

# LESSON PLAN

## DEPARTMENT OF CIVIL ENGINEERING, ITT, CHOUDWAR

**SUBJECT-** CIVIL ENGINEERING LABORATORY-II

**Periods:** 6per week

**SEMESTER:** 5th

**NAME OF INSTRUCTOR-**BHAGYASHREE DAS

Week	Class Day	Theory / Practical Topics
1st	1 <sup>st</sup>	Determination of Specific gravity of Soil by Pycnometer /Density bottle
	2 <sup>nd</sup>	Determination of Field Density of Soil by Core Cutter Method.
2 <sup>nd</sup>	1 <sup>st</sup>	Determination of Particle Size gradation of sand/Gravel by sieve analysis.
	2 <sup>nd</sup>	a)Determination of Liquid Limit by soil by Casagrande's apparatus. (b)Determination of Plastic limit of soil.
3 <sup>rd</sup>	1 <sup>st</sup>	Determination of Shrinkage limit of soil,Determination of MDD & OMC of soil by using modified Proctor Test
	2 <sup>nd</sup>	Determination of CBR value using Laboratory CBR Testing device, Determination of $c$ and $\phi$ of soil by triaxial testing device.
4 <sup>th</sup>	1 <sup>st</sup>	Determination of coefficient of permeability of soil by constant head method
	2 <sup>nd</sup>	Verification of Bernoulli's Theorem
5 <sup>th</sup>	1 <sup>st</sup>	Determination of coefficient of Discharge of a rectangular notch fitted in open Channel
	2 <sup>nd</sup>	Determination of coefficient of Discharge of a Venturimeter, Orificemeter fitted in a pipe
6 <sup>th</sup>	1 <sup>st</sup>	Determination of head Loss due to friction and coefficient of friction for flow through pipe.
	2 <sup>nd</sup>	Penetration Test of Bitumen.
7 <sup>th</sup>	1 <sup>st</sup>	Penetration Test of Bitumen.
	2 <sup>nd</sup>	Ductility Test of Bitumen.
8 <sup>th</sup>	1 <sup>st</sup>	Ductility Test of Bitumen.
	2 <sup>nd</sup>	Viscosity Test of Bitumen

9 <sup>th</sup>	1 <sup>st</sup>	Viscosity Test of Bitumen
	2 <sup>nd</sup>	Bitumen content by centrifuge extractor.
10 <sup>th</sup>	1 <sup>st</sup>	Bitumen content by centrifuge extractor.
	2 <sup>nd</sup>	Determination of Turbidity of water Sample using Turbidimeter.
11 <sup>th</sup>	1 <sup>st</sup>	Determination of Turbidity of water Sample using Turbidimeter.
	2 <sup>nd</sup>	Determination of pH of Water sample using (a) pH – meter (b) colour Comparator
12 <sup>th</sup>	1 <sup>st</sup>	Determination of Chloride content of a Water sample using method of titration.
	2 <sup>nd</sup>	Determination of Coagulant (Alum) dose requirement for a turbid water sample by Jar Test.
13 <sup>th</sup>	1 <sup>st</sup>	Determination of Coagulant (Alum) dose requirement for a turbid water sample by Jar Test.
	2 <sup>nd</sup>	Determination of dissolved oxygen in a water sample.
14 <sup>th</sup>	1 <sup>st</sup>	Determination of dissolved oxygen in a water sample.
	2 <sup>nd</sup>	Determination of bacteriological quality of water sample by Coliform test.
15 <sup>th</sup>	1 <sup>st</sup>	Determination of bacteriological quality of water sample by Coliform test.
	2 <sup>nd</sup>	Determination of bacteriological quality of water sample by Coliform test.