LESSON PLAN						
Deparment: Civil Engineering	Semester : 5TH SEC A	Name of the Teaching faculty: Sailaja bhuyan (Railway Engg.), Kalyani Mohanty (Bridge Engg.)				
Subject :- Th 3. Railway And Bridge Engineering	No.of Days/ week class allotted : 4	Semester from date: 01/07/2024 to 08/11/2024 No. of Weeks :19 Topics to be covered:-				
Week	Class Day	Topics	Remarks			
		Section A:- RAILWAY				
8th WEEK	1st	1. Introduction (2P) 1.1 Kanway terminology				
9th WEEK	2nd	1.2 Advantages of railways1.3 Classification of Indian Railways				
		2. Permanent way (5)				
10th WEEK	1st	2.1 Definition and components of a permanent way				
	2nd	2.1 Definition and components of a permanent way				
11th WEEK	1st	2.2 Concept of gauge, different gauges prevalent in India, suitability of these gauges under different conditions				
TIM WEEK	2nd	2.2 Concept of gauge, different gauges prevalent in India, suitability of these gauges under different conditions				
12th WEEK	2nd	2.2 Concept of gauge, different gauges prevalent in India, suitability of these gauges under different conditions				
		3.Track materials (10)				
13th WEEK	1st	3.1 Rails 3.1.1 Functions and requirement of rails				
	2nd	3.1.2 Types of rail sections, length of rails				
	1st	3.1.4 Purpose of welding of rails & its advantages				
14th WEEK						
	2nd	3.1.5 Creep- definition, cause & prevention				
15th WEEK		PUJA VACATION				
16th WEEK	1st 2nd	3.2 Sleepers 3.3 Ballast 3.3.1 Functions & requirements of ballast				
17th WEEK	1st	3.3.2 Materials for ballast				
	2nd	3.3.2 Materials for ballast				
18th WEEK	1st	3.4 Fixtures for Broad gauge 3.4.1 Connection of rails to rail-fishplate, fish bolts 3.4.2 Connection of rails to sleepers				
	2nd	3.4.2 Connection of rails to sleepers				
19th WEEK		4. Geometric for broad gauge (10)				
	1st	4.1Typical cross – sections of single & double broad gauge railway track in cutting and embankment				
	2nd	4.1Typical cross – sections of single & double broad gauge railway track in cutting and embankment				

railway track in cutting and embankment 4.2 Permanent & temporary land width 4.3 Gradients for drainage 4.3 Gradients for drainage 4.4 Super elevation – necessity & limiting valued 5. Points and crossings (4P) 5. Definition, necessity of Points and crossings 5.1 Definition, necessity of Points and crossings 5.1 Definition, necessity of Points and crossings 5.2 Types of points & crossings with tie diagrams 5.2 Types of points & crossings with tie diagrams 6. Laying & maintenance of track (4P) 6.1 Methods of Laying & maintenance of track 6.1 Methods of Laying & maintenance of track 6.2 Duties of a permanent way inspector Section B: BRIDGES 1. Introduction to bridges (2P) 1.1 Demintures 1.2 Components of a bridge 2.1 Components of a bridge 2.1 A Requirements of an ideal bridge 2. Bridge site investigation (5P) 9th WEEK 1st 2.1 Selection of bridge site, Alignment 2.2 Determination of Flood Discharge 10th WEEK 2.2 Determination of Flood Discharge 11th WEEK 3. Bridge foundation (8P) 2.1 Seour depth minimum depth of foundatio 3.1 Scour depth minimum depth of foundatio			T447 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1
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17th WEEK	1st	4.1 Types of piers	
	2nd	4.2 Types of abutments	
18th WEEK	2nd	4.3 Types of wing walls	
19th WEEK	1st	4.4 Approaches	
		5. Culvert & Cause ways(5P)	
	2nd	5.1 Types of culvers – brief description	
EXTRA CLASSES REQUIRED		5.1 Types of culvers – brief description	
		5.1 Types of culvers – brief description	
		5.2 Types of causeways – brief description	
		5.2 Types of causeways – brief description	

Kalyani Mohandy

SIGNATURE OF THE FACULTY