

Lesson Plan

VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, BURLA

Branch: **Civil Engineering**

Semester: **6th B.Tech**

Subject: **Transportation Engineering -II**

Name of the Faculty: **Mrs. Jhuna Rani Ojha**

Theory/ Sessional: **Theory**

Class No.	Module No.	Topics to be Covered	Remarks
1	M-I	History of Indian Railways, Component parts of railway track, Problems of multi gauge system,	
2	M-I	Railway Terminology	
3	M-I	Wheel and axis arrangements, Coning of wheels, Various resistances and their	
4	M-I	Hauling capacity and tractive effort, problems .	
5	M-I	stresses in rail, sleepers, ballast and formation	
6	M-I	Permanent way component parts : Types of rail	
7	M-I	Rail joints, bearing plates	
8	M-I	anti-creep devices, check and guard rails	
9	M-I	Ballast requirements, Specifications, Formation	
10	M-I	Cross-section, drainage., .:	
11	M-II	Geometric design: Alignment	
12	M-II	horizontal curves, super elevation, Numerical	
13	M-II	equilibrium cant and cant deficiency, Numerical	
14	M-II	Length of transition curves, Numerical	
15	M-II	Gradients and grade compensation, Numerical	
16	M-II	vertical curves	
17	M-II	Point and Crossing	
18	M-II	Design of simple turn out. -, ,	
19	M-II	Numerical related to turn out	
20	M-II	various types of track junction and their	
21	M-III	Signalling , Types of signalling	
22	M-III	Types of signalling Control of train movement	
23	M-III	monitoring, interlocking	
24	M-III	, principles of interlocking	
25	M-III	Air Transport Development: Airport scenario in India	
26	M-III	Stages of development	
27	M-III	Aircraft Characteristics	
28	M-III	airport planning, site selection,	

Class No.	Module No.	Topics to be Covered	Remarks
29	M-III	Obstruction and zoning laws,	
30	M-III	Imaginary surfaces, Approach zones and turning	
31	M-IV	Runways and Taxiway Design	
32	M-IV	orientation and configuration, numericals	
33	M-IV	Basic runway length and corrections	
34	M-IV	: Elements of runway, , , Geometric elements design,	
35	M-IV	Taxiway design, Main and exit taxiway,	
36	M-IV	Terminal building, gate position.	
37	M-IV	, Visual Aids and Air Traffic Control:	
38	M-IV	design Airport making and lighting,	
39	M-IV	Airway and airport traffic control,	
40	M-IV	Instrumental landing systems and Air navigation	

28	M-II	Spherical Triangle Numerical	
29	M-III	Principles of Remote Sensing and Idealized Remote Sensing	
30	M-III	Geographic Information System	
31	M-III	Geographic Information System	
32	M-III	Application of Geographic Information System	
33	M-III	Application of Geographic Information System	
34	M-IV	Electronic distance measurement: Introduction	
35	M-IV	EDM	
36	M-IV	Total Station	
37	M-IV	Total Station	
38	M-IV	Global Positioning System	
39	M-IV	Application of GPS	
40	M-IV	Application of GPS	