

LESSON PLAN

Discipline: Civil engineering			Name of The Teaching Faculty: Lect. ANITA PRADHAN		
Subject: Railway and bridge Engineering (TH3)			Semester From Date: 01.08.2023 To Date 30.11.2023		
SEMESTER-5th				No. Of Weeks: 14	4P/WEEK
No. of Days/week class allotted: 04 period per week (Mon, Tue, Wed & Sat - 1 Period each)				TOTAL PERIOD-60	
MONTH	Week	DATE	DAYS	Topics to be covered	NO. OF PERIODS AVAILABLE
				Introduction	2
A u g u s t	1st	01-08-2023	Tues	1.1 Railway terminology	1
				1.2 Advantages of railways	
		02-08-2023	Wed	1.3 Classification of Indian Railways	1
				Permanent way	5
		05-08-2023	Sat	2.1 Definition	1
	2nd	07-08-2023	Mon	components of a permanent way	1
		08-08-2023	Tues	2.2 Concept of gauge	1
		09-08-2023	Wed	Different gauges prevalent in India	1
		12-08-2023	Sat	Suitability of these gauges under different conditions	1
				Track materials	10
	3rd	14-08-2023	Mon	3.1 Rails	1
		16/08/2023	Wed	3.1.1 Functions and requirement of rails	1
				3.1.2 Types of rail sections, length of rails	
		19-08-2023	Sat	3.1.3 Rail joints – types, requirement of an ideal joint	1
				3.1.4 Purpose of welding of rails & its advantages	
	4th	21-08-2023	Mon	3.1.5 Creep- definition, cause & prevention	1
		22-08-2023	Tues	3.2 Sleepers	1
		23-08-2023	Wed	3.2.1 Definition, function & requirements of sleepers	1
		26-08-2023	Sat	3.2.2 Classification of sleepers	1
				3.2.3 Advantages & disadvantages of different types of	
5th	28-08-2023	Mon	3.3 Ballast	1	
			3.3.1 Functions & requirements of ballast		
	29-08-2023	Tues	3.3.2 Materials for ballast	1	
			3.4 Fixtures for Broad gauge		
S e p t	1st	02-09-2023	Sat	3.4.1 Connection of rails to rail-fishplate, fish bolts	1
	2nd	04-09-2023	Mon	3.4.2 Connection of rails to sleepers	
				Geometric for broad gauge	10
		05-09-2023	Tues	gauge railway track in cutting	1
		09-09-2023	Sat	gauge railway in embankment	1
	3rd	11-09-2023	Mon	4.2 Permanent & temporary land width	1
		12-09-2023	Tues	4.3 Gradients for drainage	1

S e p t e m b e r	3rd	13-09-2023	Wed	4.4 Super elevation	1
		16-09-2023	Sat	Necessity & limiting valued	1
	4th	18-09-2023	Mon	Numerical problems	1
		23-09-2023	Sat	Numerical problems	1
	5th	25-09-2023	Mon	Numerical problems	1
		26-09-2023	Tues	Class test	1
				Points and crossings	4
		27-09-2023	Wed	5.1 Definition	1
		30-09-2023	Sat	Necessity of Points and crossings	1
O c t o b e r	1st	03-10-2023	Tues	5.2 Types of points with tie diagrams	1
		04-10-2023	Wed	5.2 Types of crossings with tie diagrams	1
				Laying & maintenance of track	4
		07-10-2023	Sat	6.1 Methods of Laying & maintenance of track	1
	2nd	09-10-2023	Mon	6.1 Methods of Laying & maintenance of track	1
		10-10-2023	Tues	6.2 Duties of a permanent way inspector	1
				6.2 Duties of a permanent way inspector	1
				Section – B: BRIDGES	
		11-10-2023	Wed	Introduction to bridges	2
	14-10-2023	Sat	1.1 Definitions	1	
	3rd	16/10/2023	Mon	1.2 Components of a bridge	1
		17/10/2023	Tues	1.3 Classification of bridges	
		18/10/2023	Wed	1.4 Requirements of an ideal bridge	
	5th			Bridge site investigation, hydrology & planning	5
		30-10-2023	Mon	2.1 Selection of bridge site, Alignment,	1
31-10-2023		Tues	Numerical problems	1	
N o v e m b e r	1st	01-11-2023	Wed	2.3 Waterway & economic span	1
		04-11-2023	Sat	2.4 Afflux	1
	2nd	06-11-2023	Mon	Clearance & free board	1
				Bridge foundation	8
		07-11-2023	Tues	3.1 Scour depth	1
		08-11-2023	Wed	Minimum depth of foundation	1
		11-11-2023	Sat	3.2 Types of bridge foundations	1
	3rd	13-11-2023	Mon	Spread foundation	1
		14-11-2023	Tues	Pile foundation- well foundation	1
		15-11-2023	Wed	Sinking of wells, caission foundation	1
		18-11-2023	Sat	3.3 Cofferdams	1
	4th	20-11-2023	Mon	Class test	1
				Bridge substructure and approaches	5
		21-11-2023	Tues	4.1 Types of piers	1
		22-11-2023	Wed	4.2 Types of abutments	1
		25-11-2023	Sat	4.3 Types of wing walls	1
	5th	28-11-2023	Tues	4.4 Approaches	1
		29-11-2023	Wed	Class test	1
E C X L T A R S A S			Culvert & Cause ways	5	
			5.1 Types of culvers – brief description	1	
			5.1 Types of culvers – brief description	1	
			5.2 Types of causeways – brief description	1	
			5.2 Types of causeways – brief description	1	
			Class test	1	