

Lesson plan for 5th semester civil engineering

2022-23

Discipline/Deptt: Civil Engineering

Semester: 5th

Subject (Practical): CIVIL ENGINEERING LABORATORY-2

No. of periods per week: 6

Total Periods: 90

Week	Periods	Unit/Chapter	Topics to be covered
1 st	3	1.1	Determination of Specific gravity of Soil by Pycnometer /Density bottle.
	3	1.2	1.2 Determination of Field Density of Soil by Core Cutter Method.
2 nd	3	1.3	Determination of Particle Size gradation of sand/Gravel by sieve analysis.
	3	1.4	Wet mechanical analysis using pipette method for clay and silt.
3 rd	3	1.5	(a)Determination of Liquid Limit by soil by Casagrande's apparatus.
	3	1.5	(b)Determination of Plastic limit of soil.
4 th	3	1.6	Determination of Shrinkage limit of soil.
	3	1.7	Determination of MDD & OMC of soil by using modified Proctor Test.
5 th	3	1.8	Determination of CBR value using Laboratory CBR Testing device.
	3	1.9	Determination of c and ϕ of soil by triaxial testing device.
6 th	3	1.9	Determination of c and ϕ of soil by triaxial testing device.
	3	1.10	Determination of coefficient of permeability of soil by constant head method.
7 th	3	2.1	Verification of Bernoulli's Theorem
	3	2.1	Verification of Bernoulli's Theorem
8 th	3	2.2	Determination of coefficient of Discharge of a rectangular notch fitted in open Channel.
	3	2.3	Determination of coefficient of Discharge of a Venturimeter, Orificemeter fitted in a pipe
9 th	3	2.4	Determination of head Loss due to friction and coefficient of friction for flow through pipe.
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10 th	3	3.1	Penetration Test of Bitumen.
	3	3.2	Ductility Test of Bitumen.

11 th	3	3.3	Viscosity Test of Bitumen
	3	3.3	Viscosity Test of Bitumen
12 th	3	3.4	Bitumen content by centrifuge extractor
	3	3.4	Bitumen content by centrifuge extractor
13 th	3	4.1	Determination of Turbidity of water Sample using Turbidimeter/Nephelometer/Jackson's Candle Turbidimeter.
	3	4.2	Determination of pH of Water sample using (a) pH – meter (b) colour Comparator.
14 th	3	4.3	Determination of Chloride content of a Water sample using method of titration.
	3	4.4	Determination of Coagulant (Alum) dose requirement for a turbid water sample by Jar Test.
15 th	3	4.5	Determination of dissolved oxygen in a water sample.
	3	4.6	Determination of bacteriological quality of water sample by Coliform test.

Sindhu
15/09/22

Manas R Adhikari
15/9/22