

Lesson Plan

Subject-Geo-Tech Engg. (Code):TH.2 Name of faculty : Er. Tina Guru Semester: 3rd


Class allotted :50/60p

Branch :Civil Engg

Session: 2024(w)

Discipline	Semester	From date: 01/07/24 To date:26/10/24	Teaching Aid
Subject:	No. of days/ per week: 4p/week	Theory/ Practical –Topics/Lesson	
Week	Date/Period		
1	01/07/2024 TO 06/07/2024	1 Introduction 1.1 Soil and Soil Engineering 1.2 Scope of Soil Mechanics	White board & Marker
2	08/07/2024 TO 13/07/2024	1.3 Origin and formation of soil 2 Preliminary Definitions and Relationship 2.1 Soil as a three Phase system.	White board & Marker
3	15/07/2024 TO 20/07/2024	2.2 Water Content, Density, Specific gravity, Voids ratio, Porosity, Percentage of air voids, air content, degree of saturation, density Index, Bulk/Saturated/dry/submerged density, Interrelationship of various soil parameters	White board & Marker
4	22/07/2024 TO 27/07/2024	3 Index Properties of Soil 3.1 Water Content 3.2 Specific Gravity	White board & Marker
5	29/07/2024 TO 03/08/2024	3.3 Particle size distribution: Sieve analysis, wet mechanical analysis, particle size distribution curve and its uses 3.4 Consistency of Soils, Atterberg's Limits, Plasticity Index, Consistency Index, Liquidity Index	White board & Marker
6	05/08/2024 TO 10/08/2024	4 Classification of Soil 4.1 General 4.2 I.S. Classification, Plasticity chart	White board & Marker
7	12/08/2024 TO 17/08/2024	5 Permeability and Seepage 5.1 Concept of Permeability, Darcy's Law, Co-efficient of Permeability, 5.2 Factors affecting Permeability.	White board & Marker


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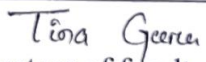
Week	Date/Period	Theory/ Practical –Topics/Lesson	Teaching Aid
8	20/08/2024 TO 24/08/2024	5.3 Constant head permeability and falling head permeability Test. 5.4 Seepage pressure, effective stress, phenomenon of quick sand	White board & Marker
9	27/08/2024 TO 31/08/2024	6 Compaction and Consolidation 6.1 Compaction: Compaction, Light and heavy compaction Test, Optimum Moisture Content of Soil, Maximum dry density, Zero air void line, Factors affecting Compaction, Field compaction methods and their suitability	White board & Marker
10	02/09/2024 TO 06/09/2024	6.2 Consolidation: Consolidation, distinction between compaction and consolidation. Terzaghi's model analogy of compression/ springs showing the process of consolidation – field implications	White board & Marker
11	09/09/2024 TO 14/09/2024	7 Shear Strength 7.1 Concept of shear strength, Mohr-Coulomb failure theory, Cohesion, Angle of internal friction,	White board & Marker
12	17/09/2024 TO 21/09/2024	strength envelope for different type of soil, Measurement of shear strength;- Direct shear test, triaxial shear test, unconfined compression test and vane-shear test	White board & Marker
13	23/09/2024 TO 28/09/2024	8 Earth Pressure on Retaining Structures 8.1 Active earth pressure, Passive earth pressure, Earth pressure at rest.	White board & Marker
14	30/09/2024 TO 05/10/2024	8.2 Use of Rankine's formula for the following cases (cohesion-less soil only) (i) Backfill with no surcharge, (ii) backfill with uniform surcharge	White board & Marker
15	07/10/2024 TO 09/10/2024	9 Foundation Engineering 9.1 Functions of foundations, shallow and deep foundation, different type of shallow and deep foundations with sketches. Types of failure (General shear, Local shear & punching shear)	White board & Marker

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Week	Date/Period	Theory/ Practical –Topics/Lesson	Teaching Aid
16	17/10/2024 TO 19/10/2024	9.2 Bearing capacity of soil, bearing capacity of soils using Terzaghi's formulae	White board & Marker
17	21/10/2024 TO 26/10/2024	IS Code formulae for strip, Circular and square footings, Effect water table on bearing capacity of soil 9.3 Plate load test and standard penetration test	White board & Marker


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