

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

SUBJECT NAME- **CONCRETE TECHNOLOGY**

TOTAL NO. OF WEEK-11

SEMESTER-6TH

TOTAL PERIODS-59

CLASSES ALLOTTED PER WEEK-4

NAME OF TEACHING FACULTY –**SWARNAPRAVA DEVI**

SESSION-(2020-2021) SUMMER

Week & Date		No of Periods Available	Topics to be covered	Topics actually covered	If any Shortfall	Reason of shortfall	How to make up	Remarks/ Signature with date
1 ST	20/04/21	1	1.1 Basics of concrete	1.1 Basics of concrete,				
	22/04/21	2	1.1, Grade of concrete 1.2 Advantages concrete	1.1, Grade of concrete 1.2 Advantages concrete				
	23/04/21	1	1.2 disadvantages of concrete.	1.2 disadvantages of concrete.				
2 ND	27/04/21	1	2.1 Composition, hydration of cement,	2.1 Composition, hydration of cement,				
	29/04/21	2	water cement ratio and compressive strength, fineness of cement,	water cement ratio and compressive strength.	fineness of cement			
	30/04/21	1	setting time, soundness, types of cement.	, fineness of cement, setting time, soundness	types of cement			

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3 RD	04/05/21	1	3.1 Classification and characteristics of aggregate,	types of cement. 3.1 Classification of aggregate	Characteristics of aggregate			
	06/05/21	2	fineness modulus, grading of aggregate, I.S.383	Characteristics of aggregate, fineness modulus, grading of aggregate	I. S. 383			
	07/05/21	1	3.2 Quality of water for mixing and curing.	I. S. 383, 3.2 Quality of water for mixing	Quality of water for curing			
4 TH	11/05/21	1	3.3 Important functions, classification of admixtures, I.S 9103, accelerating admixture	Quality of water for curing, 3.3 Important functions of admixture	Classification of admixture, I.S 9103, Accelerating admixture			
	13/05/21	2	Retarding admixtures, Water reducing admixtures, Air entraining admixtures	Classification of admixture, I.S 9103, Accelerating admixture, Retarding admixture	Water reducing admixture, Air entraining admixture			
	18/05/21	1	4.1 Concept of fresh concrete, workability, slump test, compacting factor test,	Water reducing admixture, Air entraining admixture, 4.1 Concept of fresh concrete	Workability, Slump test, Compacting factor test			

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5 TH	20/05/21	2	4.1 V-tee consistency test and flow test, requirement of workability, I.S.1199. 5.1 Cube and cylinder compressive strengths, flexural strength of concrete	Workability, Slump test, Compacting factor test, 4.1 V-tee consistency test and flow test, I.S 1199	Requirement of workability, 5.1 Cube and cylinder compressive strengths, flexural strength of concrete			
	21/05/21	1	5.1 stress-strain and elasticity, phenomena of creep and shrinkage, permeability, durability of concrete,	Requirement of workability, 5.1 Cube and cylinder compressive strengths, flexural strength of concrete	5.1 stress-strain and elasticity, phenomena of creep and shrinkage, permeability, durability of concrete			
6 TH	25/05/21	1	5.1 Sulphate, chloride and acid attack on concrete, efflorescence.	5.1 stress-strain and elasticity, phenomena of creep and shrinkage, permeability, durability of concrete	5.1 Sulphate, chloride and acid attack on concrete, efflorescence.			
	27/05/21	2	6.1 a) Introduction b) Data or input required for mix design	5.1 Sulphate, chloride and acid attack on concrete, efflorescence.	6.1 a) Introduction b) Data or input required for mix design			
	28/05/21	1	6.2 Nominal mix concrete & design mix concrete	6.1 a) Introduction b) Data or input required for mix design	6.2 Nominal mix concrete & design mix concrete			
7 TH	01/06/21	1	6.3 Basic consideration for concrete mix design, Methods of proportioning concrete mix – I.S Code method of mix design (I.S.10262)	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			

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					design(I.S.10262)			
	03/06/21	2	7.1 Batching of materials, mixing of concrete materials, transportation, placing of concrete, compaction of concrete (vibrators), Curing of concrete,	6.3 Basic consideration for concrete mix design, Methods of proportioning concrete mix – I.s Code method of mix design(I.S.10262)	7.1 Batching of materials, mixing of concrete materials, transportation, placing of concrete, compaction of concrete (vibrators), Curing of concrete,			
	04/06/21	1	Formwork-requirements and types ,stripping of forms.	7.1 Batching of materials, mixing of concrete materials,	transportation, placing of concrete, compaction of concrete (vibrators), Curing of concrete, Formwork-requirements and types ,stripping of forms			
8 TH	08/06/21	1	10.1 Quality control of Concrete as per I.S.456, Factors causing the variations in the quality of concrete	transportation, placing of concrete, compaction of concrete (vibrators),	Curing of concrete, Formwork-requirements and types ,stripping of forms 10.1 Quality control of Concrete as per I.S.456, Factors causing the variations in the quality of concrete			

