Decipline: Civil Engineering	Semester: 5th No of days/ per week class allotted: 4	Name of the Teaching Faculty: SAIRAM MISHRA
Subject: RAILWAY & BRIDGE ENGINEERING		Semester From date :01.08.2023 To Date : 30.11.2023
No. of Periods: 60		No. of Weeks: 16

Week	Class Day	Theory/ Practical Topics
Aug-1st	1st	**1.1 Railway terminology** 1.2 Advantages of railways
	2nd	1.3 Classification of Indian Railways
	3rd	2.1 Definition and components of a permanent way
	4th	**2.2 Concept of gauge, different gauges prevalent in India, suitability of these gauges** under different conditions
Aug-2nd	5TH	3.1 Rails, Functions and requirement of rails
	6th	Types of rail sections, length of rails
	7th	Rail joints – types, requirement of an ideal joint
	8th	Purpose of welding of rails & its advantages
Aug-3rd	9th	Creep- definition, cause & prevention
	10th	Sleepers, Definition, function & requirements of sleepers
	11th	Classification of sleepers
	12th	Advantages & disadvantages of different types of sleepers
Aug-4th	13th	Ballast,Functions & requirements of ballast,Materials for ballast
	14th	Fixtures for Broad gauge,Connection of rails to rail-fishplate, fish bolts Connection of rails to sleepers
	15th	4.1Typical cross – sections of single & double broad gauge railway track in cutting and embankment
	16th	Permanent & temporary land width
Sep-1st	17th	4.3 Gradients for drainage
	18th	4.3 Gradients for drainage
	19th	4.4 Super elevation – necessity & limiting valued
	20th	4.4 Super elevation – necessity & limiting valued
Sep-2nd	21st	Problem Solving
	22nd	Problem Solving
	23rd	Problem Solving
	24th	Problem Solving
Sep-3rd	25th	Introduction to bridges,Definitions,Components of a bridge
	26th	Classification of bridges,Requirements of an ideal bridge
	27th	Selection of bridge site, Alignment,
	28th	Determination of Flood Discharge
Sep-4th	29th	Waterway & economic span
	30th	**Afflux, clearance & free board**
	31st	Internal Assessment Test
	32nd	Points and crossings,Definition, necessity of Points and crossings
Oct-1st	33rd	Points and crossings,Definition, necessity of Points and crossings
	34th	**Points and crossings, Types of points & crossings with tie diagrams**
	35th	Types of points & crossings with tie diagrams
	36th	Methods of Laying & maintenance of track
Oct-2nd	37th	Methods of Laying & maintenance of track
	38th	**Duties of a permanent way inspector**
	39th	Scour depth minimum depth of foundation
	40th	Types of bridge foundations – spread foundation, pile foundation-
Oct-3rd	41st	Types of bridge foundations – spread foundation, pile foundation-
	42nd	well foundation – sinking of wells, caission foundation
	43rd	well foundation – sinking of wells, caission foundation
	44th	well foundation – sinking of wells, caission foundation
Oct-4th		**Puja Holidays**
Nov-1st	45th	Coffer dams
	46th	Types of piers,Types of abutments
	47th	Types of wing walls
	48th	Approaches
Nov-2nd	49th	Culvert & Cause ways ,5.1 Types of culvers – brief description
	50th	Culvert & Cause ways ,5.1 Types of culvers – brief description
	51st	Culvert & Cause ways ,5.1 Types of culvers – brief description
	52nd	Culvert & Cause ways ,5.1 Types of culvers – brief description
	53rd	Types of causeways – brief description

Nov-3rd	54th	Types of causeways – brief description
	55th	Types of causeways – brief description
	56th	Types of causeways – brief description
Nov-4th	57th	Doubt clear session
	58th	Doubt clear session
	59th	Doubt clear session
	60th	Doubt clear session

28.7.23
Lecturer

31.7.23
HOD
Civil Engg.

31/07/23
Academic
Co-ordinator

31/7/23
Principal
GP Nabarangpur