

LESSON PLAN: Pr. CIVIL ENGINEERING LABORATORY-II FOR THE SESSION 2025-26 (WINTER 2025)
BATCH-2023-26, GOVT. POLYTECHNIC, KANDHIMAL

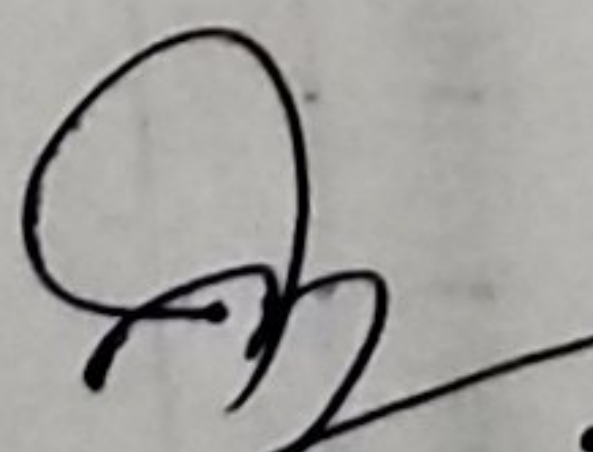
Discipline: Civil Engineering	Semester: 5th	Name of the Teaching Faculty : Ashish Nayak, Swastik Pradhan, Lecturer stage II in Civil Engg., Subrat Kumar Behera, LAB ASSISTANT in Civil Engg.
Subject: Pr. CIVIL ENGINEERING LABORATORY-II (Pr-1)	No. of days/ per week class allotted: 6	Semester From Date : 14/07/2025 to Date: 15/11/2025 No. of Weeks: 15
Week	Class Day	Theory/ Practical Topics
		1.0 TESTS ON SOIL :
1st	1st	Determination of Specific gravity of Soil by Pycnometer /Density bottle.
	2nd	Determination of Specific gravity of Soil by Pycnometer /Density bottle.
	3rd	Determination of Specific gravity of Soil by Pycnometer /Density bottle.
	4th	Determination of Field Density of Soil by Core Cutter Method.
	5th	Determination of Field Density of Soil by Core Cutter Method.
	6th	Determination of Field Density of Soil by Core Cutter Method.
2nd	1st	Determination of Particle Size gradation of sand/Gravel by sieve analysis.
	2nd	Determination of Particle Size gradation of sand/Gravel by sieve analysis.
	3rd	Determination of Particle Size gradation of sand/Gravel by sieve analysis.
	4th	Determination of Particle Size gradation of sand/Gravel by sieve analysis.
	5th	Determination of Particle Size gradation of sand/Gravel by sieve analysis.
	6th	Wet mechanical analysis using pipette method for clay and silt.
3rd	1st	Wet mechanical analysis using pipette method for clay and silt.
	2nd	Wet mechanical analysis using pipette method for clay and silt.
	3rd	(a)Determination of Liquid Limit by soil by Casagrande's apparatus.
	4th	(a)Determination of Liquid Limit by soil by Casagrande's apparatus.
	5th	(a)Determination of Liquid Limit by soil by Casagrande's apparatus.
	6th	(b)Determination of Plastic limit of soil.
4th	1st	(b)Determination of Plastic limit of soil.
	2nd	Determination of Shrinkage limit of soil.
	3rd	Determination of Shrinkage limit of soil.
	4th	Determination of Shrinkage limit of soil.
	5th	Determination of MDD & OMC of soil by using modified Proctor Test.
	6th	Determination of MDD & OMC of soil by using modified Proctor Test.
5th	1st	Determination of MDD & OMC of soil by using modified Proctor Test.
	2nd	Determination of CBR value using Laboratory CBR Testing device.
	3rd	Determination of CBR value using Laboratory CBR Testing device.

