

Discipline: 06
Civil

Semester: 3rd

Name of The Teaching Faculty: Dr. Preeti Kanyani Sethy

TH-2

Subject: Geotechnical Engineering

No. of Days/Week: 4
Class allotted: 4

Semester from: 15.09.2022 to 22.12.2022

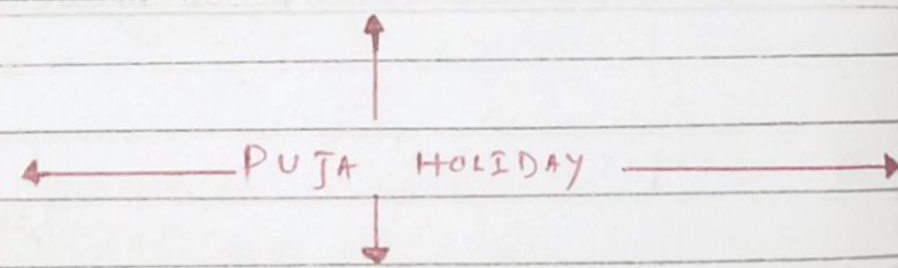
No. of weeks: 15

WEEKS

CLASS DAY

THEORY

	1 st	
12.09.2022	2 nd	
To	3 rd	Soil and Soil Engineering
17.09.2022	4 th	scope of soil mechanics, origin and formation of soil
	1 st	Soil as a three phase system
19.09.2022	2 nd	Water content, Density, specific gravity, void ratio,
To		
24.09.2022	3 rd	Porosity, Percentage of air voids, cur content, Degree of saturation, density index
	4 th	Bulk/saturated/dry/submerged density
	1 st	Interrelationship of various soil parameters.
26.09.2022	2 nd	Water content
To	3 rd	specific Gravity
01.10.2022	4 th	particle size distribution: sieve analysis, wet mechanical analysis, particle size distribution curve and its uses.
	1 st	
03.10.2022	2 nd	
To	3 rd	
08.10.2022	4 th	
	1 st	Consistency of soils, Atterberg's Limits, plasticity index, consistency index, Liquidity index
10.10.2022	2 nd	I. s. classification
To		
15.10.2022	3 rd	Confining . . .
	4 th	plasticity chart
	1 st	confining . . .
17.10.2022	2 nd	concept of permeability
To	3 rd	Darcy's Law, co-efficient of permeability.
22.10.2022	4 th	Factors affecting Permeability
	1 st	
24.10.2022	2 nd	constant head permeability and falling head



DIWALI

WEEKS	CLASS DAY	THEORY
To 29.10.2022	3 rd	- Permeability Test. Seepage pressure, effective stress, phenomenon of quick sand
	4 th	Continuing...
31.10.2022	1 st	Compaction: compaction, Light and heavy compaction Test
To 05.11.2022	2 nd	optimum moisture
	3 rd	Content of soil, maximum dry density, zero air void line.
	4 th	Factors affecting, compaction, Field compaction methods and their suitability.
07.11.2022	1 st	← LAST MONDAY OF KARTIKA →
	2 nd	← RASHA PURNIMA →
To 12.11.2022	3 rd	Consolidation: Consolidation, distinction between compaction and consolidation
	4 th	Terzaghi's model analogy of compression/ Springs showing the process of consolidation. Filled implications.
14.11.2022	1 st	Continuing...
To 19.11.2022	2 nd	Concept of shear strength
	3 rd	Mohr-coulomb failure theory
	4 th	Cohesion, Angle of internal friction, strength envelope for different type of soil.
21.11.2022	1 st	Measurement of shear strength: - Direct shear test, triaxial shear test.
To 26.11.2022	2 nd	unconfined compression test and vane-shear test
	3 rd	Active earth pressure.
	4 th	Passive earth pressure.
28.11.2022	1 st	Earth pressure at rest.
To 02.12.2022	2 nd	Use of Rankine's formula for the following cases (Concepts less soil etc).
	3 rd	Back fill with no surcharge
	4 th	Back fill with uniform surcharge.
05.12.2022	1 st	Functions of foundations, shallow and deep foundation
To 10.12.2022	2 nd	Different type of shallow foundations with sketches
	3 rd	← LAST THURSDAY of VADASHIA →
	4 th	Different types of deep foundations with sketches
12.12.2022	1 st	Types of failure (General shear, local shear & punching)
To 17.12.2022	2 nd	Bearing capacity of soil, bearing capacity of soil using Terzaghi's formulae & IS code provisions
	3 rd	For strip, square and square footings.
	4 th	Effect water table on bearing capacity of soil
19.12.2022	1 st	Plate load test
To 22.12.2022	2 nd	square penetration test
	3 rd	PYA practice
	4 th	PYA practice

15.9.2022