

DISCIPLINE	SEMESTER	NAME OF THE TEACHING FACULTY
CIVIL ENGG.	6 th	Bansha Priyadarshini Panda
SUBJECT	NO OF CLASSES PER WEEK ATTENDED	SEMESTER FROM DATE - 10.3.22 TO DATE - 10.6.22
CONCRETE TECHNOLOGY	4 P/week	NO OF WEEKS 15

MONTHS	WEEKS	CLASS DAY	THEORY TOPIC
MARCH	2nd	1st	Chapter 1 → Grade of concrete
	3rd	1st	→ Advantages & disadvantages of concrete
		2nd	Chapter 2 → Composition, hydration of cement
		3rd	→ Water cement ratio, compressive strength
	4th	1st	→ Fineness of cement, setting time, soundness
		2nd	→ Types of cement
		3rd	Chapter 3 → Classification and characteristics of aggregate
		4th	→ deleterious substances in aggregates, fineness modulus grading aggregate, IS 383
	5th	1st	→ quality of water for mixing and curing
		2nd	→ Imparted functions, classification of admixture IS 9103, accelerating admixtures
		3rd	→ Retarding admixtures, water reducing admixtures, air

MONTHS	WEEKS	CLASS DAY	THEORY TOPIC
APRIL	1st	1st	Containing admixtures <u>Chapter 4</u>
	2nd	1st	→ concept of fresh concrete, workability, slump test.
		2nd	→ Compacting factor test v- bee consistency test and flow test.
		3rd	→ Requirement of workability I.S. 1199.
		4th	<u>Chapter 5</u> → Cube and cylinder compressive strength.
	3rd	1st	→ Flexural strength of concrete
		2nd	→ Stress - Strain and elasticity
		3rd	→ Phenomena of creep and shrinkage permeability, durability of concrete.
		4th	→ Sulfate chloride and acid attack on concrete, efflorescence.
	4th	1st	<u>Chapter 6</u> → Introduction
		2nd	→ Data or input required for mix design.
		3rd	→ Nominal mix concrete.
		4th	→ Design mix concrete.

MONTHS	WEEKS	CLASS DAY	THEORY TOPIC	
	5th	1st	→ Basic consideration for concrete mix design	
		2nd	→ Methods of proportioning concrete mix - I.S code method of mix design (I.S. 10262)	
		3rd	→ class test	
		4th	→ Batching of materials class mixing of concrete material transportation. Placing of concrete.	
	MAY	1st	1st	→ Compaction of concrete, compaction methods, vibrators curing. When to start and time of curing.
			2nd	→ Formwork - requirement and types, Stripping of forms.
		3rd	3rd	<u>Chapter 8</u> → Quality control of concrete as per I.S. 456 Factors causing the variations in the quality of concrete.
			4th	→ Field quality control, Sampling & acceptance criteria as per clause 15 & 16 of IS:456
2nd	1st	→ Mixing, Transporting, placing & curing requirement of concrete as per I.S. 456		

MONTHS	WEEKS	CLASS DAY	THEORY TOPICS
		2nd	→ Inspection and Testing as per Clause 17 of IS: 456
		3rd	→ Durability requirements of concrete as per IS 456.
		4th	<u>Chapter-9</u> → Introduction to ready mix concrete.
	3rd	1st	→ High Performance Concrete Silica fume concrete.
		2nd	→ Shotcrete concrete on guniting.
		3rd	<u>Chapter-10</u> → Types of deterioration.
	4th	1st	→ Prevention of concrete deterioration.
		2nd	→ Corrosion of reinforcement effects and prevention
		3rd	→ Symptom, cause and prevention and remedy of defects during construction.
		4th	→ Cracking of concrete due to different reasons.
JUNE	1st	1st	→ Repair of cracks for different purposes.

MONTHS	WEEKS	CLASS DAY	THEORY TOPICS
		2nd	→ selection of Techniques
		3rd	→ Polymer based repairs, Common types of repairs
	2nd	1st	→ Class Test
		2nd	→ Doubt clearing class
		3rd	→ Class Test