



Department of Civil Engineering Govt. Polytechnic for Women Rehala Distt. - Kangra (H.P.) - 176022 LESSON PLAN	
Program Name	Civil Engineering
Subject Name	Concrete Technology
Subject Code	CEPC209
Semester	3rd Semester
Subject Teacher Name	Er. Anshu Rehala

Sr. No.	Subject Name	Study scheme (Hrs/Week)	Marks in Evaluation Scheme						
			Internal Assessment				External Assessment		
		Th	DCS	Th	Pr	Total	Th	Pr	Total
1		3	1	40	-	40	60	-	60

Reference Books

- Ghambhir M.L Concrete Technology
- Shetty M.S Concrete Technology

CO - 1	To know properties of cement, aggregate and water used in concrete.
CO - 2	To understand different characteristics of concrete
CO - 3	To learn about role of admixtures in concrete

		Name of Topic	Proposed Date	Actual Date	Remarks
1	Unit - I Cement, Aggregates and Water	Physical properties of OPC and PPC: fineness, standard consistency, setting time, soundness, compressive strength.	02-08-2024		
2		Different grades of OPC and relevant BIS codes	02-08-2024		
3		Storage of cement and effect of storage on properties of cement.	06-08-2024		
4		BIS Specifications and field applications of different types of cements: Rapid hardening	09-08-2024		
5		Low heat, Portland pozzolana, Sulphate resisting, Blast furnace slag, High Alumina and White cement	09-08-2024		
6		Aggregates: Requirements of good aggregate, Classification according to size and shape.	13-08-2024		
7		Fine aggregates: Properties, size, specific gravity, bulk density, water absorption and bulking, fineness modulus and grading zone of sand,	16-08-2024		
8		silt content and their specification as per IS 383. Concept of crushed Sand.	16-08-2024		
9		Coarse aggregates: Properties, size, shape, surface texture, water absorption, soundness, specific gravity and bulk density,	20-08-2024		
10		fineness modulus of coarse aggregate, grading of coarse aggregates, crushing value, impact value and abrasion value of coarse aggregates with specifications.	23-08-2024		
11		Water: Quality of water, impurities in mixing water and permissible limits for solids as per IS: 456.	23-08-2024		
12	Unit- II Concrete	Concrete: Different grades of concrete, provisions of IS 456.	27-08-2024		
13		Duff Abraham water cement (w/c) ratio law, significance of w/c ratio, selection of w/c ratio for different grades,	30-08-2024		
14		Maximum w/c ratio for different grades of concrete for different exposure conditions as per IS 456.	30-08-2024		
15		Properties of fresh concrete: Workability: Factors affecting workability of concrete. Determination of workability of concrete by slump cone	03-09-2024		
16		compaction factor, Vee-Bee Consistometer. Value of workability requirement for different types of concrete works	06-09-2024		
17		Segregation, bleeding, and preventive measures	06-09-2024		
18		Properties of Hardened concrete: Strength, Durability, Impermeability.	10-09-2024		
19		Class test- 1	13-09-2024		

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20	Unit- III Concrete Mix Design and Testing of Concrete	Concrete mix design Objectives, methods of mix design, study of mix design as per IS 10262 (only procedural steps)	13-09-2024			
21			20-09-2024			
22			20-09-2024			
23		Testing of concrete, determination of compressive strength of concrete cubes at different ages, interpretation, and co-relation of test results.	24-09-2024			
24			27-09-2024			
25		Non- destructive testing of concrete: Rebound hammer test, working principle of rebound hammer	27-09-2024			
26			01-10-2024			
27	Unit- IV Quality Control of Concrete	factor affecting the rebound index, Ultrasonic pulse velocity test as per IS 13311 (part 1 and 2), Importance of NDT tests	04-10-2024			
28		Concreting Operations: Batching, Mixing, Transportation, Placing, Compaction, Curing and Finishing of concrete.	04-10-2024			
29			08-10-2024			
30		Forms for concreting: Different types of form works for beams, slabs, columns, materials used for form work, requirement of good form work	11-10-2024			
31			11-10-2024			
32		CLASS TEST-2	15-10-2024			
33		Stripping time for removal of form works per IS 456.	18-10-2024			
34		Waterproofing: Importance and need of waterproofing, methods of waterproofing and materials used for waterproofing.	18-10-2024			
35			18-10-2024			
36		Joints in concrete construction: Types of joints, methods for joining old and new concrete, materials used for filling joints	22-10-2024			
37	25-10-2024					
38	25-10-2024					
39	Unit- V Chemical Admixtures, Special Concrete and Extreme Weather concreting	Admixtures in concrete: Purpose, properties and application for different types of admixtures such as accelerating admixtures,	01-11-2024			
40		Retarding admixtures, water reducing admixtures, air entraining admixtures and super plasticizers.	01-11-2024			
41		Special Concrete: Properties, advantages and limitation of following types of Special concrete: Ready mix Concrete,	05-11-2024			
42		Fibre Reinforced Concrete, High performance Concrete Self-compacting concrete and light weight concrete.	08-11-2024			
43		House Test	08-11-2024			
44		Unit- V Chemical Admixtures, Special Concrete and Extreme Weather concreting	Cold weather concreting: effect of cold weather on concrete,	12-11-2024		
45			precautions to be taken while concreting in cold weather condition.	19-11-2024		
46	Hot weather concreting: effect of hot weather on concrete		22-11-2024			
47	precautions to be taken while concreting in hot weather condition.		22-11-2024			
48	Doubt Session		26-11-2024			
49	Doubt Session	29-11-2024				
			29-11-2024			

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Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test - 1	Unit-1	13-09-2024		
Class Test - 2	unit 2 and 3(till date)	15-10-2024		
House Test - 1	unit 1-4	12-13-14 nov		

(Signature of Teacher)

(Signature of HOD)

Approved

Principal  
Govt. Polytechnic for Women  
Rehar Distt. Kangra (H.P.)