



Discipline:	Semester: 5th	Name of the Teaching Faculty: Rupell Kumar Patro, Lecturer in Civil Engineering, GP Gandhamal, Phulbani
Civil Engineering		SESSION-2022-23 (WINTER-2022)
Subject: Pr1.1 Civil engineering Lab-2	No. of Days/per week class allotted-06	Semester from date: 15.09.22 to date: 21.01.23
Week	Class Day	Theory/Practical Topics
1st	1 st	TESTS ON SOIL
	2 nd	Determination of Specific gravity of Soil by Pycnometer /Density bottle
	3 rd	Determination of Specific gravity of Soil by Pycnometer /Density bottle
2nd	1 st	Determination of Specific gravity of Soil by Pycnometer /Density bottle
	2 nd	Determination of Field Density of Soil by Core Cutter Method
	3 rd	Determination of Field Density of Soil by Core Cutter Method
3rd	1 st	Determination of Field Density of Soil by Core Cutter Method
	2 nd	Determination of Particle Size gradation of sand/Gravel by sieve analysis
	3 rd	Determination of Particle Size gradation of sand/Gravel by sieve analysis
4th	1 st	Determination of Particle Size gradation of sand/Gravel by sieve analysis
	2 nd	Wet mechanical analysis using pipette method for clay and silt
	3 rd	Wet mechanical analysis using pipette method for clay and silt
	1 st	Wet mechanical analysis using pipette method for clay and silt
	2 nd	(a)Determination of Liquid Limit by soil by Casagrande's apparatus
	3 rd	(a)Determination of Liquid Limit by soil by Casagrande's apparatus
5th	1 st	(a)Determination of Liquid Limit by soil by Casagrande's apparatus
	2 nd	(b)Determination of Plastic limit of soil.
	3 rd	(b)Determination of Plastic limit of soil.
6th	1 st	Determination of Shrinkage limit of soil
	2 nd	Determination of Shrinkage limit of soil
	3 rd	Determination of MDD & OMC of soil by using modified Proctor Test
	1 st	Determination of MDD & OMC of soil by using modified Proctor Test
	2 nd	Determination of MDD & OMC of soil by using modified Proctor Test
7th	1 st	Determination of CBR value using Laboratory CBR Testing device.
	2 nd	Determination of CBR value using Laboratory CBR Testing device.
	3 rd	Determination of c and ϕ of soil by triaxial testing device.
	1 st	Determination of c and ϕ of soil by triaxial testing device.
8th	1 st	Determination of coefficient of permeability of soil by constant head method.
	2 nd	Determination of coefficient of permeability of soil by constant head method.
	3 rd	HYRAULICS LABORATORY:
9th	1 st	Verification of Bernoulli's Theorem
	2 nd	Verification of Bernoulli's Theorem
	3 rd	Determination of coefficient of Discharge of a rectangular notch fitted in open Channel
	1 st	Determination of coefficient of Discharge of a rectangular notch fitted in open Channel
10th	1 st	Determination of coefficient of Discharge of a Venturimeter, Orificemeter fitted in a pipe
	2 nd	Determination of coefficient of Discharge of a Venturimeter, Orificemeter fitted in a pipe
	3 rd	Determination of head Loss due to friction and coefficient of friction for flow through pipe.
11th	1 st	Determination of head Loss due to friction and coefficient of friction for flow through pipe.
	2 nd	TRANSPORTATION LABORATORY:
	3 rd	Penetration Test of Bitumen.
12th	1 st	Penetration Test of Bitumen.
	2 nd	Ductility Test of Bitumen
	3 rd	Ductility Test of Bitumen
	1 st	Viscosity Test of Bitumen
13th	1 st	Viscosity Test of Bitumen
	2 nd	Bitumen content by centrifuge extractor
	3 rd	Bitumen content by centrifuge extractor
	1 st	PUBLIC HEALTH ENGINEERING LABORATORY:
	2 nd	Determination of Turbidity of water Sample using
14th	1 st	Determination of Turbidity of water Sample using
	2 nd	Turbidimeter/Nephelometer/Jackson's Candle Turbidimeter.
	3 rd	Turbidimeter/Nephelometer/Jackson's Candle Turbidimeter.
	1 st	Water sample Determination of pH of using (a) pH - meter (b) colour Comparator
	2 nd	Water sample Determination of pH of using (a) pH - meter (b) colour Comparator
	3 rd	Determination of Chloride content of a Water sample using method of titration.
	1 st	Determination of Chloride content of a Water sample using method of titration.
	2 nd	Determination of Coagulant (Alum) dose requirement for a turbid water sample by Jar Test.
15th	1 st	Determination of Coagulant (Alum) dose requirement for a turbid water sample by Jar Test.
	2 nd	Determination of dissolved oxygen in a water sample.
	3 rd	Determination of dissolved oxygen in a water sample.
	1 st	Determination of bacteriological quality of water sample by Coliform test
	2 nd	Determination of bacteriological quality of water sample by Coliform test
	3 rd	Determination of bacteriological quality of water sample by Coliform test

[Signature]
15/9/2022

LESSON PLAN of Pr.1- Civil Engineering Lab - II for the session 2022-2023(Winter 2022)

Govt. polytechnic Kandhamal, Phulbani

Discipline: Civil Engineering	Semester: 5th	Name of the Teaching Faculty: Ashish Nayak , Lecturer in Civil GP Kandhamal, Phulbani
Subject: Geotechnical Engineering Civil Lab-II (Th-02)	No. of days/ per week class allotted: 2	Semester From Date : 15/09/2022 to Date: 22/12/2022 / 21/01/2023
		No. of Weeks: 15

PUBLIC HEALTH ENGINEERING LABORATORY:

1st week		Determination of Turbidity of water Sample using
2nd Week		Determination of Turbidity of water Sample using
3rd Week		Water sample Determination of pH of using (a) pH – meter (b) colour Comparator
4th Week		Water sample Determination of pH of using (a) pH – meter (b) colour Comparator
5TH Week		Determination of Chloride content of a Water sample using method of titration.
6th week		Determination of Chloride content of a Water sample using method of titration.
7th week		Determination of Coagulant (Alum) dose requirement for a turbid water sample by Jar Test.
8th week		Determination of Coagulant (Alum) dose requirement for a turbid water sample by Jar Test.
9th week		Determination of dissolved oxygen in a water sample.
10th week		Determination of dissolved oxygen in a water sample.
11th week		Determination of bacteriological quality of water sample by Colliform test.
12week		Determination of bacteriological quality of water sample by Colliform test.
13th week		Determination of bacteriological quality of water sample by Colliform test.
14th week		Determination of bacteriological quality of water sample by Colliform test.

Ashish Nayak
Signature of Lecturer
15/09/2022

H. O. D
Signature of HOD
15/09/22

Signature of Principal

H. O. D
Dept. of Civil Engg.
Govt. Polytechnic
Kandhamal