LESSON PLAN

Name of the Institute :	C.V. RAMAN POLYTECHNIC, BHUBANESWAR
Department :	CIVIL ENGINEERING
Semester/Division/Branch :	4TH / CIVIL
Subject Name with code :	HIGHWAY ENGINEERING(TH.4)
Total No. of Class (Required) :	75
Faculty Name :	AMBIKA PRASAD MOHANTY

Class No.	Brief Description of the Topic/Chapter to be taught	Remarks
1	Introduction of Highway, Importance of Highway transportation,Functions of Indian Roads Congress,IRC classification of roads.	
2	.....DO.....	
3	.....DO.....	
4	Road Geometric Design	
5	.....DO.....	
6	.....DO.....	
7	Design and average running speed,stopping& passing sight distance	
8	.....DO.....	
9	.....DO.....	
10	Necessity of curves, horizontal and vertical curves including transition curves and super elevation.	
11	.....DO.....	
12	Methods o f providing super – elevation	
13	.....DO.....	
14	Road Materials-Difference types of road materials in use	
15	.....DO.....	
16	California Bearing Ratio	
17	.....DO.....	
18	Testing aggregates : Abrasion test, impact test, crushing strength test, water absorption test & soundness test.	
19	.....DO.....	
20	.....DO.....	
21	Aggregates : Availability of road aggregates in India, Requirements of road aggregates as per IS specifications	
22	.....DO.....	
23	Binders : common binders : cement, bitumen and Tar, propertied as per IS specifications, penetration and viscosity test of bitumen	
24	.....DO.....	
25	.....DO.....	

26	Road Pavement : Flexible and rigid pavement, their merits and demerits, typical cross-sections, functions of various components	
27	.....DO.....	
28	.....DO.....	
29	Sub-grade preparation	
30	.....DO.....	
31	.....DO.....	
32	Flexible pavements : necessity of sub base, stabilized sub bade: purpose of stabilization	
33	.....DO.....	
34	Base Course	
35	.....DO.....	
36	Surfacing	
37	.....DO.....	
38	.....DO.....	
39	Rigid Pavements	
40	.....DO.....	
41	.....DO.....	
42	Hill Roads :Introduction : Typical cross-sections showing all details of a typical hill road in cut.	
43	.....DO.....	
44	.....DO.....	
45	partly in cutting and partly in filling	
46	.....DO.....	
47	Breast Walls, Retaining walls, different types of bends	
48	.....DO.....	
49	Road Drainage :Necessity of road drainage work, cross drainage works	
50	.....DO.....	
51	Surface and sub-surface drains and storm water drains	
52	.....DO.....	
53	Location, spacing and typical details of side drains, side ditches for surface drainage	
54	.....DO.....	
55	pipe drains in hill roads, details of drains in cutting embankment, typical cross sections.	
56	.....DO.....	
57	.....DO.....	
58	Road Maintenance	
59	.....DO.....	
60	.....DO.....	
61	.....DO.....	
62	.....DO.....	
63	.....DO.....	
64	Construction equipments	
65	.....DO.....	
66	.....DO.....	
67	.....DO.....	
68	Traffic studies	

69	.....DO.....	
70	.....DO.....	
71	.....DO.....	
72	Landscaping and Arboriculture	
73	.....DO.....	
74	.....DO.....	
75	.....DO.....	

Signature of the Faculty

Signature of the H.O.D