

ORISSA SCHOOL OF ENGINEERING & POLYTECHNIC ,BERHAMPUR

Th2. GEOTECHNICAL ENGINEERING

SEMESTER:-3RD

FACULTY NAME:- BAISALI SAMANTRAI

Week	Date Range	Topics	Subtopics
1	1/8 - 5/8	Introduction	Soil and Soil Engineering, Scope of Soil Mechanics, Origin and formation of soil
2	7/8 - 12/8	Preliminary Definitions and Relationships	Soil as a three-phase system, Water Content, Density, Specific Gravity
3	14/8 - 19/8	Preliminary Definitions and Relationships (cont.)	Voids ratio, Porosity, Air voids, Degree of Saturation, Interrelationships of soil parameters
4	21/8 - 26/8	Index Properties of Soil	Water Content, Specific Gravity, Sieve analysis, Particle size distribution
5	28/8 - 2/9	Index Properties of Soil (cont.)	Consistency of Soils, Atterberg's Limits, Plasticity Index, Consistency Index, Liquidity Index
6	4/9 - 9/9	Classification of Soil	General, I.S. Classification, Plasticity Chart
7	11/9 - 16/9	Permeability and Seepage	Darcy's Law, Coefficient of Permeability, Factors affecting permeability
8	18/9 - 23/9	Permeability and Seepage (cont.)	Constant and falling head tests, Seepage pressure, Quick sand phenomenon
9	25/9 - 30/9	Compaction and Consolidation	Light and heavy compaction tests, Zero air void line, Factors affecting compaction
10	2/10 - 7/10	Compaction and Consolidation (cont.)	Consolidation: Terzaghi's model, Compaction vs. Consolidation
11	9/10 - 14/10	Shear Strength	Concept of shear strength, Mohr-Coulomb failure theory, Cohesion, Angle of internal friction
12	16/10 - 21/10	Shear Strength (cont.)	Direct shear test, Triaxial test, Unconfined compression test, Vane shear test
13	23/10 - 28/10	Earth Pressure on Retaining Structures	Active, Passive, and At-rest earth pressure, Rankine's formula applications
14	30/10 - 4/11	Foundation Engineering	Functions of foundations, Types of shallow and deep foundations
15	6/11 - 11/11	Foundation Engineering (cont.)	Bearing capacity using Terzaghi's and IS Code formulae, Effect of water table
16	13/11 - 18/11	Foundation Engineering (cont.)	Plate load test, Standard penetration test
17	20/11 - 25/11	Buffer Week for Spillover Topics	Coverage of pending or missed topics

18	27/11 - 30/11	Completion and General Discussion	Recap key concepts, address doubts
----	---------------	-----------------------------------	------------------------------------

Baisali Samantoi

Myotirmaye Hani
H.O.D Civil Dept.
O.S.E., Berhampur


Principal
Orissa School of Engineering
Berhampur (Gm.)