ARYAN SCHOOL OF ENGINEERING & TECHNOLOGY

Dicipline: Civil	Semester: 3rd	Name of the Teaching Faculty: Pratidya Narayan		
Subject: Geotechnical Engineering	No of Days/Week Class Allotted: 4	Semester From date: 15.09.22 To date		No of Weeks:

WEEK	Class Day	Theory Topics
1st 15.09.2022 to 17.09.22	1st	Introduction. soil Engineering.
	2nd	scope of soil mechanics
	3rd	Origin and formation of soil
	4th	
	5th	
2nd 19.09.22 to 24.09.22	1st	Preliminary definitions & relationship - three phase system
	2nd	Day- Water content, Density, Specific gravity, void ratio & their relation
	3rd	Porosity, Percentage of air void, air content, degree of saturation
	4th	Density index, Bulk / saturated / dry / submerged density.
	5th	
3rd 26.09.22 to 01.10.22	1st	Inter relationship of various soil parameter
	2nd	Problemes Practice
	3rd	Index properties of soil.
	4th	water content, specific gravity.
	5th	

WEEK	Class Day	Theory Topics
4th (10.10.22 to 15.10.22)	1st	Particle size distribution : Sieve analysis
	2nd	Wet mechanical analysis, Particle size distribution curve and its uses
	3rd	consistency of soils, Atterberg limits,
	4th	Problems
	5th	
5th (17.10.22 to 22.10.22)	1st	Classification of soil - General
	2nd	I.S classification
	3rd	Plasticity chart
	4th	Revision class
	5th	
6th (24.10.22 to 29.10.22)	1st	Permeability - Introduction, Concept of permeability.
	2nd	Darcy's law, Co-efficient of Permeability
	3rd	Factor affecting permeability.
	4th	Test on Permeability - Constant head & falling head.
	5th	

ARYAN

ARYAN SCHOOL OF ENGINEERING & TECHNOLOGY

Dicipline:		Semester:	Name of the Teaching Faculty: Pratikshya Bhuyan	
Subject:		No of Days/Week Class Allotted:____	Semester From date:_____ To date_____	No.of Weeks:

WEEK	Class Day	Theory Topics
7th 31.10.22 to 05.11.22	1st	Problem Practice on Permeability.
	2nd	Defn. Seepage, seepage Pressure
	3rd	Effective stress phenomenon & Problems
	4th	Quick sand condn & Problem Practice.
	5th	
8th 07.11.22 to 12.11.22	1st	Compaction- Introduction, Defn, Light & heavy compactn test.
	2nd	Optimum moisture content of soil,
	3rd	Maxm dry density, Zero air void line diagrams
	4th	Factor affecting compaction,
	5th	
9th 14.11.22 to 19.11.22	1st	Field compaction methods & their suitability
	2nd	Consolidation - Defn, distinction bet compaction & Consolidation
	3rd	Terzaghi's model analogy of compression
	4th	The Process of consolidation- Field implicat
	5th	

WEEK	Class Day	Theory Topics
10th 21.11.22 to 26.11.22	1st	Shear strength - concept of shear strength
	2nd	Mohr - coulomb failure theory, Cohesion
	3rd	Angle of internal friction, strength envelope for different type of soil.
	4th	Measurement of shear strength - Direct shear test.
	5th	
11th 28.11.22 to 03.12.22	1st	Triaxial shear test, unconfined compression test.
	2nd	Ven - shear test
	3rd	Shear strength Problems
	4th	Problem Practice & Doubt clearing class
	5th	
12th 05.12.22 to 10.12.22	1st	Earth Pressure - Active & Passive
	2nd	Earth Pressure at rest & Derivations
	3rd	Problems
	4th	Use of Rankine's Formula, Problems on backfill with no surchage, with uniform surchage
	5th	

ARYAN SCHOOL OF [illegible] ECHNOLOGY

Dicipline:		Semester:	
Subject:		No of Days/Week Class Allotted: ____	To / No.of Weeks:

WEEK	Class Day	
13th 12.12.22 to 17.12.22	1st	Foundation engineering - Introduction & uses
	2nd	Function of foundation engg, shallow & deep foundation.
	3rd	Different types of shallow & deep with sketches Types of failure - General shear & local.
	4th	Punching shear failure; Bearing capacity of soil - using Terzaghi formula.
	5th	
14th 19.12.22 to 24.12.22	1st	IS code formula for strips, circular, problems, square.
	2nd	Effect of water table on bearing capacity of soil.
	3rd	Test on bearing capacity of soil - Plate load test.
	4th	Derivation on plate load test. Problems
	5th	
15th	1st	Standard penitration test derivation
	2nd	problems
	3rd	Differentiate bet^n plate load test and Standard P. test
	4th	Problems.
	5th	