

# LESSON PLAN

<b>Name of the Institute :</b>		C.V. RAMAN POLYTECHNIC, BHUBANESWAR
<b>Department :</b>		CIVIL ENGINEERING
<b>Semester/Division/Branch :</b>		5th Sem.
<b>Subject Name with code :</b>		RBE (TH.3)
<b>Total No. of Class (Required) :</b>		60
<b>Faculty Name :</b>		SAFALYA MOHANTY
Class No.	Brief Description of the Topic/Chapter to be taught	Remarks
1	Introduction Railway terminology	
2	Advantages of railways Classification of Indian Railways	
3	Permanent way	
4	Definition and components of a permanent way	
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6	Concept of gauge, different gauges prevalent in India, suitability of these gauges under different conditions	
7	Concept of gauge, different gauges prevalent in India, suitability of these gauges under different conditions	
8	Track materials Rails, Functions and requirement of rails	
9	Track materials Types of rail sections, length of rails	
10	Track materials: Rail joints – types, requirement of an ideal joint ,Purpose of welding of rails & its advantages	
11	Track materials Creep- definition, cause & prevention	
12	Track materials, Sleepers Definition, function & requirements of sleepers Classification of sleepers Advantages & disadvantages	
13	Track materials, Ballast Functions & requirements of ballast	
14	Track materials Materials for ballast	
15	Track materials Connection of rails to rail-fishplate, fish bolts	
16	Track materials Connection of rails to sleepers	

17	Geometric for broad gauge	
18	Geometric for broad gauge	
19	Geometric for broad gauge Typical cross – sections of single & double broad gauge railway track in cutting and embankment	
20	Geometric for broad gauge Typical cross – sections of single & double broad gauge railway track in cutting and embankment	
21	Geometric for broad gauge: Permanent & temporary land width	
22	Geometric for broad gauge: Permanent & temporary land width	
23	Geometric for broad gauge: Gradients for drainage	
24	Geometric for broad gauge: Gradients for drainage	
25	Geometric for broad gauge Super elevation – necessity & limiting valued	
26	Geometric for broad gauge Super elevation – necessity & limiting valued	
27	Points and crossings:Definition, necessity of Points and crossings	
28	Points and crossings:Definition, necessity of Points and crossings	
29	Points and crossings:Types of points & crossings with tie diagrams	
30	Points and crossings:Types of points & crossings with tie diagrams	
31	Laying & maintenance of track Methods of Laying & maintenance of track	
32	Laying & maintenance of track Methods of Laying & maintenance of track	
33	Laying & maintenance of track Duties of a permanent way inspector	
34	Laying & maintenance of track Duties of a permanent way inspector	
35	Introduction to bridges: Definitions Components of a bridge	
36	Introduction to bridges:Classification of bridges Requirements of an ideal bridge	
37	Bridge site investigation, hydrology & planning Selection of bridge site, Alignment.	
38	hydrology & planning, Selection of bridge site, Alignment.	
39	Determination of Flood Discharge	

40	Waterway & economic span	
41	Afflux, clearance & free board	
42	Bridge foundation: Scour depth minimum depth of foundation	
43	Bridge foundation: Scour depth minimum depth of foundation	
44	Bridge foundation: Scour depth minimum depth of foundation	
45	Bridge foundation:Types of bridge foundations – spread foundation, pile foundation- well foundation – sinking of wells, caission foundation	
46	Bridge foundation:Types of bridge foundations – spread foundation, pile foundation- well foundation – sinking of wells, caission foundation	
47	Bridge foundation:Types of bridge foundations – spread foundation, pile foundation- well foundation – sinking of wells, caission foundation	
48	Bridge foundation: Cofferdams	
49	Bridge foundation:Cofferdams	
50	Bridge substructure and approaches	
51	Types of piers	
52	Types of abutments	
53	Types of abutments	
54	Approaches	
55	Culvert & Cause ways:Types of culvers – brief description	
56	Culvert & Cause ways:Types of culvers – brief description	
57	Culvert & Cause ways:Types of culvers – brief description	
58	Types of causeways – brief description	
59	Types of causeways – brief description	
60	Types of causeways – brief description	

  
Signature of the Faculty

  
Signature of the H.O.D