

# BALASORE SCHOOL OF ENGINEERING, BALASORE

LESSON PLAN/SEMESTER:- 5TH

SUBJECT:- RAILWAY & BRIDGE ENGG. (th-3)

NAME OF THE FACULTY :- D. BARIK

Branch-civil Engg

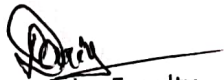
SL. No.	CH. NO.	Month	DATE	NAME OF THE CHAPTER/OBJECTIVES	NO. OF PERIOD AVAIL. AS PER SYLLABUS	NO. OF PERIODS AVAILABLE AS PER PLAN			
1	CH-1	AUG	08/8/23	<b>Introduction</b> 1.1 Railway terminology	02	02			
2			09/8/23	1.2 Advantages of railways					
3			10/8/23	1.3 Classification of Indian Railways	05	07			
4	CH-2	11/8/23	<b>Permanent way</b> 2.1 Definition and components of a permanent way						
5		17/8/23	2.2 Concept of gauge,						
6		18/8/23	CONT..						
7		21/8/23	different gauges prevalent in India,						
8		22/8/23	suitability of these gauges under different conditions						
9		CH-3	SEP	23/8/23			<b>Track materials</b> 3.1 Rails	10	14
10				24/8/23			3.1.1 Functions and requirement of rails		
11	26/8/23			3.1.2 Types of rail sections, length of rails					
12	28/8/23			3.1.3 Rail joints – types					
13	29/8/23			requirement of an ideal joint					
14	31/8/23			3.1.4 Purpose of welding of rails & its advantages					
15	1/9/23			3.1.5 Creep- definition, cause & prevention					
16	4/9/23			3.2 Sleepers					
17	5/9/23			3.2.1 Definition, function & requirements of sleepers					

18			7/9/23	3.2.2 Classification of sleepers		
19			8/9/23	3.2.3 Advantages & disadvantages of different types of sleepers		
20			11/9/23	3.3 Ballast Functions & requirements of ballast		
21			12/9/23	3.3.2 Materials for ballast 3.4 Fixtures for Broad gauge		
22			13/9/23	3.4.1 Connection of rails to rail-fishplate, fish bolts 3.4.2 Connection of rails to sleepers		
23			14/9/23	<b>Geometric for broad gauge</b> 4.1 Typical cross – sections of single &		
24			15/9/23	double broad gauge	10	05
25			21/9/23	railway track in cutting and embankment		
26			22/9/23	4.2 Permanent & temporary land width		
27			25/9/23	4.3 Gradients for drainage		
28	CH-4		26/9/23	4.4 Super elevation – necessity		
29			27/9/23	limiting valued		
30	CH-5	CH-5	28/9/23	<b>POINTS AND CROSSING:5.1 Definition ,necessity of points and crossing</b>	04	03
31			29/9/23	5.2 Types of points		
32		OCT	3/10/23	Crossing with tie of diagrams		
33	CH-6		4/10/23	<b>LAYING AND MAINTANCE OF TRACK:6.1 Methods of laying &amp; maintenance of track</b>	04	02
34			5/10/23	6.2 Duties of a permanent way inspector		
35	CH-1		6/10/23	<b>BRIDGES</b> Introduction to bridges 1.1 Definitions	02	05
36			9/10/23	1.2 Components of a bridge		
37			10/10/23	1.3 Classification of bridges		
38			11/10/23	1.4 Requirements of an ideal bridge		
39	CH-2		12/10/23	Bridge site investigation, hydrology & planning	05	05
40		NOV	1/11/23	2.1 Selection of bridge site,Alignment		
41			2/11/23	2.2 Determination of Flood Discharge		
42			3/11/23	2.3 Waterway & economic span		
43			6/11/23	2.4 Afflux, clearance & free board		
44	CH-3		7/11/23	Bridge foundation 3.1 Scour depth minimum depth of foundation		
45			8/11/23	3.2 Types of bridge foundations – spread foundation,	08	04
46			9/11/23	pile foundation- well foundation – sinking of wells, caission foundation		
47			10/11/23	3.3 Cofferdams		

48		13/11/23	Bridge substructure and approaches 4.1 Types		
49		14/11/23	of piers 4.2 Types of abutments 4.3 Types of wing walls 4.4 Approaches	05	02
50	CH-5	15/11/23	Culvert & Cause ways 5.1 Types of culvers – brief description	03	03
51		16/11/23	5.2 Types of causeways –		
52		17/11/23	brief description		

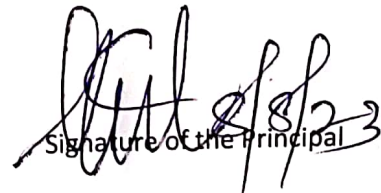
**Brief Summary of the Plan**

SL NO	MONTH	UNITS/CHAPTER TO BE COVERED	% OF COVERAGE
1	AUG	Ch-1,CH-2,CH-3.....	15%
2	SEP	CH-3.... ,CH-4...	35%
3	OCT	CH-4,CH-5,CH-6,CH-1,CH-2	25%
4	NOV	CH-2,CH-3,CH-4,CH-5	25%



Signature of the Faculty

Date 8.8.23



Signature of the Principal

Date