

LESSON PLAN

Name of the Institute :	C V RAMAN POLYTECHNIC, BHUBANESWAR	
Department :	CIVIL ENGINEERING	
Semester/Division/Branch :	3 RD / CIVIL	
Subject Name with code :	GEOTECHNICAL ENGINEERING (TH.2)	
Total No. of Class (Required) :	60	
Faculty Name :	SAFALYA MOHANTY	
Class No.	Brief Description of the Topic/Chapter to be taught	Remarks
1	Introduction to Geotechnical engineering	
2	Soil as a three Phase system	
3	Preliminary definitions and relationship	
4	.....DO.....	
5	.....DO.....	
6	.....DO.....	
7	.....DO.....	
8	Determination of Index properties with various methods.	
9	.....DO.....	
10	.....DO.....	
11	.....DO.....	
12	Classification of soil	
13	.....DO.....	
14	Particle size Distribution and classification.	
15	.....DO.....	
16	.....DO.....	
17	.....DO.....	
18	Concept and Co-efficient of Permeability.	
19	Darcy's Law	
20	Factors affecting Permeability	
21	Constant head and falling head permeability Test.	
22	Seepage pressure, the phenomenon of quick sand	
23	Concept of flow-net and its properties.	
24	Application of flow-net.	
25	Compaction, its types and tests.	
26	OMC of Soil, Maximum dry density, Zero air void line	
27	Factors affecting Compaction	
28	Field compaction methods and their suitability.	
29	Consolidation & distinction between compaction and consolidation	
30	Laboratory Consolidation Test, Co-efficient of Consolidation etc.	
31	Terzaghi's theory of one-dimensional consolidation.	
32	Estimation of consolidation settlement, primary and secondary consolidation.	
33	Concept of shear strength	
34	Mohr- Coulomb failure theory & Cohesion.	
35	Angle of internal friction.	

36	strength envelope for different type of soil	
37	Measurement of shear strength	
38	.....DO.....	
39	Earth Pressure and its types in details.	
40	.....DO.....	
41	.....DO.....	
42	Use of Rankine's formula for various retaining structures	
43	.....DO.....	
44	.....DO.....	
45	.....DO.....	
46	.....DO.....	
47	Introduction to Foundation Engineering and its functions.	
48	Different type of foundations	
49	.....DO.....	
50	Types of failure of foundations.	
51	.....DO.....	
52	Bearing capacity of soils by various formula	
53	.....DO.....	
54	.....DO.....	
55	Introduction to Soil dynamics	
56	.....DO.....	
57	Types of machines and machine foundation.	
58	.....DO.....	
59	Design of machine foundations	
60	.....DO.....	


Signature of the Faculty


Signature of the H.O.D