

## Lesson Plan

Name of Faculty: - Mr. Vijay Pal (Theory and Practical)  
 Discipline: - Civil Engineering  
 Semester: - 4<sup>th</sup>  
 Subject: - Concrete Technology  
 Lesson Plan Duration: - 15 weeks (from Jan-2019 to Apr-2019)  
 Work Load:- Lectures-3, Practicals-2

WEEK	THEORY		PRACTICAL	
	LECTURE DAY	TOPIC	PRACTICAL DAY	TOPIC
1st	1 <sup>st</sup>	Concept of concrete and its use	1st	To determine physical properties of cement
	2 <sup>nd</sup>	Comparison of concrete to other building material		
	3 <sup>rd</sup>	Cement and its properties	2 <sup>nd</sup>	To determine physical properties of cement
2nd	1 <sup>st</sup>	Different type of cement and Aggregate and its classification	1st	To determine flakiness and elongation index of coarse aggregate
	2 <sup>nd</sup>	Characteristics of various aggregate		
	3 <sup>rd</sup>	Grading of aggregate and water absorption	2 <sup>nd</sup>	To determine and elongation index of coarse aggregate
3rd	1 <sup>st</sup>	Water cement ratio, hydration of cement, Duff Abram water cement ratio law	1st	To determine silt in fine aggregate
	2 <sup>nd</sup>	Limitation of water cement ratio law and its effect		
	3 <sup>rd</sup>	Workability and factor affecting workability	2 <sup>nd</sup>	To determine silt in fine aggregate
4th	1 <sup>st</sup>	Measurement of workability	1st	Determination of specific gravity and water absorption of aggregate
	2 <sup>nd</sup>	Slump for placement in various condition		
	3 <sup>rd</sup>	Property of concrete, segregation, bleeding And harshness	2 <sup>nd</sup>	Determination of specific gravity and water absorption of aggregate
5th	1 <sup>st</sup>	Sessional 1 <sup>st</sup>		
	2 <sup>nd</sup>			
	3 <sup>rd</sup>			
6th	1 <sup>st</sup>	Property of concrete, segregation, bleeding And harshness	1st	Determination of bulk density and void in aggregate and surface moisture by displacement method
	2 <sup>nd</sup>	Properties in hardened state		
	3 <sup>rd</sup>	Strength, durability of concrete And dimensional changes	2 <sup>nd</sup>	Determination of bulk density and void in aggregates and surface moisture by displacement method
7th	1 <sup>st</sup>	Proportioning of normal concrete, mix design and normal mix	1st	Determination of particle size distribution of aggregate by

	2 <sup>nd</sup>	Adjustment on site of concrete		sieve analysis
	3 <sup>rd</sup>	Difference between nominal concrete and controlled concrete	2 <sup>nd</sup>	Determination of particle size distribution of aggregate by sieve analysis
8th	1 <sup>st</sup>	Revision of previous chapter	1st	To determine necessary adjustment for bulking of fine aggregate
	2 <sup>nd</sup>	Admixture		
	3 <sup>rd</sup>	Types of admixture and its uses	2 <sup>nd</sup>	To determine necessary adjustment for bulking of fine aggregate
9th	1 <sup>st</sup>	Special concrete, concrete under special condition	1st	To determine workability by slump test
	2 <sup>nd</sup>	Ready mixed concrete, fibre reinforced concrete		
	3 <sup>rd</sup>	Polymer and fly ash concrete	2 <sup>nd</sup>	To determine workability by slump test
10th	1 <sup>st</sup>	Sessional 2 <sup>nd</sup>		
	2 <sup>nd</sup>			
	3 <sup>rd</sup>			
11th	1 <sup>st</sup>	Silica fume concrete and revision	1st	To verify the effect of water, fine aggregate ratio and cement ratio on slump
	2 <sup>nd</sup>	Concreting operation , storing of cement		
	3 <sup>rd</sup>	Storing of aggregate	2 <sup>nd</sup>	To verify the effect of water, fine aggregate ratio and cement ratio on slump
12th	1 <sup>st</sup>	Batching of cement	1st	Compaction factor test
	2 <sup>nd</sup>	Mixing of cement and concrete		
	3 <sup>rd</sup>	Transportation of concrete	2 <sup>nd</sup>	Compaction factor test
13th	1 <sup>st</sup>	Placement of concrete	1st	Non destructive test
	2 <sup>nd</sup>	Compaction		
	3 <sup>rd</sup>	Finishing of concrete slabs and curing of concrete made structure	2 <sup>nd</sup>	Non destructive test
14th	1 <sup>st</sup>	Jointing and defects in concrete	1st	Test for compressive strength of concrete cubes of different grade
	2 <sup>nd</sup>	Non destructive test for concrete		
	3 <sup>rd</sup>	Revision of previous chapter	2 <sup>nd</sup>	Test for compressive strength of concrete cubes of different grade
15th	1 <sup>st</sup>	Sessional 3 <sup>rd</sup>		
	2 <sup>nd</sup>			
	3 <sup>rd</sup>			