DISCIPLINE: CIVIL ENGINEERING	SEMESTER: V	NAME OF THE TEACHING FACULTY: SHAKTI SAMANTA SAHU
SUBJECT: RAILWAY & BRIDGE ENGINEERING	NO. OF DAYS/PER WEEK CLASS ALLOTTED: 04 HOURS	NO. OF WEEKS: 18

Week No.	Day	Topics
1	1	Railway Terminology
	2	Advantages of Railway & Classification of Indian Railways **(SECTION A Chapter 1 Ends-2 Hour)**
	3	Defination & Components of a permanent Way
	4	Concept of Gauge, Different gauges prevalent in India
2	1	Suitability of gauges under different conditions
	2	Doubt Clearing Session
	3	Previous Year question discussion **(SECTION A Chapter 2 Ends-5 Hour)**
	4	Functions and requirement of rails
3	1	Types of Rail Sections, Length of Rails
	2	Rail Joints- Types, requirement of an ideal joint
	3	Purpose of welding of rails and its advantage
	4	Creep of rail: Defination, causes and prevention.
4	1	Defination, Function & requirement of sleepers
	2	Classification of sleepers
	3	Advantages & disadvantages of different types of sleepers
	4	Functions & requirements of ballast, Materials for ballast
5	1	**Monthly Test**
	2	Connection of rails to rail-fishplate, fish bolts, Connection of rails to sleepers **(SECTION A Chapter 3 Ends-10**
	3	Typical cross – sections of single broad gauge railway track in cutting and embankment
	4	Typical cross – sections of Double broad gauge railway track in cutting and embankment
6	1	Permanent & temporary land width-I
	2	Permanent & temporary land width-II
	3	Gradients for drainage
	4	Revision
7	1	Doubt Clearing Session
	2	Super elevation – necessity & limiting valued
	3	Previous Year question discussion
	4	Numerical Practice **(SECTION A Chapter 4 Ends-10 Hour)**
8	1	Definations and component of bridges
	2	**Monthly Test**
	3	Classification of bridges, Requirements of an ideal bridge **(SECTION B CHAPTER 1 Ends-2 Hours)**
	4	Revision
9	1	Doubt Clearing Session
	2	Selection of bridge site, Alignment,
	3	Determination of Flood Discharge
	4	Waterway & economic span
10	1	Afflux, clearance & free board
	2	Previous Year Question Practice **(SECTION B CHAPTER 2 Ends-5 Hours)**
	3	Definition, necessity of Points and crossings
	4	Types of points & crossings with tie diagrams
INTERNAL ASSESSMENT ON 3RD WEEK OF SEPTEMBER		
11	1	Doubt Clearing Session
	2	Previous year question discussion **(SECTION A Chapter 5 Ends-4 Hours)**
	3	Methods of Laying & maintenance of track
	4	Duties of a permanent way inspector
12	1	Doubt Clearing Session
	2	Previous year question discussion **(SECTION A Chapter 6 Ends-4 Hours)**
	3	Scour depth minimum depth of foundation
	4	Types of bridge foundations – spread foundation
13	1	Pile Fondation
	2	Well foundation
	3	Sinking of Wells
	4	Cassion Foundation
14	1	Coffer Dams
	2	Previous Year Question Discussion **(SECTION B CHAPTER 3 Ends-8 Hours)**
	3	Revision
	4	Doubt Clearing Session
15	1	**Monthly Test**
	2	Types of piers
	3	Types of abutments
	4	Types of wing walls
16	1	Approaches
	2	Revision **(SECTION B CHAPTER 4 Ends-5 Hours)**
	3	Doubt Clearing Session
	4	Types of culverts – brief description-I
17	1	Types of culverts – brief description-II
	2	Types of causeways – brief description-I
	3	Types of causeways – brief description-II
	4	Revision **(SECTION B CHAPTER 5 Ends-5 Hours)**
18	1	Doubt Clearing Session
	2	Previous Year Question discussion
	3	Numerical Practice
	4	**Monthly Test**

CONCERNED FACULTY

11/07/25.

HOD/CIVIL ENGG.

11/07/25