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	10/06/21	2	10.2 Mixing, Transporting, Placing &curing requirements of Concrete as per I.S.456. 10.3 Inspection and Testing as per Clause 17 of IS:456.	Curing of concrete, Formwork-requirements and types ,stripping of forms	10.1 Quality control of Concrete as per I.S.456, Factors causing the 10.2 Mixing, Transporting, Placing &curing requirements of Concrete as per I.S.456. 10.3 Inspection and Testing as per Clause 17 of IS:456			
	11/06/21	1	10.4 Durability requirements of Concrete as per I.S:456.	10.1 Quality control of Concrete as per I.S.456,	, Factors causing the 10.2 Mixing, Transporting, Placing &curing requirements of Concrete as per I.S.456. 10.3 Inspection and Testing as per Clause 17 of IS:456 10.4 Durability requirements of Concrete as per I.S:456.			
	15/06/21	1	11.1 Introduction to ready mix concrete	10.2 Mixing, Transporting, Placing &curing requirements of Concrete as per I.S.456	10.3 Inspection and Testing as per Clause 17 of IS:456 10.4 Durability requirements of Concrete as per I.S:456. 11.1 Introduction to			

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9 TH					ready mix concrete			
	17/06/21	2	11.1 High performance concrete, silica fume concrete, shot-crete concrete or gunitting 12.1 Types of deterioration	10.3 Inspection and Testing as per Clause 17 of IS:456.	10.4 Durability requirements of Concrete as per I.S:456. 11.1 Introduction to ready mix concrete High performance concrete, silica fume concrete, shot-crete concrete or gunitting 12.1 Types of deterioration			
	18/06/21	1	12.1 Prevention of concrete deterioration, corrosion of reinforcement, effects and prevention	10.4 Durability requirements of Concrete as per I.S:456.	11.1 Introduction to ready mix concrete High performance concrete, silica fume concrete, shot-crete concrete or gunitting 12.1 Types of deterioration corrosion of reinforcement, effects and prevention			
10 TH	22/06/21	1	13.1 Symptom, cause and prevention and remedy of defects during construction,	11.1 Introduction to ready mix concrete High performance concrete,	silica fume concrete, shot-crete concrete or gunitting 12.1 Types of deterioration corrosion of reinforcement, effects and prevention			

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					13.1 Symptom, cause and prevention and remedy of defects during construction			
24/06/21	2	13.1 cracking of concrete due to different reasons. Repair of cracks for different purposes, selection of techniques, polymer based repairs, common types of repairs.	silica fume concrete, shot-crete concrete or gunniting	12.1 Types of deterioration, prevention of concrete deterioration, corrosion of reinforcement, effects and prevention 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.				
25/06/21	1	REVISION	12.1 Types of deterioration, prevention of concrete deterioration	corrosion of reinforcement, effects and prevention 13.1 Symptom, cause and prevention and remedy of defects during construction, cracking of concrete due to different				

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					reasons. Repair of cracks for different purposes, selection of techniques, polymer based repairs, common types of repairs.			
11 TH	29/06/21	1	CLASS TEST	corrosion of reinforcement, effects reinforcement	Prevention reinforcement, 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.			
12 TH	01/07/21	2	Prevention reinforcement,	Prevention reinforcement,	NILL			
	02/07/21	1	13.1 Symptom, cause and prevention	13.1 Symptom, cause and prevention	NILL			
13 TH	06/07/21	1	remedy of defects during construction,	remedy of defects during construction	NILL			
	08/07/21	2	cracking of concrete due to different reasons. Repair of cracks for different purposes, selection of techniques,	cracking of concrete due to different reasons. Repair of cracks for different purposes,	NILL			

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				selection of techniques,				
	09/07/21	1	polymer based repairs, common types of repairs.	polymer based repairs, common types of repairs.	NILL			
14 TH	13/07/21	1	Revision of chapter 1,2	Revision of chapter 1,2				
	15/07/21	2	Revision of chapter 3,4	Revision of chapter 3,4				
	16/07/21	1	Revision of chapter 5,6	Revision of chapter 5,6				
15 TH	20/07/21	1	Revision of chapter 7,10	Revision of chapter 7, 10				
	22/07/21	2	Revision of chapter 11,12	Revision of chapter 11,12				
	23/07/21	1	Revision of chapter 13	Revision of chapter 13				
16 TH	27/07/21	1	QUESTION DISSCUSION	QUESTION DISSCUSION				
	29/07/21	2	QUESTION DISSCUSION,DOUBT CLEAR	QUESTION DISSCUSION,DOUBT CLEAR				
	30/07/21	1	TEST					