LESSON PLAN (CT)

Name of faculty Dheeraj Grover
Discipline Civil Engineering
Semester 3rd
Subject Concrete Technology
Work Load:-L- 02 P-02

Week	Theory		Practical	
	Lecture Day	Topic	Practical Day	Topic
1st	1st	Introduction Definition of concrete, uses of concrete	1	To determine the physical properties of cement as per IS Codes
	2nd	Ingredients of Concrete: physical properties of cement		
2nd	1st	different types of cement	2	To determine flakiness and elongation index of coarse aggregates
	2nd	Classification of aggregates according to size, and shape Characteristics of aggregates Particle size and shape,		
3rd	1st	surface texture, specific gravity of aggregate; bulk density,	3	To determine silt in fine aggregate
	2nd	water absorption, surface moisture, bulking of sand,		
4th	1st	soundness Grading of aggregates: coarse aggregate, finr agg	4	Determination of specific gravity and water absorption of aggregates
	2nd	All-in-aggregate; fineness modulus; interpretation of grading charts **REVISION / DISCUSSUION**		
5th	1st	Hydration of cement, principle of water-cement ratio	5	Determination of bulk density and voids of aggregates
	2nd	Duff Abram's Water-cement ratio law,limitations of w/c ratio **SITE VIST TO NEAREST AREA OF CONSTRUCTION**		
6th	1st	Workability factors affecting workability Measurement of workability: slump test,	6	To determine surface moisture in fine aggregate by displacement method
	2nd	compacting factor and Vee Bee consistometer		
7th	1st	Recommendedslumps for placement in various conditions as per IS:456-2000/	7	Determination of particle size distribution of fine, coarse and all in aggregate by sieve analysis
	2nd	Properties in plastic state,properties in hardened stage **REVISION / DISCUSSUION**		
8th	1st	Proportioning for Normal Concrete: Proportioning for Normal Concrete:	8	To determine necessary adjustment for bulking of fine aggregate
	2nd	introduction to various grades as per IS:456-2000 proportioning for nominal mix design as prescribed by IS 456-2000		
9th	1st	Adjustment on site for: Bulking of fine aggregate,	9	To determine workability by slump test:
	2nd	Difference between nominal and controlled concrete Introduction to IS-10262-2009-Code for controlled mix design		
10th	1st	Introduction to Admixtures	10	Compaction factor test for workability
	2nd	Concreting under special conditions, Ready mix concrete **REVISION / DISCUSSUION**		
11th	1st	`Fly ash concrete Silica fume concrete	11	Tests for compressive strength of concrete cubes for different grades of concrete
	2nd	Storing of cement in a warehouse Storing of cement at site Effect of storage on strength of cement Det. of warehouse capacity		
12th	1st	Storing of Aggregate: Storing of aggregate at site Batching of Cement	12	Non destructive test Rebound Hammer Test
	2nd	Batching of aggregate by Volume, using gauge box Weight spring balances and batching machines Measurement of water		
13th	1st	`Hand mixing Machine mixing	13	Ultrasonic Pulse Velocity Test
	2nd	types of mixers, capacities of mixers, transportation methods of conc. Hand compaction Machine compaction		
14th	1st	Finishing concrete slabs - screeding, floating and trowelling Curing:Jointing: L	14	To determine flexural strength of concrete beam
		Special Concretes (only features)		
	2nd	Defects in concrete: Importance and methods of non-destructive test		
15th	1st	**SITE VISIT** **REVISION / DISCUSSUION**	15	To determine the physical properties of cement as per IS Codes
	2nd	**REVISION / DISCUSSUION**		