

LESSON PLAN (SUMMER-2026)

VENUS GROUP OF EDUCATIONAL & RESEARCH INSTITUTE,BAHANAGA,BALASORE-756042

Discipline: Civil Engg.	Semester: 6th	Name of the Teaching Faculty: Er.Nillima Malik
Subject: Concrete Technology	No. of days per week class allotted: 5 nos	Semester From date :22/12/2025 To 18/04/2026
Week No.	Class Day	Theory/Practical Topic
1st	1st	Concrete.
	2nd	Grades of concrete.
	3rd	Types of concrete.
	4th	Advantages of concrete.
	5th	Disadvantages of concrete.
2nd	1st	Advantages and disadvantages of concrete.
	2nd	Composition cement.
	3rd	Hydration of cement.
	4th	Water cement ratio
	5th	Compressive strength.
3rd	1st	Fineness of cement.
	2nd	Setting time cement.
	3rd	Soundness of cement.
	4th	Types of Cements.
	5th	Classification and characteristics of aggregate.
4th	1st	Fineness modulus.
	2nd	Grading of aggregate.
	3rd	Quality of water for mixing .
	4th	Quality of water for and curing.
	5th	Important functions, classification of admixtures.
5th	1st	Accelerating admixtures.
	2nd	Retarding admixtures.
	3rd	Water reducing admixtures.
	4th	Air containing admixtures.
	5th	Concept of fresh concrete, workability.
6th	1st	Concept of fresh concrete slump test.
	2nd	Concept of fresh concrete compacting factor test.
	3rd	V-bee consistency test and flow test, requirement of workability.
	4th	Cube and cylinder compressive strengths, flexural strength of concrete.
	5th	Cube and cylinder compressive strengths, flexural strength.
7th	1st	stress-strain and elasticity, phenomena of creep and shrinkage.
	2nd	Permeability, durability of concrete, sulphate, chloride.
	3rd	Acid attack on concrete.

7th	4th	Efflorescence.
	5th	Data or input required for mix design.
8th	1st	Nominal mix concrete & design mix concrete.
	2nd	Basic consideration for concrete mix design.
	3rd	Methods of proportioning concrete mix.
	4th	Code method of mix design.
	5th	Batching of materials, mixing of concrete materials, transportation, placing of concrete, compaction of concrete.
9th	1st	Curing of concrete, Formwork-requirements and types ,stripping of forms.
	2nd	Quality control of Concrete.
	3rd	Factors causing the variations in the quality of concrete.
	4th	Mixing, Transporting of Concrete.
	5th	Placing & curing requirements of Concrete.
10th	1st	Inspection and Testing as per Clause.
	2nd	Inspection and Testing as per Clause.
	3rd	Durability requirements of Concrete.
	4th	Durability requirements of Concrete.
	5th	Introduction to ready mix concrete, high performance concrete, silica fume concrete, shot-crete concrete or gunnitting.
11th	1st	Introduction to ready mix concrete, high performance concrete, silica fume.
	2nd	Types of deterioration, prevention of concrete deterioration, corrosion.
	3rd	Types of deterioration, corrosion of reinforcement, effects and prevention.
	4th	Symptom, cause and prevention.
	5th	Remedy of defects during construction.
12th	1st	cracking of concrete.
	2nd	cracking of concrete due to different reasons.
	3rd	Repair of cracks for different purposes.
	4th	Repair of cracks selection of techniques.
	5th	Polymer based repairs, common types of repairs.
13th	1st	Polymer based repairs.
	2nd	Common types of repairs.
	3rd	Revision.
	4th	Revision.
	5th	Revision.