18rd	1st	DOUBT CLEARING CLASS
	2nd	DOUBT CLEARING CLASS
	3rd	DOUBT CLEARING CLASS
	4th	DOUBT CLEARING CLASS
19th	1st	RIVISION
	2nd	RIVISION
	3rd	RIVISION
	4th	RIVISION
20th	1st	RIVISION
	2nd	RIVISION
	3rd	RIVISION