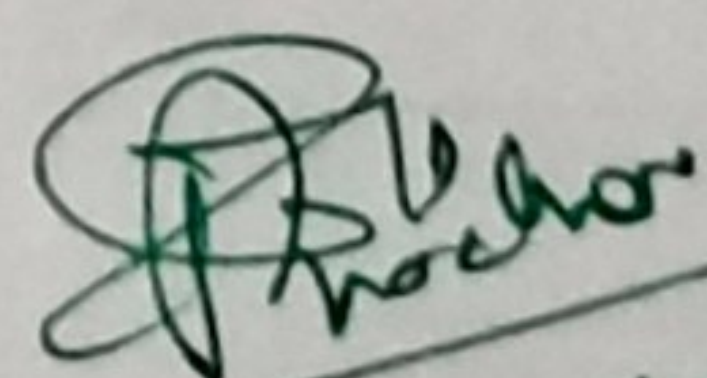
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	4th	Determination of CBR value using Laboratory CBR Testing device.
	5th	Determination of c and ϕ of soil by triaxial testing device.
	6th	Determination of c and ϕ of soil by triaxial testing device.
6th	1st	Determination of c and ϕ of soil by triaxial testing device.
	2nd	Determination of c and ϕ of soil by triaxial testing device.
	3rd	Determination of coefficient of permeability of soil by constant head method.
	4th	Determination of coefficient of permeability of soil by constant head method.
	5th	Determination of coefficient of permeability of soil by constant head method.
	6th	Determination of coefficient of permeability of soil by constant head method.
		2. HYDRAULICS LABORATORY:
7th	1st	2.1 Verification of Bernoulli's Theorem
	2nd	2.1 Verification of Bernoulli's Theorem
	3rd	2.1 Verification of Bernoulli's Theorem
	4th	2.1 Verification of Bernoulli's Theorem
	5th	2.3 Determination of coefficient of Discharge of a rectangular notch fitted in open Channel.
	6th	2.3 Determination of coefficient of Discharge of a rectangular notch fitted in open Channel.
8th	1st	2.3 Determination of coefficient of Discharge of a rectangular notch fitted in open Channel.
	2nd	2.3 Determination of coefficient of Discharge of a rectangular notch fitted in open Channel.
	3rd	2.3 Determination of coefficient of Discharge of a rectangular notch fitted in open Channel.
	4th	2.3 Determination of coefficient of Discharge of a Venturimeter, Orificemeter fitted in a pipe
	5th	2.3 Determination of coefficient of Discharge of a Venturimeter, Orificemeter fitted in a pipe
	6th	2.3 Determination of coefficient of Discharge of a Venturimeter, Orificemeter fitted in a pipe
9th	1st	2.3 Determination of coefficient of Discharge of a Venturimeter, Orificemeter fitted in a pipe
	2nd	2.4 Determination of head Loss due to friction and coefficient of friction for flow through pipe
	3rd	2.4 Determination of head Loss due to friction and coefficient of friction for flow through pipe
	4th	2.4 Determination of head Loss due to friction and coefficient of friction for flow through pipe
	5th	2.4 Determination of head Loss due to friction and coefficient of friction for flow through pipe
	6th	2.4 Determination of head Loss due to friction and coefficient of friction for flow through pipe
		3. TRANSPORTATION LABORATORY:
10th	1st	3.1 Penetration Test of Bitumen
	2nd	3.1 Penetration Test of Bitumen
	3rd	3.1 Penetration Test of Bitumen
	4th	3.1 Penetration Test of Bitumen
	5th	3.1 Penetration Test of Bitumen
	6th	3.2 Ductility Test of Bitumen.

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11th	1st	3 2 Ductility Test of Bitumen
	2nd	3 2 Ductility Test of Bitumen.
	3rd	3 2 Ductility Test of Bitumen
	4th	3 3 Viscosity Test of Bitumen
	5th	3 3 Viscosity Test of Bitumen
	6th	3 3 Viscosity Test of Bitumen.
12th	1st	3 3 Viscosity Test of Bitumen.
	2nd	3 4 Bitumen content by centrifuge extractor.
	3rd	3 4 Bitumen content by centrifuge extractor.
	4th	3 4 Bitumen content by centrifuge extractor.
	5th	3 4 Bitumen content by centrifuge extractor
	6th	3 4 Bitumen content by centrifuge extractor.
		4. PUBLIC HEALTH ENGINEERING LABORATORY:
13th	1st	4 1 Determination of Turbidity of water Sample using Turbidimeter/Nephelometer/Jackson's Candle Turbidimeter
	2nd	4 1 Determination of Turbidity of water Sample using Turbidimeter/Nephelometer/Jackson's Candle Turbidimeter.
	4th	4 1 Determination of Turbidity of water Sample using Turbidimeter/Nephelometer/Jackson's Candle Turbidimeter.
	5th	4 2 Determination of pH of Water sample using (a) pH - meter (b) colour Comparator.
	6th	4 2 Determination of pH of Water sample using (a) pH - meter (b) colour Comparator.
14th	1st	4 2 Determination of pH of Water sample using (a) pH - meter (b) colour Comparator.
	2nd	4 3 Determination of Chloride content of a Water sample using method of titration.
	3rd	4 3 Determination of Chloride content of a Water sample using method of titration.
	4th	4 3 Determination of Chloride content of a Water sample using method of titration.
	5th	4 4 Determination of Coagulant (Alum) dose requirement for a turbid water sample by Jar Test.
	6th	4 4 Determination of Coagulant (Alum) dose requirement for a turbid water sample by Jar Test.
15th	1st	4 4 Determination of Coagulant (Alum) dose requirement for a turbid water sample by Jar Test.
	2nd	4 5 Determination of dissolved oxygen in a water sample.
	3rd	4 5 Determination of dissolved oxygen in a water sample.
	4th	4 5 Determination of dissolved oxygen in a water sample
	5th	4 6 Determination of bacteriological quality of water sample by Coliform test
	6th	4 6 Determination of bacteriological quality of water sample by Coliform test


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