LESSON PLAN OF 5TH SEMESTERCIVIL ENGINEERING(2023-24)

Discipline :-CIVIL	Semester:-5TH	Name of the Teaching Faculty Amarapalli sahoo Sr. Lect(Civil)
Subject:- Railway and bridge engg.	No of Days per Week Class Allotted :-04	Semester From:- **1st August 2023** To:- **30th November, 2023** No of Weeks:- **18**

Week	Class Day	Theory/ Practical Topics
1st	1st	Introduction : Railway terminology
	2nd	Advantages of railways Classification of Indian Railways
	3rd	Permanent way Definition
	4th	components of a permanent way
2nd	1st	Concept of gauge
	2nd	different gauges prevalent in India
	3rd	suitability of these gauges under different
	4th	Track materials :Rails Functions and requirement of rails
3rd	1st	Types of rail sections , length of rails Rail joints – types, requirement of an ideal joint
	2nd	Purpose of welding of rails & its advantages Creep definition, cause & prevention
	3rd	Sleepers Definition, function & requirements of sleepers 3.2.2 Classification of sleepers Advantages & disadvantages of different types of sleepers
	4th	Ballast Functions & requirements of ballast Materials for ballast
4th	1st	Fixtures for Broad gauge connection of rails to sleepers
	2nd	Geometric for Broad gauge Typical cross – sections of single
	3rd	double broad gauge railway track in cutting
	4th	embankment
5th	1st	Permanent & temporary land width
	2nd	Gradients for drainage
	3rd	Super elevation – necessity & limiting valued
	4th	Numerical problem
6th	1st	Numerical problem
	2nd	Numerical problem
	3rd	Numerical problem
	4th	Points and crossings
7th	1st	Definition,

	2nd	necessity of Points and crossings
	3rd	Types of points
	4th	Types of crossings with tie diagrams
8th	1st	diagrams
	2nd	Laying & maintenance of track
	3rd	Methods of Laying
	4th	maintenance of track
9th	1st	Details of a permanent way inspector
	2nd	Section – B : BRIDGES Introductions Components of a bridge
	3rd	Classification of bridges. Requirements of an ideal bridge
	4th	Bridge Site investigation, hydrology & planning Selection of bridge site
10th	1st	Bridge alignments
	2nd	Determination of flood discharge
	3rd	Waterway & economic span
	4th	Afflux, clearance & free board Collection of bridge design data & sub surface investigation
11th	1st	Bridge foundation
	2nd	Scour depth minimum depth of foundation Types of bridge
	3rd	pile foundation-, pile driving,
	4th	well foundation – sinking of wells caission foundation
12th	1st	foundations – spread foundation
	2nd	Coffer dams
	3rd	Bridge substructure and approaches Types of piers
	4th	Types of abutments
13th	1st	Types of wing walls
	2nd	**10.4 Approaches**
	3rd	11.0Permanent bridges 11.1 Masonry bridges
	4th	**11.2 Steel bridges – classification with sketches**
14th	1st	11.3 Concrete bridges – classification, brief description with sketches 11.4 IRC bridge loading
	2nd	12.Culvert & cause ways 12.1 Types of culvers - brief description
	3rd	12.2 Types of causeways - brief description
	4th	PREVIOUS YEAR QUESTION DISCUSSION
15th	1st	PREVIOUS YEAR QUESTIONS PRACTICE
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE
	4th	PREVIOUS YEAR QUESTIONS PRACTICE
16th	1st	PREVIOUS YEAR QUESTIONS PRACTICE
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE

	4th	PREVIOUS YEAR QUESTIONS PRACTICE
5th	1st	PREVIOUS YEAR QUESTIONS PRACTICE
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE
	4th	PREVIOUS YEAR QUESTIONS PRACTICE
18th	1st	PREVIOUS YEAR QUESTIONS PRACTICE
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE
	4th	PREVIOUS YEAR QUESTIONS PRACTICE